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# Undergraduate Catalog

## General Information - West Virginia University

West Virginia University (https://www.wvu.edu/) (WVU) was founded in 1867 as a result of the 1862 Land-Grant Act, otherwise known as the Morrill Act. As the state's flagship, land-grant university, WVU's mission reflects its dedication to serving the state and citizens of West Virginia through access to higher education, research and scholarship, and comprehensive health sciences. The WVU system includes the flagship campus in Morgantown, WVU Institute of Technology in Beckley, WVU Potomac State in Keyser, and several other locations across the stat serving health science programs. The West Virginia University Robert C. Byrd Health Sciences Center (http://home.hsc.wvu.edu/) has five schools serving undergraduate, graduate, and professional students at four locations in Morgantown, Charleston, Bridgeport and Martinsburg.

West Virginia University is accredited by the Higher Learning Commission (https://www.hlcommission.org/). Many WVU programs hold specialized accreditation.

WVU Morgantown provides programs of instruction through 11 colleges and schools and offers over 300 majors at the baccalaureate, master's, doctoral, and professional levels, as well as numerous certificate programs, both in-person and online.

WVU Morgantown facilities are built on more than 1,000 acres and include several buildings on the National Register of Historic Places.

WVU Potomac State College (https://www.potomacstatecollege.edu/), situated in West Virginia's Eastern Panhandle in Keyser, offers associate and baccalaureate degree programs and serves both residential and commuting students. WVU Institute of Technology (https://www.wvutech.edu/) is located in Beckley, and serves the region and the state by offering technology-intensive baccalaureate degree programs.

The WVU Extension Service (https://extension.wvu.edu/) has offices in all of West Virginia's 55 counties, staffed by county agents. WVU operates experimental farms and forests throughout the state, as well as WVU Jackson's Mill, near Weston, WV, home of West Virginia 4-H camping and the West Virginia Fire Academy.

Visit About WVU (http://about.wvu.edu/) for updated WVU facts and achievements.

## In this section:


- WVU Mission (p. 6)
- WVU Vision (p. 6)
- WVU Values (p. 6)
- Commitment to Campus Engagement and Compliance (p. 7)
- West Virginia University Center for Excellence in Disabilities (p. 7)
- Office of Student Accommodations (p. 7)


## WVU Mission

As a land-grant institution, the faculty, staff and students at West Virginia University commit to creating a diverse and inclusive culture that advances education, healthcare and prosperity for all by providing access and opportunity; by advancing high-impact research; and by leading transformation in West Virginia and the world through local, state and global engagement.

## WVU Vision

As One West Virginia University, we are purposeful in our studies and our work so that we can partner with our communities-both near and far-to bring needed and valued solutions to real-life problems within the pillars of education, healthcare and prosperity.

## WVU Values

Service: We seek opportunities to serve others and are committed to providing the highest quality of service.

Curiosity: We ask questions, seek new opportunities, and change through innovation.

Respect: We are respectful, transparent and inclusive with each other.

Accountability: We perform at our very best every day to create a University that is responsive, efficient and effective.

Appreciation: We support and value each other's contributions as we build a community that is One WVU.

## RESEARCH AND SCHOLARSHIP

As West Virginia's flagship research institution, WVU undertakes scholarly activity to improve the lives of West Virginians and others across the globe. WVU is classified as a Doctoral University-Highest Research Activity (R1) in the Carnegie Classification of Institutions of Higher Education.

## SERVICE

West Virginia University's land-grant mission underscores its obligation to serve the public and the state of West Virginia by promoting economic development, enhancing the well-being and the quality of life of the people of West Virginia, and increasing opportunities for the citizens of the state through workforce education, lifelong learning, and outreach to every county.

West Virginia University is the only institution in West Virginia to earn the Carnegie Foundation for the Advancement of Teaching "Community Engagement Classification."

WVU's dedication to its service mission is manifested through its instructional programs, educational outreach, and initiatives and centers that engage external constituencies and support public service.

## WVU Extension Service

The Smith-Lever Act of 1914 created a Cooperative Extension Service for each land-grant institution. The purpose of the Extension Service was to disseminate the findings of the universities' agricultural stations and provide training and programs on home economics and other practical subjects. WVU has sustained its commitment to the state by supporting an Extension Service office with a presence in all of West Virginia's 55 counties, staffed by county agents.

The educational programs and initiatives of the WVU Extension Service (https://extension.wvu.edu/) focus on service to the state and exemplify West Virginia University's commitment to the public good by connecting the knowledge and research of WVU with citizen and community needs. The Extension Service's programs are driven by four major initiatives: (1) 4-H youth development; (2) family and health; (3) agriculture and natural resource education; and (4) community, workforce, and economic development.

## Commitment to Campus Engagement and Compliance

West Virginia University does not discriminate on the basis of race, color, national origin, ancestry, age, physical or mental disability, marital or family status, pregnancy, veteran status, service in the uniformed services (as defined in state and federal law), religion, creed, sex, sexual orientation, genetic information, gender identity, or gender expression in the administration of any of its educational programs, activities, or with respect to admission or employment.

In keeping with this commitment, members of the academic community are expected to demonstrate civility and mutual respect for all persons as well as understanding and appreciation for all persons, to express that perspective in every dimension of the institution's life and mission, and to work cooperatively, representing not only the interests of their own groups but also those of the wider community.

Individuals believing they may have been illegally discriminated against by any member of the university community at West Virginia University may file a complaint with the Division of Campus Engagement and Compliance (https://campusengagement.wvu.edu/).

## Center for Excellence in Disabilities

The WVU CED (http://www.cedwvu.org/) is available for students, staff, and faculty. The federally funded center supports a 80+ team of specialists who provide services (https://cedwvu.org/services/) for individuals with disabilities of all ages. Clinics and community programming is available throughout the state to address needs related to all disabilities - acute, acquired, or chronic in nature. The center is also the home of the WV assistive technology (AT) program (https://wvats.cedwvu.org/), Country Roads program (https://countryroads.cedwvu.org/), and family support program (F2F) (https://cedwvu.org/families/). These and other services provide support for the classroom, community living, and the workplace. Additional training opportunities (https://cedwvu.org/education/) are available for students. Students of all disciplines can work in multidisciplinary groups to provide clinical and community services at the center and throughout the state. Trainings and innovative research initiatives also incorporate disability services and awareness and support the Department of Disability Services undergraduate minor and graduate certificate courses (DISB) and micro-credentials/badges (https://cedwvu.org/badges/).

WVU CED is recognized, and trusted, as a leader and innovative agent in a statewide network of individual and community supports that promote respect, inclusiveness, interdependence, and access for everyone.

## Office of Student Accommodations

The Office of Student Accommodations (https://osa.wvu.edu/) (OSA) is dedicated to enhancing educational opportunities and providing equal access for students with permanent and temporary disabilities at West Virginia University and all of its campuses. We provide a range of services and assist in the implementation of accommodations that lead to academic and personal achievement.

## Commitment to Assessment

West Virginia University conducts comprehensive and systematic assessment of student learning across all locations and delivery methods. Continuous improvement of student learning is faculty-driven (authentic and embedded), conducted at the course, program, and institutional levels, and grounded in the work of the colleges and individual academic programs, the Provost's Office, the Undergraduate Council, and the Graduate Council.

The Provost's Office collaborates with the Faculty Senate's Curriculum Committee to ensure quality and rigor of academic programs and courses, the Teaching and Assessment Committee to ensure quality and rigor across sections of courses regardless of modality of delivery or location, and the General Education Foundations Committee to oversee all aspects of the general education program. The Provost's Office works to strengthen the effectiveness of assessment across all programs by:

- Overseeing, reviewing, and approving program creation and review policies, process and governance.
- Serving as an institutional-level resource for curricular design, program evaluation, and assessment of learning best practices.
- Facilitating faculty professional development in curricular design, program evaluation, and assessment of learning.
- Providing consulting to departments to enhance their program improvement based upon assessment planning and reporting.
- Compiling supporting documentation and evidence of the assessment work at WVU in support of institutional accreditation.

## Distinguished Professors

- Kashy Aminian,  Charles T. Holland Professor in Petroleum and Natural Gas Engineering
- James Anderson, Davis Michael Professor of Forestry and Natural Resources
- Vinay Badhwar, Gordon F. Murray Chair of Cardiothoracic Surgery
- Karl Barth, Samples Professorship of Civil and Environmental Engineering
- Robert M. Bastress, John W. Fisher II Professor of Law
- Debangsu Bhattacharyya, GE Plastics Professor in Chemical and Biomedical Engineering
- Robert E. Blobaum, Eberly Family Distinguished Professor of History
- Forest J. Bowman, Jackson Kelly Professor of Law, Emeritus
- Gregory W. Bowman, William J. Maier, Jr. Dean
- Naomi Boyd, Fred T. Tattershell Chair in Finance
- Laura Brady, Eberly Family Professor of Outstanding Teaching
- John F. Brick, JF Brick Endowed Chair in Neurology
- William I. Brustein, Eberly Family Distinguished Professor of History
- Vincent P. Cardi, Bowles, Rice, McDavid, Graff and Love Professor of Law
- Timothy Carr, Marshall S. Miller Energy Professor of Geology
- Linda M. Carson, Ware Distinguished Professor, Emerita
- Judie F. Charlton, Judie F. Charlton Chair for Glaucoma Outreach
- Shawn A. Chillag, Patricia T. Ayash Distinguished Professorship
- Nigel N. Clark, George B. Berry Chair of Engineering
- Roger Congleton, BB&T Chair of Economics
- Patrick W. Conner, Eberly Centennial Professor in English, Emeritus
- Jody L. Crosno, Joseph E. Antonini Chair in Marketing
- Annie Peng Cui, Kmart Chair in Marketing
- Reagan P. Curtis, Chester E. and Helen B. Derrick Teacher College of Education and Human Services Endowed Professor
- Robert Dailey, Davis Michael Professor of Animal and Nutritional Sciences
- Lisa DeFrank-Cole, Harriet E. Lyon Professorship in Women's and Gender Studies
- Walter Dekeseredy, Anne Deane Carlson Endowed Chair of Social Sciences
- A. Courtney DeVries, John T. and June R. Chambers Chair of Oncology Research
- Lisa DiBartolomeo, Armand E. and Mary W. Singer Professor in the Humanities
- Robert DiClerico, Eberly Family Professor Outstanding Teaching, Emeritus
- Charles R. DiSalvo, Woodrow A. Potesta Professor of Law
- Gregory Dudley, Eberly Family Distinguished Professor of Chemistry
- Richard Dull, GoMart Professor in Accounting Information Systems
- Barry A. Edelstein, Eberly Family Professor of Psychology
- Emma Morton Eggleston, Quad/Graphics Chair in Internal Medicine
- James R. Elkins, Arthur S. Dayton Professor Law

- Eloise Elliott, The Ware Family Distinguished Professorship
- Judith Feinberg, Dr. Edmund B. Flink Chair of Internal Medicine #1
- John W. Fisher, II, William J. Maier Jr. Dean, Emeritus and Robert M. Steptoe and James D. Steptoe Professor of Property Law, Emeritus
- Paula F. Fitzgerald, Nathan Haddad Professor of Business Administration
- Kenneth Fones-Wolf, Stuart and Joyce Robbins Chair in History
- Stephanie Foote, Jackson and Nichols Chair of English
- Mathis P. Frick, O. F. Gabriele Chair of Radiology
- James J. Friedberg, Hale J. and Roscoe P. Posten Professor of Law
- Hota S. GangaRao, Wadsworth Professorship
- Laura Gibson, Alexander B. Osborn Distinguished Professor in Hematological Malignancies Research
- Richard M. Goldberg, Lawrence S. and Jean DeLynn Chair of Oncology
- Alan Goodboy, Peggy Rardin McConnell Chair in Communication Studies
- Rakesh K. Gupta, Berry Chair of Chemical Engineering
- Michael Gutensohn, Ray Marsh and Arthur Pingree Dye Professor
- Joseph D. Hagan, Barnette Professor of Political Science
- Trevor M. Harris, Eberly Family Professor of Geography
- Hannah W. Hazard-Jenkins, Jean and Laurence DeLynn Chair of Oncology
- Erik Herron, Eberly Family Professor of Political Science
- John Hu, Statler Chair in Engineering for Natural Gas Utilization
- Tara Hulsey, E. Jane Martin Professor of Nursing
- James Iovino, Ogden Newspapers Visiting Assistant Professor of Media Innovation
- Glen P. Jackson, Ming Hsieh Teaching Professor of Forensic and Investigative Science
- H. Keith Jackson, Philip J. Faini/Falbo Family Dean of the College of Creative Arts
- Thomas Kammer, Eberly College Centennial Professor, Emeritus
- Vlad Kecojevic, Murray Chair of Mining Engineering
- Peter E. Konrad, JW Ruby Chair for the Study of Neurosciences and Neurosurgery
- Alexander Kurov, Fred T. Tattersall Chair in Finance
- Kennon A. Lattal, Eberly College Centennial Professor of Psychology
- Nathan Lerfald, Anthony G. DiBartolomeo Professorship in Medicine
- Lian Li, Robert L. Carroll Chair of Physics
- Xingbo Liu, Statler Endowed Chair of Engineering
- Paul Lockman, Douglas D. Glover Endowed Chair of the Department of Basic Pharmaceutical Sciences
- Anne Marie Lofaso, Arthur B. Hodges Professor of Law
- Yi Luo, Charles E. Lawall Endowed Chair for Energy and the Environment in Mining Engineering
- Joseph Lupo, J. Bernard Schultz Endowed Professor of Art
- J. Wallis Marsh, The Bernard Zimmerman, MD Chair in Surgery
- Diana Martinelli, Widmeyer Professorship in Public Relations
- Thomas Mauger, Jane McDermott Shott Chair of Ophthalmology
- Marjorie A. McDiarmid, Steptoe and Johnson Professor of Law and Technology
- Patrick C. McGinley, Charles H. Haden, Jr. Professor of Law
- James McGraw, Eberly Family Professor of Biology
- Maura McLaughlin, Eberly Family Distinguished Professor of Physics and Astronomy
- Daniel McNeil, Eberly Family Professor for Outstanding Public Service
- Mark D. Miller, Dana L. & Peggy M. Farnsworth Chair in Educational Psychiatry
- Brijes Mishra, Syd and Felicia Peng Professor of Mining Engineering
- Keith Morris, Ming Hsieh Distinguished Professor of Forensic and Investigative Science
- Tracy Morris, Eberly Family Professorship for Outstanding Teaching
- Charles J. Mullett, Margaret T. & Larry K. Pickering Chair in Pediatrics
- Scott Myers, Peggy Rardin McConnell Chair of Communication Studies
- R. Osvaldo Navia, Grace Kinney Mead Chair of Geriatrics
- Randy J. Nelson, Hazel Ruby McQuain Chair for Neurological Research
- Steven Neuenschwander, Mabel DeVries Tanner Endowed Professor of Theatre

- Peter Ngan, Branson-Maddrell Endowed Professorship in Orthodontics
- Timothy Nurkiewicz, E. J. Van Liere Medicine Professorship
- Daniel Panaccione, Davis Michael Professor of Plant and Soil Sciences
- Syd S. Peng, Charles E. Lawall Chair in Mining Engineering, Emeritus
- William P. Petros, Gates E. Wigner Endowed Deanship
- Jason Phillips, Eberly Family Professor of Civil War Studies
- Ubolrat Piamjariyakul, WVUH Evidence Based Research Endowed Professorship
- L. Christopher Plein, Eberly Family Professor for Outstanding Public Service
- Joseph Prudomme, Christopher Cline Chair in Orthopedic Surgery
- Hassan H. Ramadan, Stephen and Patricia Wetmore Chair in Otolaryngology
- Ronald Reed, Arthur I. Jacknowitz Chair for Clinical Pharmacy
- Hayne W. Reese, Centennial Professor of Psychology, Emeritus
- Ali Rezai, John D. Rockefeller IV Chair in Neuroscience
- Larry A. Rhodes, James H. Walker, MD Chair of Pediatric Cardiology
- Patricia Rice, Eberly Family Professor for Outstanding Teaching, Emerita
- Bryan Richmond, William J. Maier, Jr. Chair of Research
- Richard A. Riley, Louis F. Tanner Distinguished Professor of Public Accounting
- Terry L. Rose, Ernest L. Hogan Chair of Life Insurance
- J. Michael Ruppert, Jo and Ben Statler Eminent Scholar and Chair, Breast Cancer Research
- Kathleen “Katy” O’Hearn Ryan, Eberly Family Professorship for Outstanding Teaching
- John P. Saldanha, Sears Chair in Global Supply Chain Management
- Arif R. Sarwari, Dr. Edmund B. Flink Chair of Internal Medicine
- R. Charles Scatterday, Shott Teaching Assistant Professor
- Ludwig Christian Schaupp, David W. and Nancy F. Hamstead Professor of Accounting
- Earl Scime, Oleg D. Jefimenko Professor of Physics
- Mohindar Seehra, Eberly Professor in Physics, Emeritus
- Partho P. Sengupta, Abnash C. Jain Chair in Cardiology
- Sunil Sharma, N. Leroy Lapp Endowed Professorship
- Kenneth Showalter, C. Eugene Bennett Distinguished Chair in Chemistry
- James Simpkins, Barbara B. Highland Chair in Stroke
- Gordon Smith, Stuart and Joyce Robbins Distinguished Professor in Epidemiology
- Xueyan Song, George B. Berry Chair of Engineering
- Samuel F. Stack, Chester E. and Helen B. Derrick Teacher Education Endowed Professor
- Gay Stewart, Eberly Professor of STEM Education
- Michael Strager, Davis Michael Professor of Resources Economics Management
- Donley Studlar, Eberly Family Professor of Political Science, Emeritus
- Timothy Sweet, Eberly Professor of American Literature
- John Taylor, Jackson Kelly Professor of Law
- Angel Tuninetti, Armand E. and Mary W. Singer Professor in the Humanities
- Richard Turton, Russell and Ruth Bolton WVU Professorship for Outstanding Teaching
- Stephen Valentine, Eberly Family Professor of Chemistry
- Kung Wang, Eberly Family Professorship of Chemistry
- Bryan Weaver, Dr. Edward C. Armbrecht Oral and Maxillofacial Surgery Professorship
- Jessica Wilkerson, Stuart and Joyce Robbins Chair in History
- Alison Wilson, Skewes Family Chair for Trauma
- Charles Yuill, Davis Michael Professor of Design and Community Development
- John Zaniewski, Asphalt Technology Professorship
- C. Q. Zhang, Eberly Family Professorship of Mathematics
- Sam Zizzi, Dr. Pat Fehl Endowed Professor

# Academic Standards

## Academic Rights, Penalties, and Appeals

**The policies described in this section are based on the** Board of Governors Rules and Policies (https://policies.wvu.edu/finalized-bog-rules/) **Academics Rule 2.5, Student Rights and Responsibilities. This section expands the general policy to include procedures for undergraduate, graduate, and professional students at WVU (including the divisional campuses in Beckley and Keyser, but subject to exclusions as defined in individual policies).**

A student, by voluntarily accepting admission to West Virginia University (WVU) or enrolling in a class or course of study offered by WVU, accepts the academic requirements and criteria of the institution. Normally students may finish a program of study according to the requirements under which they were admitted to the program. However, requirements are subject to change at any time with reasonable notice provided to students. It is the student's responsibility to fulfill coursework and degree or certificate requirements and to know and meet criteria for satisfactory academic progress and completion of the program. Students are expected to adhere to academic requirements and standards in all academic settings, such as classrooms, laboratories, and clinics, and during any activities that are part of academic requirements. Further, WVU students are citizens of a broader academic community. As such, the University expects that every member of its academic community share its historic and traditional commitment to honesty, integrity, and the search for truth. To meet these standards, academic dishonesty is prohibited and is subject to both academic and disciplinary penalties. Information on these penalties, as well as all associated procedures, are found on the West Virginia University Office of Academic Integrity (https://academicintegrity.wvu.edu/) website. Please note that, to the extent there is any inconsistency with the language in the catalog and the BOG Academics Rule 2.5 or the WVU Policy on Student Academic Integrity, the BOG Rule and the WVU Policy govern; please refer to the BOG Rule and WVU Policy for the most current language.

Any question of interpretation regarding student rights and responsibilities, academic penalties, or appeal processes for final grades or other academic penalties shall be referred to the Provost and Vice President of Academic Affairs, the Vice President for Health Sciences, or the divisional campus President, as appropriate, for final determination.

Any behaviors not academic in nature but related to student conduct should be referred to the Campus Student Code as stipulated in Board of Governors Rules and Policies (https://policies.wvu.edu/finalized-bog-rules/) Student Life Rule 6.1.

## Academic Rights

Each student at West Virginia University has the following academic rights (as well as others; see BOG (https://policies.wvu.edu/finalized-bog-rules/) Academics Rule 2.5):

1. Right to have their performance evaluated solely upon performance as measured against academic standards. The student shall not be evaluated prejudicially, capriciously, or arbitrarily. The student shall not be graded, nor shall their performance be evaluated on the basis of race, color, national origin, ancestry, age, physical or mental disability, marital or family status, pregnancy, veteran status, service in the uniformed services (as defined in state and federal law), religion, creed, sex, sexual orientation, genetic information, gender identity, or gender expression (see BOG (https://policies.wvu.edu/finalized-bog-rules/) Governance Rule 1.6), or other protected status.
2. Right to appeal any final grade, charge of academic dishonesty, or other academic penalty.
3. Right to access a copy of the University catalog and program documents in which all current program requirements and standards are described (e.g. required courses, total credit requirements, time in residence requirements, special program requirements, minimum grade point average, probation standards, professional standards, etc.).
4. Right to receive course syllabi with descriptions of content and requirements for any course in which they are enrolled (e.g., attendance expectations, special requirements, laboratory requirements including time, field trips and costs, grading standards and procedures, professional standards, etc.).
5. Right to assigned grades issued from the instructor of each course to students enrolled in the course consistent with the academic rights set out in the preceding sections.

## Academic Dishonesty

Students are expected to adhere to the academic standards set forth by West Virginia University, and to avoid academic dishonesty in all its forms. West Virginia University defines academic dishonesty as follows:

1. Plagiarism means the theft or unauthorized use of work, typically created by another. It includes but is not limited to:
   a. the use of another's words, ideas, or media – whether published or unpublished, partial or complete, by paraphrase or direct quotation – without complete and accurate acknowledgement;
   b. the unacknowledged use of materials prepared by another individual, including an individual engaged in the selling of term papers or other academic materials; or
   c. repeated submission of one's own work, specifically submission of the same material in multiple courses or iterations of a course, without the instructor's express permission.

2. Cheating means reliance on unauthorized resources, in connection with examinations or academic assignments. It includes but is not limited to:
   a. collaboration with peers beyond that authorized by the instructor in the completion of an examination or academic assignment;
   b. cheating on an examination or academic assignment, by either (i) utilizing unauthorized physical or technological resources (e.g., cheat sheets, online resources), or (ii) receiving unauthorized personal assistance (e.g., copying from another student); or
   c. the acquisition or use, without permission, of examinations or other academic material belonging to a member of the University faculty or staff.

3. Fabrication or Falsification means acts of misrepresentation, forgery, or fraud as they relate to academic or educational matters. It includes but is not limited to:
   a. fabricating or falsifying citations, data, or other records;
   b. wrongfully fabricating or falsifying attendance or participation records for a University course or in an experiential or clinical setting;
   c. wrongfully fabricating or altering an educational record (e.g., admission, grade, or attendance record) after it has been created;
   d. use of University documents or instruments of identification for fraudulent purposes (e.g., impersonation of another student); or
   e. knowingly furnishing false statements in any University academic proceeding.

4. Other Prohibited Academic Conduct means:
   a. engaging in behavior specifically prohibited by a faculty member in the course syllabus; or
   b. violating other departmental, college, or university academic standards, and/or legal or professional standards.

5. Facilitation means:
   a. providing unauthorized materials or personal assistance to another student when such assistance allows them to commit academic dishonesty; or
   b. compelling someone else to commit academic dishonesty on one's behalf.

Information on all associated procedures are found in the WVU Policy on Student Academic Integrity (https://academicintegrity.wvu.edu/policies/student-academic-integrity/). Please note that, to the extent there is any inconsistency with the language in the catalog and the Board of Governors Rules and Policies (https://policies.wvu.edu/finalized-bog-rules/) or the WVU Policy on Student Academic Integrity, the BOG Rule and the WVU Policy govern; please refer to the BOG Rule and WVU Policy for the most current language.

# Types of Academic Penalties

## In this section:


- Penalties for Failure to Meet Academic Requirements or Standards (p. 12)
- Penalties for Academic Dishonesty (p. 13)


## PENALTIES FOR FAILURE TO MEET ACADEMIC REQUIREMENTS OR STANDARDS

A student at West Virginia University who fails to meet academic requirements or standards will be subject to one or more of the following academic penalties:

1. A lower final grade, including failure of a course. A lower grade or failure of the course can be imposed by the course instructor/coordinator. If a student appeals a final grade, the grade shall remain in effect until the appeal is completed.
2. Exclusion of a student from further participation in class prior to any appeal proceedings requires that the course instructor/coordinator obtain approval of the dean of the college or school offering the course.
3. Required repetition or revision of a program requirement, or termination of the student's participation in specific program-related activities.
4. Failure of a program requirement or failure to meet academic standards. Program requirements and standards must be described in the catalog or other program documents provided or available to students. Program requirements may include such items as passing a qualifying exam, maintaining progress on research, developing required technical skills, or meeting professional standards of conduct (including the avoidance of academic dishonesty).
5. Academic probation or suspension at the program, college, or school level for failure to meet program requirements and academic standards, or at the university level for failure to meet grade point average standards. More information concerning probation and suspension of undergraduate students at the university level (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probationsuspensiontext) is available in the Academic Standards section of undergraduate catalog. More information about probation and suspension of graduate or professional students at the program, college, or school level (http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensiontext) is in the Academic Standards section of the graduate catalog as well as in program documents. If a graduate or professional student appeals a penalty of program suspension, the dean of the college or school offering the student's program will determine if the student shall be allowed to continue in the program, and the conditions of that continuation, until the case is determined.
6. Dismissal from a program, college, school or the university. Dismissal is defined as termination of student status, including any right or privilege to receive some benefit or recognition or certification. A student may be academically dismissed from any program and remain eligible to enroll in courses in other programs at the institution, or a student may be academically dismissed from the institution and not remain eligible to enroll in other

courses or programs at the institution, including other divisional campuses (BOG (https://policies.wvu.edu/finalized-bog-rules/) Academics Rule 2.5). If a student appeals a penalty of program dismissal, the dean of the college or school offering the student's program will determine if the student shall be allowed to continue in the program, and the conditions of that continuation, until the case is determined. Dismissal from a program, college, or school must be communicated to the Associate Provost for Undergraduate or Graduate Academic Affairs, the Health Sciences Associate Vice President for Academic Affairs, or the divisional campus President once the time limit for a student appeal has expired or the appeal process has been completed. The Associate Provost, Associate Vice President, or divisional campus President submits a request to the appropriate office to change the student's status to non-degree. Academic dismissal from the university requires consultation and approval from the student's dean, the Associate Vice President for Academic Affairs (Health Sciences students only), and the Provost's or divisional campus President's Office.

## PENALTIES FOR ACADEMIC DISHONESTY

Information for both students and faculty on procedures related to the resolution of allegations of academic dishonesty can be found on the Office of Academic Integrity (https://studentconduct.wvu.edu/) website. A student at West Virginia University who is found responsible for academic dishonesty will be subject to one or more of the following academic and/or disciplinary penalties:

1. Remedial and/or educational sanctions.
2. Required repetition or revision of the academic assignment at issue.
3. A lower grade on the academic assignment or course at issue.
4. Failure of the academic assignment or course at issue.
5. Unforgivable failure (UF) of the course. When a UF is assigned, a student may repeat the course at issue, but the undergraduate (and where applicable, the graduate or professional school) D/F repeat process will not be applied. A permanent record will appear on the student's transcript, and the F will be permanently factored into the student's GPA.
6. Failure of the course with exclusion from further participation. The student will receive a final grade of an "F" for the course at issue but will be prohibited from continued enrollment or participation in the course for the duration of the semester.
7. Disciplinary probation, deferred suspension, or disciplinary suspension at the university level. More information concerning disciplinary probation, deferred suspension, and disciplinary suspension of students at the university level is available in the West Virginia University Campus Student Code and in the regional campus handbooks (https://studentconduct.wvu.edu/campus-student-code/).
8. Dismissal from a program, college, or school. Dismissal is defined as termination of student status, including any right or privilege to receive some benefit or recognition or certification, from a specific academic program. A student may be academically dismissed from any program and remain eligible to enroll in courses in other programs at the institution.
9. Expulsion. Permanent separation of the student from the University. More information concerning expulsion of students at the university level is available in the West Virginia University Campus Student Code and in the regional campus handbooks (https://studentconduct.wvu.edu/campus-student-code/).
10. Other sanctions. Other sanctions may be imposed instead of or in addition to those specified, where those sanctions bear a reasonable relationship to the nature and severity of the violation.

# Appeals

## In this section:


- General Information about Appeals (p. 13)
- The Appeal Process for Failure to Meet Academic Requirements or Standards (p. 14)
- The Appeal Process for Academic Dishonesty (p. 16)


## General Information about Appeals

Students may appeal any final grade, charge of academic dishonesty, or other academic penalty described above and imposed by a course instructor/coordinator, the institution, or its constituent academic units through the procedures described in this section of the catalog with the following exceptions:

- Grades for individual course assignments cannot be appealed except in the context of a final grade appeal or a charge of academic dishonesty.
- University, college/school, or program probation based on failure to meet minimum GPA standards may not be appealed. University suspension of undergraduate students based on GPA may be appealed as described in the Academic Standards section of the undergraduate catalog (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probationsuspensiontext).
- When imposed for academic dishonesty, disciplinary penalties imposed by the Office of Academic Integrity (https://academicintegrity.wvu.edu/policies/student-academic-integrity/), including but not limited to probation, suspension, or expulsion from the university, are appealed as described here. However, disciplinary penalties imposed by the Office of Student Rights and Responsibilities for any other form of misconduct may not be appealed through these processes, and students should refer to the Campus Student Code for appropriate procedures.

The primary purpose of the appeal procedure is to allow review of a final grade, charge of academic dishonesty, or other academic penalty in cases where a student believes that due process was not followed or that the grade, charge, or penalty was imposed unfairly or inconsistently with course, program, and university standards and regulations.

Students are expected to present written grounds (typically via email) for an appeal. Students have the right to appeal a final grade, charge of academic dishonesty, or academic penalty that they believe reflects a capricious, arbitrary, or prejudiced academic evaluation, or reflects discrimination based on criteria listed in BOG (https://policies.wvu.edu/finalized-bog-rules/) Governance Rule 1.6, Section 1.2. Additional grounds for appeal may include: unreasonable severity of the penalty; demonstrable prejudice in the decision-making process; a belief that the evidence does not support the finding of responsibility (in the case of academic dishonesty) or the choice of penalty; or additional evidence or new information that was not considered in determining the penalty. Further guidance for students on preparing an appeal is available on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage.

If a student does not appeal a final grade, charge of academic dishonesty, or other academic penalty, fails to follow the appeal procedures described below, or does not attend a scheduled meeting regarding the appeal, the final grade, charge of academic dishonesty, or other academic penalty will be upheld, regardless **of whether or not the student is still enrolled in the course or program.**

## COMMUNICATION ABOUT APPEALS:

All communication with a student concerning an appeal must come directly from, or be directed to, the student, except in cases of academic dishonesty that proceed through the Office of Academic Integrity (https://academicintegrity.wvu.edu/policies/student-academic-integrity/), when communication through attorneys or advisors is explicitly allowed. Otherwise, although students and others involved in the appeal process may consult with third parties, appeals and communication about appeals should be conducted between the student and individuals or committees charged with reviewing the appeal. Communication may take place through written documents, e-mail (using official University e-mail accounts whenever possible), and direct contact (telephone, face-to-face meetings, etc.). Decisions at each level of appeal must be communicated to the student and other individuals involved with the appeal at prior levels in writing transmitted via WVU e-mail.

## RESPONSIBILITY FOR APPEAL DECISIONS:

Detailed information about which individuals or committees are responsible for handling different types and levels of appeals is available on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage. These individuals may delegate this responsibility to a designee or to a standing or ad-hoc committee. In some cases, program, college, or school documents may provide additional guidance on who is charged with reviewing specific types of appeals. If an appeal reviewer was involved in the determination of a sanction, or otherwise has a conflict of interest relevant to the appeal, a different appeal reviewer must be identified. When necessary, decisions about who is responsible for appeal decisions will be made by the Associate Vice President for Academic Affairs in Health Sciences, the Provost, or the divisional campus President, or the designee of any of these.

## EVIDENCE AND MEETINGS CONCERNING APPEALS:

Individuals and committees reviewing appeals may convene individual or joint meetings or request additional materials to collect further evidence. The student may be accompanied to meetings concerning the grade, charge, penalty, or appeal by a person of his or her choice from the institution. Such advisors may consult with but may not speak on behalf of their advisees or otherwise participate directly in the proceedings, unless they are given specific permission to do so by the individual or committee conducting the appeal. Attorneys, operating in that capacity, may only participate in appeals in cases of academic dishonesty through the Office of Academic Integrity (https://academicintegrity.wvu.edu/policies/student-academic-integrity/), and are subject to limitations imposed by the WVU Policy on Student Academic Integrity.

# The Appeal Process for Failure to Meet Academic Requirements or Standards

## STEPS IN THE APPEAL PROCESS:

The following is a summary of the steps in the appeal process for failure to meet academic requirements or standards. In addition, a detailed list of the steps involved in each type of appeal is available on the Academic Standards Resources webpage on the Detailed Appeal Procedures (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/) tab to assist students, instructors, and administrators in managing the appeal process.

- Students are notified of final grades and other academic penalties.
  - Students are informed of final grades for courses at the end of each academic term through the WVU Portal accessible at https://portal.wvu.edu.
  - The individual or chair of the committee who imposed an academic penalty must notify the student in writing via WVU e-mail of the academic penalty.
- Prior to filing an appeal, students are strongly encouraged (but not required) to contact the individual or chair of the relevant committee who reported a final grade or imposed an academic penalty to express their concerns and attempt to resolve the issue. The individual or committee chair, or another informed individual, must meet with the student to provide information and evidence forming the basis for the grade or penalty.

- Level 1 appeal (for final grades and other academic penalties):
  - The student may begin an appeal by submitting a written appeal via WVU e-mail to the Level 1 appeal reviewer named on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage within the time limit provided below. The student's appeal must include the documentation and evidence forming the basis of their appeal.
  - The individual or committee that gave the grade or imposed the penalty must provide all relevant documentation (including the criteria for determining the student's final grade in the case of a final grade appeal) to the Level 1 appeal reviewer upon their request.

- The Level 1 appeal reviewer assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the Level 1 reviewer.
- The reviewer communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the grade, penalty, or appeal to that point. The reviewer retains all documentation related to the appeal for 5 years. In the case of a final grade appeal, the Level 1 appeal reviewer ensures that a grade modification is submitted if necessary.
- If the student accepts the Level 1 appeal decision, the appeal is concluded.

- Level 2 appeal (for final grades and other academic penalties):
  - If the student does not accept the Level 1 appeal decision, the student may continue their appeal by submitting a written appeal via WVU e-mail to the Level 2 appeal reviewer named on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage within the time limit provided below.
  - The Level 1 appeal reviewer forwards all materials included in the appeal to the Level 2 reviewer and the student upon request from the Level 2 reviewer. Both the student and other individuals or committees may provide additional information if they wish.
  - The Level 2 appeal reviewer assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the Level 2 reviewer.
  - The reviewer communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the grade, penalty, or appeal to that point, including the Level 1 appeal reviewer. The reviewer retains all documentation related to the appeal for 5 years. In the case of a final grade appeal, the Level 2 appeal reviewer ensures that a grade modification is submitted if necessary.
  - If the student accepts the Level 2 appeal decision, the appeal is concluded. If the appeal concerned a final grade or an academic penalty other than program dismissal, the appeal is concluded.
- Level 3 appeal (for dismissal from a program):
  - If the penalty is dismissal from a program, the student may continue their appeal by submitting a written appeal via WVU e-mail to the Level 3 appeal reviewer named on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources/) webpage within the time limit provided below.
  - The Level 2 appeal reviewer forwards all materials included in the appeal to the Level 3 reviewer and the student upon request from the Level 3 reviewer. Both the student and other individuals or committees may provide additional information if they wish.
  - The Level 3 appeal reviewer may (but is not required to) appoint and convene a Student Academic Hearing Committee (SAHC) to hear the case and review the appeal. SAHC procedures follow.
    - Members are appointed to the SAHC at the discretion of the Level 3 appeal reviewer and shall comprise at least three faculty members. At least one SAHC member should be from the program offering the course or the student's program; at least one should be from outside the program offering the course or the student's program.
    - The SAHC holds a joint hearing with the student and any individuals involved in making the academic dishonesty charge or imposing the academic penalty and may also convene additional individual meetings or request additional materials to collect further evidence. The hearing is set outside of the student's scheduled classes; should the student choose not to appear, the meeting will proceed as scheduled.
    - The student may be accompanied to the hearing or meetings or be advised by a person of his or her choice from the institution. Likewise, the faculty member, academic officer, or committee recommending dismissal may have an advisor from the institution. Such advisors may consult with but may not speak on behalf of their advisees or otherwise participate directly in the proceedings, unless they are given specific permission to do so by the individual or committee conducting the appeal.
    - Witnesses may be called by any of the parties involved.
    - A record of the SAHC hearing shall be prepared in the form of summary minutes or an audio recording. This record and relevant attachments and will be provided to the student upon request.
  - The Level 3 appeal reviewer assesses the available evidence, including the recommendation of the Student Academic Hearing Committee, when available, and makes a decision about the appeal based on the evidence and recommendation. The reviewer communicates the decision in writing via WVU e-mail to the student, and other individuals or committees that have been involved in the penalty or appeal to that point, including the Level 1 and 2 appeal reviewers. The reviewer retains all documentation related to the appeal for 5 years.
  - The appeal is concluded.

## TIME LIMITS FOR STEPS IN THE APPEAL PROCESS:

- Level 1:
  - Final Grade Appeal
    - The student files an initial appeal based on the Timeline for Appeals on the Office of the Provost webpage (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-final-grade/), after the grade is posted. The timeline on this webpage will indicate the last date the final grade appeals can be filed for each academic term in the current academic year.
    - The decision about the appeal is communicated to the student within 10 academic days* after the student submits the appeal.
  - Academic Penalty
    - The student files an initial appeal within 10 academic days* after the penalty is sent to the student.
    - The decision about the appeal is communicated to the student within 10 academic days* after the student submits the appeal.
- Level 2 (for final grades and other academic penalties):

    - The student files a continuation of the appeal within 10 academic days* after the decision at Level 1 is sent.
    - The decision about the appeal is communicated to the student within 10 academic days* after the student submits the Level 2 appeal.
- Level 3 (appeals of program dismissal only):
    - The student files a continuation of the appeal within 10 academic days* after the decision at Level 2 is sent.
    - The decision about the appeal is communicated to the student at the discretion of the Provost's office.

*Academic days are defined as days during which the University is open and on-campus classes are officially in session. If classes are canceled for the entire campus, for any portion of a day, the day will not be deemed an academic day.

# The Appeal Process for Academic Dishonesty

## STEPS IN THE APPEAL PROCESS:

The following is a summary of the steps in the appeal process for academic dishonesty. In addition, a detailed list of the steps involved in each type of appeal is available on the Office of Academic Integrity (https://academicintegrity.wvu.edu/policies/student-academic-integrity/) webpage.

- A student who has been found responsible for violating the WVU Policy on Student Academic Integrity may initiate an appeal by submitting a written appeal following the instructions provided in the notice of outcome. The student's appeal must include the documentation and evidence forming the basis of their appeal, and must be based on one or more of the recognized grounds for appeal listed in the WVU Policy on Student Academic Integrity. The student may appeal the finding of responsibility, the sanction(s), or both.
- The Office of Academic Integrity must provide all relevant documentation to the Provost upon their request.
- The Provost assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the Provost.
- The Provost communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the charge or appeal to that point. The Office of Academic Integrity retains all documentation related to the appeal for 5 years.
- Once the Provost has issued a decision, the matter is final and binding upon all involved.

## TIME LIMITS FOR STEPS IN THE APPEAL PROCESS:

The student must file an appeal within 10 academic days* from the date the outcome letter is sent. If no appeal is submitted within that time frame, the sanction(s) will be applied, no appeal will be considered, and the matter will be concluded.

The decision about the appeal is communicated to the student within 30 calendar days after the student submits the appeal.

*Academic days are defined as days during which the University is open and on-campus classes are officially in session. Summer sessions and final exam days are included in this definition. If classes are canceled for the entire campus, for any portion of a day, the day will not be deemed an academic day.

# In this section:


- Undergraduate Academic Probation and Suspension Policy (p. 16)
- Probation Procedures (p. 18)
- Suspension Procedures (p. 18)
- Duration of Suspension (p. 16)
- Appeal of Suspension (p. 17)
- Summer Enrollment for Students Suspended for Fall (p. 17)
- Winter Enrollment (p. 17)
- Immediate Reinstatement after Suspension (p. 17)
- Readmission after Serving Suspension (p. 17)


# Undergraduate Academic Probation and Suspension Policy

## DEFINITIONS

Fall and Spring are regular terms. Winter and Summer, and Maymester are not.

# Policy

This policy concerns academic probation and suspension (referred to below as probation and suspension) in the West Virginia University system. It does not apply to the suspension of financial aid eligibility (https://financialaid.wvu.edu/applying-for-aid/unsatisfied-requirements/) or suspension due to violation of the student conduct code (https://studentconduct.wvu.edu/campus-student-code/).

Academic Notice: At the end of any regular term (Fall and Spring), any student with an overall grade point average (GPA) below a 2.0 for the first time will be on Academic Notice.

Probation: At the end of any regular term (Fall and Spring), any student with an overall grade point average (GPA) below a 2.0 for the second time and beyond will be on Probation.

Suspension: The accumulation of academic notice and probationary terms may result in suspension at the end of the Fall and Spring term if the student has a GPA below 2.0. Students are suspended only after a regular term.

- First Suspension: students who earn an overall GPA lower than a 2.0 for three regular terms (consecutive or not) will be placed on Academic Suspension for one calendar year.
- Second Suspension: after returning from their first suspension, students who earn an overall GPA lower than a 2.0 for two additional regular terms (consecutive or not) will be placed on Academic Suspension for one calendar year.
- Third Suspension: after returning from their second suspension, students who earn an overall GPA lower than a 2.0 for two additional regular terms (consecutive or not) will be placed on Academic Suspension for three calendar years.

Schools, colleges, and programs may dismiss from their programs using criteria that are more rigorous than the university requirements described above.

## Appeal

Suspended students have until early January or early June (exact date specified in the emailed notice of suspension) to appeal the suspension by following the appropriate workflow as described in the notice of suspension. Students who appeal their suspension and are denied, or who do not appeal it, will be removed from their Spring or Fall term courses. For more information regarding Academic Probation, Suspension and Suspension Appeals (https://undergraduate.wvu.edu/strategies/probation-and-suspension/), please visit the Academic Strategies, Curriculum and Assessment website.

## Summer Enrollment

Students who are placed on academic notice, probation or suspended after a spring term may enroll in summer courses in the WVU system. Suspended students who are enrolled in summer courses as of July 1 will not be removed from their fall classes until summer grades are available. Students placed on academic notice, probation or suspended who rehabilitate their overall GPA to 2.0 or above in the summer will be permitted to attend the upcoming fall semester, although the academic notice, probation or suspension will remain on their academic record and will be counted as if it was served. Only summer courses taken in the WVU system (i.e. WVU Morgantown, WVU Online, WVU Potomac State College, and WVU Institute of Technology) are eligible to raise the GPA for determining reinstatement.

## Winter Enrollment

Students who are placed on academic notice, probation or suspended after the Fall term may enroll in winter courses in the WVU system. Students who rehabilitate their overall GPA to 2.0 or above after the winter intersession will be automatically reinstated to good academic standing.

## Immediate Reinstatement after Suspension

Students who are suspended and subsequently reinstated following a successful appeal or a successful summer term may be retained in their major for advising. An unserved suspension is recorded as a suspension on the WVU transcript. Students reinstated following a successful academic suspension appeal are placed on contract with their college/school and are required to abide by the terms of an academic contract. For more information to apply for contractual readmission (https://undergraduate.wvu.edu/strategies/probation-and-suspension/), please visit the Academic Strategies, Curriculum and Assessment website. Failure to abide by the terms of their contract or to return to good academic standing may result in the enforcement of academic suspension at the end of the term. Suspended students who rehabilitate their overall GPA to 2.0 or above in the summer will be permitted to attend the upcoming fall semester, although the suspension remains on their academic record. Suspended students who rehabilitate their overall GPA to 2.0 or above in the winter term will be automatically reinstated from suspension to good academic standing. Only summer or winter courses taken in the WVU system (i.e. WVU Morgantown, WVU Online, WVU Potomac State College, and WVU Institute of Technology) are eligible to raise the GPA for determining reinstatement.

## Readmission after Serving Suspension

Suspended students who wish to be readmitted into the University after their required suspension period must contact the Office of Admissions or appropriate office. Students may or may not be readmitted to their previous major at the discretion of their academic program. Students who are dismissed may transfer to another program if they meet the program's admission requirements and are accepted. Alternatively, they may be advised in the Center for Learning, Advising and Student Success until they are able to be accepted to a program. All reinstated students whose overall GPA is below 2.0 are given a contract that describes the conditions that must be met to avoid suspension in future terms.

After returning from suspension, students who earn an overall GPA lower than a 2.0 for two additional regular terms (consecutive or not) will be placed on academic suspension (refer to *Policy – Suspension*). Courses taken outside the WVU system will not be reflected in a student’s GPA until the overall GPA is 2.0 or above and the courses are approved (see WVU Transient Policy).

## Probation Procedures

At the conclusion of the fall or spring term, students with an overall GPA below 2.0 are sent an academic notice or probation letter from the Office of the University Registrar (OUR) or appropriate office via e-mail to their MIX account. This communication informs the student that they have been placed on academic notice or probation effective for the end of the current term. Students on academic notice or probation will be placed on contract by their College and required to complete specific academic requirements.

## Suspension Procedures

At the conclusion of the Fall or Spring term, suspended students are sent a suspension letter from the Office of the University Registrar or student's individual college via e-mail to their MIX account. The letter informs students that they have been suspended from the West Virginia University system and provides information about appealing the suspension.

The suspension is enforced beginning with the next Fall or Spring term. Successful appeals require strict adherence to the terms of the probation contract provided to the probationary student.

# Accelerated Programs

## Accelerated Bachelor's/Master's Programs

Accelerated Bachelor's/Master's degree programs (ABM programs) offer WVU students the opportunity to pursue both a bachelor's and a master's degree at WVU in the same or related disciplines in an accelerated time frame. Students in approved programs can take required courses for the master’s degree at the 400 or 500 levels prior to completion of the bachelor’s degree.

Students admitted to an ABM program will have their bachelor’s and master’s degrees conferred simultaneously upon completing all requirements for both degrees.

The bachelor’s degree in an ABM program must require at least 120 credits, and the master’s degree must require at least 30 credits, including any courses (up to 14 credits) approved to count for both degrees. For additional information, see the section below on Attaining Multiple Curricula.

## ADMISSIONS, ENROLLMENT, AND PROGRAM STANDARDS

All ABM students are expected to work closely with an academic adviser.

- Regular admission may not be any earlier than the semester in which an undergraduate student is expected to complete 60 credits or later than the semester after which the student needs two additional semesters to complete the bachelor’s degree.
  - The minimum standard for regular admission is a cumulative undergraduate GPA of 3.0, with no provisional admission allowed. The individual programs determine additional admissions criteria (such as completion of specific courses, entrance exam scores, letters of recommendation, or personal statements).
  - Students must complete at least 24 undergraduate credits in residence to be eligible for admission into an ABM program.
- Each ABM program will determine when students begin taking graduate-level courses; students should consult the WVU Catalog for the ABM plan of study.  ABM students do not need to complete a Senior Petition to enroll in graduate-level courses.
  - Courses taken and credits earned while enrolled as an undergraduate student will be recorded on the undergraduate transcript even when used to fulfill graduate requirements.
- Undergraduate ABM students will have their academic status updated to graduate as prescribed by their ABM program.
  - Students must maintain academic standards set forth by the academic unit corresponding to their status (i.e., undergraduate or graduate).
  - Students must be switched to graduate status effective the semester after they have reached 120 credits and have met all other undergraduate graduation requirements.  The ABM program coordinator will request the change of status during the semester when the undergraduate requirements are expected to be completed, effective the following semester.  If students fail to complete the undergraduate requirements, their status for the following semester will be changed back to undergraduate.
- Students admitted to an ABM program must maintain full-time continuous enrollment during fall and spring terms unless given specific permission by the appropriate dean. Individual programs determine enrollment requirements in the summer term.
- Students admitted to an ABM program may not pursue a dual degree, double major, or certificate unless approved by the appropriate dean(s).  They may pursue minors and areas of emphasis as approved by their advisor.
- Students’ eligibility to remain in the ABM program will be evaluated at the end of each semester. Students failing to meet academic standards of the university, college, school, or program will be placed on program probation for no more than one semester, after which they will be terminated from the ABM degree program. Terminated students and students who choose not to continue in the ABM degree program will be eligible to receive their bachelor's degree when they have completed the bachelor’s degree requirements and earned a minimum of 120 credit hours. The credits earned in graduate-level courses apply to the minimum credits required by the bachelor’s degree program.

## TUITION AND FINANCIAL AID

Students in an ABM degree program are charged undergraduate tuition and are eligible for undergraduate financial aid as defined by each program in the Catalog. Once the student's academic status has been updated to graduate level, students are charged graduate tuition. They are eligible for graduate assistantships (with permission of their program) or other graduate student funding opportunities and financial aid.

## APPROVED ABM PROGRAMS:

- Bachelor of Science in Physical Education & Kinesiology and Master of Science in Physical Education Teacher Education
- Bachelor of Science/Master of Science in Sport Management
- Bachelor of Science in Sport and Exercise Psychology and Master of Science in Sports Management
- Bachelor of Science/Master of Science in Journalism
- Bachelor of Science in Journalism and Master of Science in Integrated Marketing Communications
- Bachelor of Science/Master of Science in Integrated Marketing Communications
- Bachelor of Science in Advertising & Public Relations and Master of Science in Integrated Marketing Communications
- Bachelor of Science in Business Administration-Accounting and Master of Science in Forensic and Fraud Examination
- Bachelor of Science/Master of Science in Economics
- Bachelor of Arts in French and Master of Arts in Linguistics
- Bachelor of Science in Immunology and Medical Microbiology and Master of Science in Biomedical Sciences
- Bachelor of Science in Environmental Microbiology and Master of Science in Applied & Environmental Microbiology
- Bachelor of Science in Health Services Management and Master of Health Administration
- Bachelor of Science in Public Health and Master of Public Health

## Accelerated Programs offered, by college/school:


- Arts and Sciences, Eberly College of (p. 19)
- Business and Economics - John Chambers College of (p. 19)
- Creative Arts and Media (p. 19)
- Applied Human Sciences (p. 19)
- Engineering and Mineral Resources - Benjamin M. Statler College of (p. 20)
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## Eberly College of Arts and Sciences


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## John Chambers College of Business and Economics


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## College of Creative Arts and Media


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## College of Applied Human Sciences


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- BSBME Biomedical Engineering and MSBME Biomedical Engineering (p. 653)
- BSCE Civil Engineering and MSCE Civil Engineering (p. 671)
- BSCHE Chemical Engineering and MSCHE Chemical Engineering (p. 662)
- BSEE Electrical Engineering and MSEE Electrical Engineering (p. 708)
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## School of Medicine

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- B.S. Exercise Physiology and M.S. Athletic Training (p. 823)
- B.S. Health Informatics and Information Management and M.H.A. Health Administration (p. 832)*
- B.S. Immunology and Medical Microbiology and M.S. Medical Laboratory Science (p. 841)
- B.S. Immunology and Medical Microbiology and M.P.H Public Health (p. 843)**

## School of Public Health

- B.S. Health Informatics and Information Management and M.H.A. Health Administration (p. 832)*
- B.S. Health Services Administration and M.H.A. Health Administration (p. 889)
- B.S. Immunology and Medical Microbiology and M.P.H Public Health (p. 843)**
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### *NOTES*

* B.S. resides in School of Medicine and M.H.A. resides in School of Public Health
** B.S. resides in School of Medicine and M.P.H resides in School of Public Health

# Admissions

## In this section:


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## Introduction

WVU provides excellent educational programs. The goal of the University's admission policy is to select applicants who will succeed academically and socially. If space is limited, the better-prepared students are admitted.

WVU enrolls a diverse student population. While preference is given to West Virginia residents, qualified students from other states and countries are encouraged to apply. The University is committed to the goal of equal educational opportunity for all students: no candidate is denied admission because of race, religion, color, sex, sexual orientation, marital status, age, handicap or disability, veteran status, or national origin.

The primary focus of the admissions review is on academic potential. All of the required materials submitted by the applicant - application, transcripts, and standardized test scores - are reviewed carefully.

Applications for admission can be found online at WVU Undergraduate Admissions How to Apply (https://admissions.wvu.edu/how-to-apply/) page.

Some colleges, schools, programs, and majors have admission standards that exceed the minimal requirements for admission to the University. Admission to the University does not ensure admission into a specific college, school, program, or major.

## Robert C. Byrd Health Sciences Center

The undergraduate programs at the Robert C. Byrd Health Sciences Center have specific application periods and requirements. Please refer to the program's website for admission requirements specific to undergraduate health sciences center programs. The undergraduate application is available on the WVU Undergraduate Admissions How to Apply (https://admissions.wvu.edu/how-to-apply/) page.

## Visiting Students Coming to WVU

Students enrolled at another institution of higher education, who want to take a course at WVU and have the credit transferred to another college or university must complete the undergraduate application and select "visiting" for student type. The application can be found at: WVU Undergraduate Admissions How to Apply (https://admissions.wvu.edu/how-to-apply/) page under Visiting Students. A new application must be submitted for each term a student wishes to attend. Students must have a 2.0 or above at their current institution or be in good standing.
Visiting students may provide a Statement of Good Standing in lieu of transcripts if it has the student's overall GPA listed and is received directly from the Office of the Registrar from their current institution.

Students attending a branch campus at either WVU Keyser or WVU Beckley must complete a Dual/Visiting campus form with their academic advisor. First-Time-Freshmen or First-Time-Transfer students who were rejected or referred from WVU Morgantown cannot enroll as a visiting student for the term (or prior terms) to their denial.

## Veterans

Veterans who do not meet minimum admission requirements may be reviewed for admission by the Admissions Review Committee. Applicants will complete the appeal process for non-traditional students (https://admissions.wvu.edu/forms-and-procedures/admissions-decision-appeal/).

## Admission Revocation

An offer of admission can be revoked if an applicant's application materials are found to be falsified or if an admitted student engages in behavior that is not in compliance with the WVU Student Conduct Code (https://studentconduct.wvu.edu/campus-student-code/) prior to the first day of classes in the term of admission. Students seeking transfer admission to the university must be academically and otherwise eligible to return to the institution from which they wish to transfer. This includes Visiting and Non-Degree applicants. Academic transcripts indicating suspension will require further action on behalf of the student. The Office of Admissions must receive a written explanation from the student as well as a letter from the school's Registrar indicating good standing and ability to return, prior to the start of class. If admission is revoked prior to the first day of classes, the admitted student may appeal the action to the Associate Provost for Undergraduate Academic Affairs. An enrolled student may be dismissed from the program or University if the student's application materials are found to be falsified, consistent with applicable policies or procedures in the Campus Student Code (https://studentconduct.wvu.edu/campus-student-code/).

## Readmission

Students who leave the University for at least one complete fall or spring semester, must submit an application for readmission to the Office of Admissions. Decisions on readmission are based on the student's academic standing.

If a student attends another institution after leaving WVU, readmission will be based on the WVU academic standing along with academic credit earned at any other institution attended after leaving WVU. In order to be readmitted, students must have an overall grade point average of 2.0 at all institutions attended since leaving WVU, or attain a combined overall grade point average of 2.0 from all institutions including WVU.

Students who were suspended from the University, must apply for readmission. Additional information may be found on the Academic Strategies, Curriculum and Assessment website on the Probation and Suspension (https://undergraduate.wvu.edu/student-resources/probation-and-suspension/) page.

## Second Degree Students

College graduates who want to earn a second bachelor's degree are required to submit an undergraduate application and official transcripts from all institutions previously attended. The Office of Admissions will only accept transcripts sent directly from the Registrars' Office of these institutions. Transcripts issued to the student, or received via fax, scan or email are not considered official. Admission is granted on the basis of a minimum cumulative grade point average of 2.0 in the first bachelor's degree. Specific majors may have higher requirements. After admission, the individual college and department evaluate the transcript and apply any appropriate credit from the first bachelor's degree toward completion of the second. Students who have earned a bachelor's degree from an accredited college or university will meet all of WVU's General Education Foundations (GEF) requirements. All Credit Residence Requirements (http://catalog.wvu.edu/undergraduate/degree_regulations/#Residency_Requirements) must be met to receive a second bachelor's degree.

## Undergraduate Non-Degree Seeking Students

Students with one or more bachelor's degrees from accredited colleges or universities (including WVU) who want to enroll for undergraduate credit may be admitted as non-degree seeking students. Post-baccalaureate students who are not working toward a graduate degree may earn undergraduate credit and will be assessed undergraduate fees. Candidates for admission to this classification who are not graduates of WVU must submit an undergraduate application.

WVU may admit students who are not seeking and/or not eligible to pursue a certificate or degree. Non-degree students must meet the minimum University admissions standards and must follow transfer admissions requirements. If students have completed fewer than twenty-four college-level credits, they should also submit an official high school transcript.

Unless otherwise stated, Students seeking non-degree admission to the University must be academically and otherwise eligible to return to their current or previous institution.

Non-degree students must supply the University with transcripts reflecting all previous college work prior to admission.

## Academic Forgiveness Policy

The West Virginia University system may provide academic forgiveness to some undergraduate students who were not successful in an attempt at higher education within the WVU system or who need forgiveness to qualify for admittance.

### POLICIES GOVERNING ACADEMIC FORGIVENESS:

- For the purposes of admission, the West Virginia University system may honor academic forgiveness granted at a previously attended regionally accredited institution. Students requesting admittance who wish to have a previous grant of academic forgiveness honored must have a GPA of 2.0 or higher in at least 24 earned credit hours after academic forgiveness was applied.
- A student may receive academic forgiveness only once.
- Students requesting academic forgiveness cannot have been enrolled at any higher education institution for at least four calendar years.
- Students who receive academic forgiveness from the West Virginia University system will receive credit for all courses completed with a grade of D- or higher during the forgiven period of enrollment. While all grades and credit hours remain on the student's transcript, grades earned during the forgiven enrollment period will not be counted in the student's GPA.
- After receiving forgiveness, the student must satisfactorily complete all coursework required by the academic unit for graduation and at least 15 credit hours in the WVU system for an associate degree or 30 credit hours for a bachelor's degree.
- Students who receive academic forgiveness are not eligible to graduate with Latin honors.
- Academic forgiveness does not supersede some calculations used to determine eligibility for Satisfactory Academic Progress (https://financialaid.wvu.edu/home/maintain/academic-progress/) regarding financial aid, scholarships, and the veterans' benefits.
- Some professional programs and other regionally accredited institutions may not honor academic forgiveness conferred by the West Virginia University system. Students receiving academic forgiveness should consult with an academic advisor in the field they wish to pursue.

### PROCEDURE:

- Students must complete the Academic Forgiveness form located on the Academic Forgiveness (https://admissions.wvu.edu/forms-and-procedures/academic-forgiveness/) page, and provide any requested documentation.
- Students applying for financial aid will need to submit a Free Application for Federal Student Aid (FAFSA) at the Federal Student Aid (https://studentaid.gov/h/apply-for-aid/fafsa/) webpage and file a Satisfactory Academic Process Appeal (SAP) if necessary.
- The form must be approved by the dean of the intended academic major and the Provost or designee. The Provost or designee makes the final decision regarding admission to WVU under the Academic Forgiveness policy.
- Students applying for Academic Forgiveness must meet with an academic advisor within the academic department they plan to enter.

## WVU Students Seeking Transient Credit

In order to take a course or courses at another college or university, students must have approval from their academic college. To receive such approval, a student must have an overall 2.0 grade-point average. All approved college-level work is accepted for transfer from accredited institutions, provided the above requirements have been met. To view a list of schools and courses already reviewed, visit WVU Undergraduate Admissions (https://admissions.wvu.edu/). In addition, an official transcript must be received by the Office of Admissions before any coursework can be counted toward degree requirements. Students cannot choose to transfer courses based on the grades earned. All courses from the institution(s) will be transferred. The academic department will determine what courses satisfy degree requirements.

International students going to their home country for transient study must complete the same Transient Credit Form found at on the Transient Credit Application (https://admissions.wvu.edu/forms-and-procedures/transient-credit-application/) page. All students traveling abroad through the Education Abroad Program should complete the Education Abroad Transient Form which can be found on the Education Abroad website (https://educationabroad.wvu.edu/home/).

The following procedures are available for students wishing to appeal transient credit received from their participation in coursework through an approved Education Abroad program:

**Student appealing grade received for coursework taken abroad** must be appealed through the host institution issuing the grade.

**Student appealing the conversion of grade received abroad into the WVU letter grade system** can email educationabroad@mail.wvu.edu with supporting documentation to be reviewed by the Provost's Office. Recommended documentation includes course syllabi and grading scale conversion recommendations from host institution.

**Student appealing the number of WVU credit hours received from courses taken abroad** can email educationabroad@mail.wvu.edu with supporting documentation to be reviewed by the Office of the University Registrar. Supporting documentation should include the number of course contact hours from host institution.

**Student appealing to receive Pass/Fail credit, removal of letter grades.** This will be considered for extenuating circumstances only. Students can email educationabroad@mail.wvu.edu with supporting documentation to be reviewed by the Provost's Office. Supporting documentation should include written statement from student regarding rational for request. Students should talk to their academic advisors regarding the implications of P/F on degree progression.

## Immunization Requirements

We do not collect proof of immunization through the onboarding process for new students. Certain majors related to the health sciences may be required to submit proof of vaccinations at a later date.

## In this section:


- Freshman Admission Requirements (p. 23)
- Home-Schooled Students (p. 24)
- High School Equivalency Test (HiSET) or General Equivalency Diploma (GED) (p. 25)
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## Freshman Admission Requirements

To be considered for freshman admission, a student must:

- Submit an application for admission at WVU Undergraduate Admissions How to Apply
- Pay required application fee.
- Provide all required documents to be reviewed for admission which includes: an official high school transcript and if applicable, ACT/SAT test scores and official transcripts of any collegiate level coursework taken.
  - Upon graduation, an official final high school transcript verifying graduation is required to finalize your admission.

### ACADEMIC COURSEWORK

To be considered for freshman admission, you must successfully complete the following high school courses upon graduation. Meeting the requirements below does not guarantee admission to the Morgantown campus.

- 4 units of English
  - Including English 12, and courses in Grammar, Composition and Literature
- 3 units of college preparatory Mathematics
  - Units must be Algebra I or higher Math I or higher and include Algebra II or equivalent higher-level Math course; Transitional Math for High School seniors will also be accepted. Courses designed as "support courses", such as Math I Lab or Math I Support, that provide extra instructional time but no additional content shall not be acceptable as meeting the required three (3) Mathematics course core requirements.
  - West Virginia course equivalencies include a series of Math I, II and III
- 4 units of Social Studies/Fine Arts/Humanities
  - Any combination of Social Studies, Fine Arts or Humanities will fulfill the requirement; combination must include U.S. Studies/History
- 3 units of Science
  - Recommended units include Biology, Chemistry, Physics, Anatomy and Environmental Science

- 2 units of the same World Language
  - American Sign Language meets this requirement.

Exceptions to these requirements may be granted on a case-by-case basis.

High school grade point average and comprehensive tests are the major criteria used to determine admission to WVU. WVU accepts either ACT (American College Testing) or SAT (Scholastic Aptitude Test) scores. The following is a list of the grade point average and test score criteria:

Residents (high school graduates from West Virginia)

- Resident Students may have a) an approved high school diploma, a minimum 2.5 high school GPA, and an SAT composite score of at least 990 or ACT composite of 19; b) meet high school equivalency exam requirements and have an SAT composite of at least 990 or ACT composite of 19; or c) an approved high school diploma, a minimum 2.5 high school GPA, and additional criteria that support academic success in the absence of Standardized Test scores.

Non-residents

- Nonresident Students may have a) an approved high school diploma, a minimum 2.5 high school GPA, and an SAT composite of at least 1060 or ACT composite of 21; b) meet high school equivalency exam requirements and have an SAT composite of at least 1060 or ACT composite of 21; or c) an approved high school diploma, a minimum 2.5 high school GPA, and additional criteria that support academic success in the absence of Standardized Test scores.

If space is available and the required high school units, GPA, and test scores are met, the student will be admitted. Therefore, we encourage eligible students to apply as soon as possible after August 1 of their senior year. If one of the requirements is not met, students may still apply, and the Admissions Review Committee will review the application. If appropriate, students should submit a written statement explaining any extenuating circumstances that may have affected their academic performance. Each application is reviewed individually and given full consideration.

WVU reviews students on a 4.0 weighted or unweighted scale. The Office of Admissions may re-calculate a high school GPA that is calculated on a 5.0 scale or higher. WVU reserves the right to not accept a high school transcript that does not include course grades or does not include an overall grade point average calculated on a 4.0 scale.

If it has been more than five years since the student's class graduated from high school or a GED was earned and no other college or university has been attended, WVU may waive some of the admission requirements.

*Admissions requirements can be found at* https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements *(*https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/*).*

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## Home-Schooled Students

Students educated at home or in non-accredited high schools should submit the freshman application (https://westvirginia.force.com/TX_SiteLogin/?startURL=%2FTargetX_Portal__PB). Home-schooled applicants may apply test optional. All students must meet core course requirements (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/).

Home-schooled applicants must provide an official academic record. The courses must be broken down by 9th, 10th, 11th and 12th grade years and bear the signature of the person who administered the curriculum.

The documentation should take the form of a typed manuscript or description and background of classes and must include the following, at a minimum:

- The student’s name.
- A list and description of courses completed.
- Grades earned for the courses completed.
- The number of credits earned for each course.

* Applicants who attended non-accredited high schools must furnish an official transcript.

Upon completion of the application students must provide all required documentation and transcripts (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/#hta-ftf-transcript). WVU will review the entire application file. All application materials must be received by the regular admission deadline of August 1.

**Note for West Virginia residents who are home-schooled:** The PROMISE Scholarship and the West Virginia Higher Education Grant require that home-schooled students submit a Home-Schooled Grade Report Form and transcript when submitting their Promise application with West Virginia Student Aid Management (WVSAM). The PROMISE Scholarship is not test optional and will require ACT/SAT. Further questions regarding this should be directed to the West Virginia Higher Education Policy Commission (http://www.wvhepc.edu/).

## High School Equivalency Test (HiSET) or General Equivalency Diploma (GED)

In lieu of a high school diploma, students are eligible for admission consideration having attained any one of the following equivalent credentials. Students must still meet all academic course requirements.

As of January 1, 2022, the HiSET® exam became the state approved HSE assessment for West Virginia. Examinees who successfully pass the HiSET® exam receive the *State of West Virginia High School Equivalency Diploma.*

Students passing the High School Equivalency Test (HiSET) will need to submit their State of West Virginia High School Equivalency Diploma. A high school transcript must also be mailed to the WVU Office of Admissions. More information about the HiSET exam can be found on the HiSET webpage (https://hiset.org/).

The GED will be accepted for students who took the GED prior to January 2014, or from a state that does not administer the HiSET or TASC exam. Students who have completed a General Equivalency Diploma (GED) with an average standard score of 2250 (450) or above must request that the State Department of Education mail copies of scores to the WVU Office of Admissions. In addition, a high school transcript must also be mailed to the WVU Office of Admissions.

Students who completed the Test Assessing Secondary Completion (TASC) prior to January 1, 2022 will need to submit their State of West Virginia High School Equivalency Diploma. A high school transcript must also be mailed to WVU Office of Admissions. More information about the TASC exam can be found on the Test Accessing Secondary Completion webpage (https://tasctest.com/).

## Credit for Military Service

WVU accepts the following military transcripts for all service members and veterans.

- Joint Services Transcript (JST)
- Community College of the Air Force (CCAF)

West Virginia University has an established database for the ACE (American Council on Education) approved postings on the JST (Joint Service Transcript). Veteran students must submit their JST to the WVU Office of Admissions in order for any coursework to be posted. Student may utilize this page, and subsequent processes, to request the experiences be articulated as credit to their record.

Please see our subsequent page for more information on Military Credit (https://registrar.wvu.edu/transfer/prior-learning-credit/military-credit/) or visit the Center for Veteran, Military, and Family Programs.

For more information please contact the Office of Admissions (https://admissions.wvu.edu/) or visit the Center for Veteran, Military, and Family Programs (https://wvuveterans.wvu.edu/).

## ACCESS (Attaining College Credits and Experiences while in Secondary School)

High school students who have completed their junior year with a 3.0 cumulative grade point average may be admitted and enroll in college courses before high school graduation. An ACCESS application for admission must be submitted along with an unofficial transcript as well as a permission form from parent(s) or guardian(s) and high school counselor or principal. Coursework completed at the University must be at a level beyond that available in the high school setting.

## Pre-Collegiate Examinations - Advanced Placement Program (AP)/College Level Examination Program (CLEP)/International Baccalaureate (IB)

### POLICY

Equivalencies for pre-collegiate examinations such as Advanced Placement (AP), International Baccalaureate (IB), or College Level Examination Program (CLEP), are established by the academic unit which teaches the subject, based on the following university rules.

- Initially, a maximum of 4 credits is awarded for each single qualifying exam score. In consultation with their Academic Adviser, students may petition for additional credit based on their score and academic circumstances.
- Once an equivalency has been established and a student has requested that a course be recorded on the transcript, it cannot be removed from the student's record.
- Credit is normally awarded at the 100 level. In some circumstances, departments may request the college or school to award credit for a 200-level course. Credit at or above the 300 level is not granted.
- In certain subjects, direct equivalency to a WVU course is awarded. Many course equivalencies will satisfy General Education requirements.
- Individual programs may decide that non-direct equivalencies fulfill major or minor requirements; equivalencies are reflected in the student's Degree Works audit.
- Examination credit equivalencies posted to the student's transcript count as both attempted and earned credits. Although credit is awarded, no grades are recorded.

- Examination credits are awarded at the point of admission for both freshmen and transfer students. For transfer students, WVU articulates credit based on its established equivalencies. WVU does not honor the articulation made by previous institutions.
- Current students may not earn college credit via CLEP, unless a department does not offer credit-by-examination and the student has secured prior approval.

### ADVANCED PLACEMENT PROGRAM (AP)

- Score of 3: equivalent to 3-4 credits of a 100-level course, usually a General Education requirement.
- A score of 4 or better: a direct equivalency may be awarded, at the discretion of the appropriate department. Students may request additional credit when applicable.
- The Advanced Placement chart can be found on the AP, CLEP, IB, Cambridge International and Military Service Credit page on the WVU Office of Admissions website.

### COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

- Incoming freshmen may request credit equivalencies for CLEP exams they passed at the time of admission to WVU.
- A minimum score of 55 is required to earn credit equivalencies, although some programs may require a higher score.
- The CLEP chart can be found on the AP, CLEP, IB, Cambridge International and Military Service Credit page on the WVU Office of Admissions website.

### INTERNATIONAL BACCALAUREATE (IB)

- Standard Level (SL): no equivalencies
- Higher Level (HL)
    - Score of 4 or 5: equivalent to 3-4 credits of a 100-level course, usually a General Education requirement.
    - Score of 6 or better: a direct equivalency may be awarded, at the discretion of the appropriate department. Students to request additional credit when applicable.
- Diploma (DP): students who earn the diploma with a minimum score of 32/45 (71%) will have fulfilled all general education requirements. Coursework will be posted on the transcript according to the established equivalencies.
- The IB chart can be found on the AP, CLEP, IB, Cambridge International and Military Service Credit page on the WVU Office of Admissions website.

### PROCESS

- AP and IB credits: upon registration for their first semester at WVU, freshman students will work with their advisers to have the appropriate credits posted to their transcripts. In consultation with their adviser, students may petition to have additional credits recorded by filling out a petition, based on the equivalencies established by the academic units found on the AP, CLEP, IB, Cambridge International and Military Service Credit (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/frequently-asked-questions/ap-clep-and-ib-equivalency/) page.
- CLEP exams results must be submitted at the time of admission. If current students wish to earn credits through CLEP because no credit by examination is offered in that subject at WVU, they must secure permission from the chair or director of their academic unit, as well as that of the chair or director of the unit that offers the course, before filling out a petition. Permission is documented by recording a note in Degree Works.

## Advanced (A) and Advanced Subsidiary (AS) Levels

West Virginia University welcomes applications from students with A and AS Level exam passes from approved United Kingdom-based exam boards for advanced placement credit.

A maximum of 8 credits per subject can be awarded for A Level grades of E or above, with the submission of official results. A maximum of 4 credits per subject can be awarded for AS Level grades of E or above, with the submission of official results. Credit for AS level subjects is not assessed when an A Level pass in the same subject area is present. For more information, please contact the Office of Admissions, International Unit (https://admissions.wvu.edu/information-for/international-students/).

## In this section:


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- Transfer Students from Other Accredited Institutions (p. 27)
- Application Materials (p. 27)
- Evaluation of Transfer Credit (p. 27)
- Transfer Credit Appeals Process (p. 27)


## Transfer Students from Divisional Campuses

Students enrolled at Potomac State College of WVU or WVU Institute of Technology must complete the Change of Campus application to transfer to the Morgantown campus. WVU admission requirements must be met as well as requirements to specific programs.

Students who want to transfer to the Morgantown campus before completing two semesters (24 transferable credits) at our divisional campuses need to meet freshman admission standards.

## Transfers from Other Accredited Institutions

WVU welcomes transfer students who have completed post-secondary coursework from accredited colleges or universities. Students seeking transfer admission to the university must be academically and otherwise eligible to return to the institution from which they wish to transfer. Students must have at least a cumulative 2.0 grade point average in all college work attempted. Transfer students who have fewer than 24 transferable credit hours must also meet freshman admission standards. Some individual programs and majors have additional course requirements and higher grade point average requirements.

Students with coursework from institutions without regional accreditation must request approval from the appropriate college to have the coursework articulated.

## Application Materials

To be considered for transfer admissions, the following materials are needed:

1. A completed application for undergraduate admission.
2. Official transcripts of all college work attempted must be sent to the Office of Admissions. Admissions can only accept transcripts sent directly from Registrars' offices. Transcripts issued directly to the student, facsimile (fax), scanned or emailed transcripts are not considered official. Before final admission is granted, an official transcript must be submitted covering all courses taken after application to WVU.
3. Applicants having fewer than 24 transferable credit hours must submit a final high school transcript.

**Application received before August 1 for Fall admission, and December 1 for Spring admission will be reviewed on a rolling admission. Applications submitted after these deadlines, may be considered for a future semester. After the start of a term, non-degree, readmitted, and transfer students may be eligible for mid-semester admissions due to extenuating circumstances with Director approval.**

## Evaluation of Transfer Credit

Evaluation of transferable credit will be made after receipt of all final official transcripts and admission to WVU. All college level credits and grades accepted as transfer credit will be used in the calculation of the cumulative grade point average and total attempted and earned credits.

The University reserves the right to recalculate GPAs as part of the admission process. Recalculations will be done using an approved national equivalency system as determined by the Office of Admissions and Provost.

Final application of transfer credit toward completion of a bachelor's degree is determined by the school or college upon enrollment. The student's academic department will determine which credits will be used to meet degree requirements. If more than 58 semester hours are being transferred, entrance requirements for the specific program must be met. Individual consideration is given to a limited number of students with more than 58 transferable hours who do not meet specific program requirements.

## Transfer Credit Appeal Process

Students who transfer credits to WVU, may appeal decisions on how credits were evaluated. Students opting to appeal a transfer evaluation must appeal to the Office of the University Registrar's transfer unit (transfercredit@mail.wvu.edu) within one semester of the transfer. Appeals should be made in writing and include syllabi or other supporting documents. The Office of the University Registrar's transfer unit will review the appeal and make any technical corrections to work evaluated as needed. If the Office of the University Registrar's transfer unit finds no technical error in how the credit was evaluated, the student's appeal and syllabi will be forwarded to the respective college through which the course or similar course is offered and reviewed by the Dean's designee for a determination. If it is determined the course in question is not equivalent to an existing course, the appeal will be denied. If the appeal is denied, the student may appeal to the Associate Provost for Undergraduate Academic Affairs. The Associate Provost will convene a panel of faculty members to review the appeal. This panel will decide to either uphold the transfer evaluation as it stands or direct that the evaluation be changed. The Associate Provost will notify all parties to the outcome of the process within 60 days of receipt of the appeal by the Office of University Registrar.

## In this section:


- International Student Admission (p. 28)
- International General Certificate of Secondary Education (IGCSE) and General Certificate of Secondary Education (GCSE) (p. 28)
- Admission Requirements (p. 29)
- English Language Proficiency (p. 29)
- Financial Documents and Student Visa (p. 30)
- Student Health Insurance (p. 30)

# International Student Admission

West Virginia University is authorized under federal law to enroll non-immigrant foreign nationals as international students. International students who wish to enroll as undergraduate students at WVU must comply with the stated academic requirements for admission and with certain additional academic and non-academic requirements.

Application deadlines are as follows:

- Fall Semester – Apply by June 1, all academic documents must be submitted by July 1
- Spring Semester – Apply by October 1, all academic documents must be submitted by November 1
- Summer – Apply by February 15, all academic documents must be submitted by April 1.

Applications submitted after the deadline and incomplete applications will be considered for the next term.

International students applying for admission to WVU must submit the following:

- Completed undergraduate admission application
- Application fee
- Proof of English proficiency (see the English Language Proficiency section for details).
- Original or certified copies of an official academic record in original language of issue
- Original or certified copies of all certificates or diplomas in original language of issue
- Official English translations of academic record and certificates/diplomas
- Copy of current passport or visa for visa status

NOTE: Copies of academic secondary school records/transcripts, certificates or diplomas from international institutions may be sent by email for review purposes after application. However, original or certified copies of all official records/transcripts, certificates and diplomas must be submitted by mail or special delivery after admission or as soon as possible prior to registration. WVU's Office of Admissions may make exceptions to the requirement for official transcripts in cases of war, civil unrest, or extenuating circumstances deemed out of the student's control.

Official transcripts from post-secondary institutions must be received by West Virginia University prior to review.

Applicants for undergraduate programs must submit all secondary school records as well as all university-level records.

International applicants who have completed high school in the United States will also be required to submit ACT or SAT results, unless applying test optional and meet the test optional admissions requirements.

The above items should be received prior to the application deadline.

Incomplete applications cannot be guaranteed consideration for the desired semester. Digital documents may be considered official when they come from an approved provide, have appropriate security features, and/or are verifiable through the relevant university or government body. Paper documents may be considered official when they are original documents issued by an institution or certified copies with the stamp, seal, and/or signature of an appropriate office to certify their authenticity. Additional documents or verifications may be requested as needed to prove authenticity.

Please note: Documents received by WVU, including original documents, become the property of WVU and cannot be returned to or copied for the applicant. Students who have only one original copy of their credentials should submit certified copies.

## WORLD EDUCATION SERVICES (WES)

To expedite the application process, it is recommended, but not required, that all undergraduate students (both freshmen and transfer) who have attended high school, post-secondary educational institutions and colleges or universities outside the United States use World Education Services (https://www.wes.org/) to complete professional credential evaluation of all academic work completed. Transfer applicants should request a "course-by-course" International Credential Advantage Package (ICAP). Freshman applicants should request a "document-by-document" International Credential Advantage Package (ICAP). ICAP evaluations include WES certified copies of official documents.

## IMPORTANT NOTE ABOUT NAMES ON SUBMITTED DOCUMENTS

Materials from applicants are retained alphabetically, under the family name, as indicated by the applicant on the International Student Admission Application. It is important that all forms, records and correspondence use the same name and spelling. Your name must be as it appears or will appear in your passport. Materials often cannot be matched to files when papers arrive with different names.

# International General Certificate of Secondary Education (IGCSE) and General Certificate of Secondary Education (GCSE)

WVU welcomes applications from students with IGCSE and GCSE Level Certificates from Cambridge International or other approved UK based examination organizations for admissions consideration.  We require a minimum of 5 subject passes of which two must be English and Mathematics.

The average of the grades must be at least a 2.5 (on a 4.0 scale).  A passing grade in the subject of English will be accepted as evidence of sufficient English ability.

## Admission Requirements

The following are the minimum admissions requirements for international students applying as freshman or undergraduate transfer students.

### FRESHMAN

- Must have at least a 2.5 grade-point average on a 4.0 scale for general admission.
- Must meet English proficiency or request conditional admission.
- Please be advised that some majors such as Engineering may reach capacity and therefore will be restricted from entry.
- **For direct admission to some colleges and majors, SAT or ACT scores are required and must be sent to WVU directly from the respective testing services.** International students are encouraged, but not required, to submit SAT or ACT scores. SAT or ACT scores are useful for determining scholarship eligibility.

### TRANSFER

- Must have at least a 2.0 grade-point average on a 4.0 scale for general admission.
- Must meet English proficiency or request conditional admission.
- In addition, transfer students who have fewer than 24 transferable credit hours, must also meet freshman admission standards and submit secondary school/high school transcripts. Some individual programs and majors have different course requirements and higher grade point average requirements; please review the various program requirements.
- Grades and credits are transferable for college-level courses from regionally accredited U.S. institutions.

Applicants must submit academic records from all secondary and post-secondary institutions attended regardless of whether grades were issued, or credit was received. WVU requires that original or certified copies of the original academic documents from non-U.S. institutions be submitted. The required documents include the official academic record (showing course titles, dates taken, and grades received) and diploma(s) or certificate(s) showing degree awarded. These documents must be in the original language of issue; official English translations must be included. Translations must be literal, word-for-word translations and must indicate actual grades received, not an interpretation of the grades. Applicants who have studied in the United States are required to have the institution(s) in the U.S. send the official transcript directly to the WVU Office of Admissions.

## English Language Proficiency

All international applicants must provide proof of English language proficiency. Proof of English proficiency may be demonstrated by citizenship in a qualifying exempt country, test scores, or approved credentials.
Applicants can be considered for 1) regular academic admission, 2) English Language Pathway program admission, or 3) Intensive English Program (IEP (https://elli.wvu.edu/programs/intensive-english-program/)) conditional admission depending on their scores based on the table below. Direct admission to WVU's Intensive English Program or English Language Pathway program does not guarantee admission to the University.

| | IEP Conditional | Pathway 2 Semesters | Pathway 1 Semester | Regular Admission |
|---|---|---|---|---|
| Academic IELTS (https://www.ielts.org/) | Below 5.5 | 5.5 | 6.0 | 6.5 |
| TOEFL Internet-Based (https://www.ets.org/toefl/) | Below 61 | 61 - 73 | 74 - 78 | 79 |
| Duolingo English Test (https://englishtest.duolingo.com/applicants/) | Below 90 | 90 - 99 | 100 - 104 | 105 |
| PTE Academic (https://pearsonpte.cor | Below 44 | 44 - 49 | 50 - 52 | 53 |
| ACT (http://www.act.org/) English | Below 19 | 19 - 21 | 22 - 23 | 24 |

| | | | | |
|---|---|---|---|---|
| SAT (https://collegereadiness.collegeboard.org/sat/) EBRW | Below 490 | 490 - 530 | 540 - 560 | 570 |

Occasionally an applicant may demonstrate English proficiency by alternative means not listed on this page. In these cases, applicants must submit all relevant information to the Office of Global Affairs for consideration for review of English proficiency.

## Financial Documents and Student Visa

Before WVU can issue the document necessary to apply for a student visa (Form I-20 or Form DS-2019), students must provide proof that they have the adequate financial resources to provide for their expenses incurred while studying at WVU. All financial documents and a copy of the visa or passport must be submitted to the International Students and Scholars Services Office. For more on the student visa process, visit the International Students and Scholars Services (https://isss.wvu.edu/) webpage.

## Student Health Insurance

International students will be automatically enrolled in our student health plan unless an appropriate waiver has been submitted and approved. Information regarding the plan, enrollment information, waiver forms, etc., can be found at the Student Health Insurance Plan (http://studentinsurance.wvu.edu/).

# Advising, Enrollment & Grades

## In this section:


- Academic Advising (p. 30)
- Degree Works (p. 30)
- Online and Distance Education Student Complaint Resolution (p. 30)


## Academic Advising

Every student at West Virginia University has access to academic advising and will be assigned an advisor. WVU students are required to meet with their academic advisors prior to registering for classes each semester. Advisors assist students in understanding major and University requirements including the General Education Foundations (GEF); course registration planning and processes; program and course prerequisites; and academic standing (e.g. probation and suspension). In addition, advisors may assist students with planning for post-baccalaureate education and careers.

It is the student's responsibility to understand their degree requirements. Students are expected to become familiar with the Undergraduate Catalog and Degree Works and prepare for their own course planning and registration processes.

## Degree Works

Degree Works is the online advising and degree auditing tool at WVU. All students are required to have a completed audit for graduation. Students can access Degree Works through the WVU Portal accessible at https://portal.wvu.edu. More information is available in the Degree Works section of the Academic Records tab on the Office of the University Registrar website (https://registrar.wvu.edu/academic-records/degreeworks/).

All degree requirements must be verified by a student's college prior to graduation. Students are responsible for complying with all academic policies published in the University catalog and relevant program documents. If students have any questions about the information presented in the Degree Works audit, they are encouraged to contact their advisor.

## Online and Distance Education Student Complaint Resolution

West Virginia University encourages students to address complaints and grievances relating to academics, consumer protection, or other University policies with the specific individuals or units most directly connected with the issue at hand. Current University grievance and appeal processes can be found here (https://provost.wvu.edu/student-questions-and-complaints/).

Students Located Outside of West Virginia: If a student located in a state outside of West Virginia has a complaint that involves distance learning, that student must first seek resolution with West Virginia University with the appropriate person or office at the university using this form (https://online.wvu.edu/internal-student-complaint-process/). If the student bringing the complaint is not satisfied with the outcome of the university's internal processes, the student may file a complaint with the university's SARA State Portal Entity at the West Virginia Higher Education Policy Commission: (https://www.wvhepc.edu/wp-content/uploads/2024/10/Student-Complaint-Process.pdf)

Students outside of West Virginia may also file a complaint with the State Portal Entity (https://nc-sara.org/state-portal-entity-contacts/) where they are located.

Students located in California should direct complaints to:

**California Department of Consumer Affairs Consumer Information Center**
1625 North Market Blvd., Suite N-112 Sacramento,
California 95834

(833)942-1120
dca@dca.ca.gov

Examples of types of student complaints that may be brought to the SARA State Portal Entity include veracity of recruitment and marketing materials, job placement data, accuracy of information about tuition, fees, and financial aid, accuracy of course transfer information. Complaints and appeals involving grades or student conduct violations will not be reviewed by the SARA State Portal Entity. For additional questions about how SARA consumer protection provisions assist students, please review NC-SARA's Student Complaint Process (https://nc-sara.org/sara-student-complaints-0/).

If all other avenues provided have been exhausted, unresolved complaints may be filed with the Higher Learning Commission (https://www.hlcommission.org/for-students/file-a-complaint-against-an-institution/), the University's regional accreditor.

Back to Top (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#Top_Advising)

## In this section:


- Attendance Policy (p. 31)
- Emergency Leave Policy (p. 32)
- Military Leave Policy (p. 33)
- Auditors (p. 34)
- Registration (p. 34)
- Course Withdrawal and University Withdrawal Policy (p. 34)


## Attendance Policy

Instructors or programs set attendance requirements and policies that are appropriate for the goals and instructional strategies of their courses. Instructors are responsible for keeping accurate attendance records when attendance is used in grading. Students who are absent from class for any reason are expected to take full responsibility for their own academic work and progress and are required to complete missed work or equivalent work, as deemed appropriate by the instructor.

### UNIVERSITY SANCTIONED ABSENCES

University sanctioned absences are absences in which instructors provide opportunities to make up missed substantial class work or activities (e.g., assignments, exams) and will not penalize students for those absences. University sanctioned absences include mandatory military obligation, mandatory court appearances, and participation in university activities at the request of university authorities. Instructors are expected to be flexible in allowing students to make up work missed due to university sanctioned absences. Instructors and students may consult with their Dean's Office on events that constitute official university sanctioned events.

WVU supports its students who are also members of the United States armed forces, reserve units, and National Guard. Absences of less than three weeks of course work for military obligation (i.e., drill or training) are university sanctioned absences. WVU's Center for Veteran, Military, and Family Programs website (https://wvuveterans.wvu.edu/) has additional information on the drill schedule for the West Virginia National Guard and can provide official verification of a student's military orders upon request.

For university sanctioned absences totaling more than three weeks of course work resulting from military obligation, see WVU's Military Leave section of the undergraduate catalog (http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#Military_Credit).

Students who will miss more than a week of course work due to health condition or personal trauma should refer to WVU's Emergency Leave Policy (p. 32).

Students wishing to appeal an instructor decision regarding an absence for a university sanctioned event may appeal to the Dean of the college/school for the relevant course.

Final course grades affected by attendance in an individual course may be appealed using the normal course grade appeal process located on the Appeals tab of the Academic Standards section of this catalog (http://catalog.wvu.edu/graduate/enrollmentandregistration/#appealstext).

### EXCUSED ABSENCES

Other events may justify an excused absence at the discretion of the instructor or program, school, or college. Instructors appropriately notified regarding anticipated absences that are not university sanctioned may use their judgment as to whether to allow make-up work.

Examples of events that may justify an excused absence include religious observances, illness of the student including Covid-19 related absence, illness of an immediate family member, death of an immediate family member, or extreme weather. Quarantined students are expected to complete class work and activities as assigned.

Students may miss class or assignments due to a variety of medical and health-related issues. There are two broad categories for such absences: those resulting from unexpected injuries and illnesses, and those related to a disability(ies) and/or chronic condition. When a student must be absent from class due to an unexpected and medical illness they should contact their instructors directly. For an extended illness the WVU Division of Student Life can assist the student in notifying his or her instructors. Students missing class due to a disability should contact the Office of Accessibility Services for assistance.

Students who will miss more than a week of course work due to health condition or personal trauma should refer to WVU's Emergency Leave Policy (p. 32).

Several high holy days have been added to the academic calendar for instructors to reference in their academic planning. Instructors may consult the Division of Diversity, Equity, and Inclusion website (https://diversity.wvu.edu/about/staff/) for support regarding religious observances.

The Office of Accessibility Services can serve as a resource to discuss student absences related to accommodations. Contact Information can be found on the About Us tab of the Office of Accessibility Services website (https://accessibilityservices.wvu.edu/about/).

Absences stemming from work duties other than military obligation (e.g., unexpected changes in shift assignments) and traffic/transit problems are not university sanctioned and should not typically qualify for excused absences.

If an instructor chooses to allow excused absences for these other events, the stated attendance policy for the course should specify the number of days that may be missed and instructions for contacting the instructor for the excused absence.

Instructors may request third party documentation.

## PROCEDURES

All attendance polices must be made available to students in writing (typically within the course syllabus) within the first week of class.

Students are responsible for notifying their instructors of expected university sanctioned absences within two weeks of the event or as soon as possible. Instructors may require written documentation in advance of the university sanctioned absence from the academic or athletic unit sponsoring the activity for students participating in official activities. Instructors may request additional verification from the Center for Veteran, Military, and Family Programs website (https://wvuveterans.wvu.edu/) for students serving military obligation.

Students who are absent from class for any reason are responsible for contacting their instructors promptly, unless the instructors' policies require otherwise.

Students wishing to appeal an instructor decision regarding an absence for a university sanctioned event may appeal using the final grade appeal process (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-final-grade/) for the relevant course.

Final course grades affected by attendance in an individual course may be appealed using the normal course grade appeal process located on the Appeals tab of the Academic Standards section of this catalog (http://catalog.wvu.edu/graduate/enrollmentandregistration/#appealstext).

# Emergency Leave Policy

During any semester, students may experience serious emergencies that will prevent them to be present in class or participate in a course for more than a week.

## SHORT TERM LEAVE

Upon presentation of documentation, students who will miss between one and three weeks of classes will work with their instructor to develop a plan to catch up on the work that they have missed.

1. Up to the 13$^{th}$ week of instruction, students have the ability to withdraw from one or several classes.

2. If the event and its subsequent related absences takes place after the 13$^{th}$ week of instruction, students may petition the Dean of the College, found on the Office of the Provost website under the Level 2 Reviewers webpage, (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-final-grade/level-2-reviewers/) where the course is housed to obtain a late withdrawal from a single class. Students who wish to withdraw from all their classes can petition the Dean of the College where their major is housed for a full, retroactive withdrawal. Students unable to attend or participate after the 13$^{th}$ week for a relatively short duration (which may include exam week) may arrange for an Incomplete with provision to make up the final exam.

## LONG TERM LEAVE

Students who will miss more than three weeks of course work due to a health condition or personal trauma should notify the appropriate Dean of the College, found on the Office of the Provost website under the Level 2 Reviewers webpage (https://provost.wvu.edu/governance/academic-standards-resources/detailed-appeal-procedures/appeal-of-a-final-grade/level-2-reviewers/), where their major is housed**.** The student should explain the circumstances of their absence and, with the assistance of the Dean, work with each of faculty members to agree upon a plan of action. In most cases, students will be asked to provide documentation or other evidence.

If necessary, these students may withdraw from the university and will go through one of the two following processes depending upon when the student withdraws.

1. Withdraw from the University up to and including the 13th week of instruction. Students who withdraw before the end of the 13th week of instruction may need to return portions of their financial aid award. A W will be placed on all courses.

2. Withdraw from the University after the 13th week of instruction. Students who leave the University after the 13th week of instruction should work with their home college/school's Dean's Office.

The relevant Dean's Office will assist the student in reviewing the student's eligibility for credit for their courses on a course-by course basis with the instructors.

- If the course is substantially complete and the student has done passing work, the student should receive the grade earned at that time.
- If the instructor establishes that the course is not quite substantially complete and the student requests it, the instructor can follow the procedure for an Incomplete, with the agreement of the department chair and the Dean of the College where the course is housed.
- When it is deemed that no credit can be awarded, the student can be administratively withdrawn from the course.

## Military Leave Policy

WVU supports its students who are also members of the United States armed forces, reserve units, and National Guard. The Military Leave Policy applies specifically to students who have begun attending classes but are called away after the beginning of the semester. For unavoidable absences at the beginning of the term, students may be better served by delaying attendance until the next academic term. All students considering taking military leave are urged to contact WVU's Center for Veteran, Military, and Family Programs (https://veterans.wvu.edu/) to discuss their best academic options.

Absences of less than three weeks of course work for military obligation (e.g., drill or training) are university sanctioned absences. WVU's Center for Veteran, Military, and Family Programs (https://wvuveterans.wvu.edu/) has additional information on the drill schedule for the West Virginia National Guard and can provide official verification of student's military orders upon request.

Students who will miss more than three weeks of course work due to military obligation should notify faculty members of the circumstances of their absence as far in advance as possible and work with faculty members to agree upon a plan of action. If necessary, these students may withdraw from the university and will go through one of the following processes depending upon when the student withdraws.

1. Withdraw from the University up to and including the 13th week of instruction.
   a. Students who withdraw before the end of the 13th week of instruction will be processed for a full refund of their tuition and fees and be administratively removed from their classes. No course grades or credit will be awarded.
2. Withdraw from the University after the 13th week of instruction.
   a. Students who leave the University for military service after the 13th week of instruction should work with their home college/school's Dean's Office and the Center for Veteran, Military and Family Programs (https://wvuveterans.wvu.edu/). The student may also contact the Office of the University Registrar. The Dean's Office will assist the student in reviewing the student's eligibility for credit for their courses on a course-by course basis with the instructors. If the course is substantially complete and the student has done passing work, the student should receive the grade earned at that time. It is anticipated that this would be the outcome in the majority of the courses.

- When it is deemed that no credit can be awarded, the student can be administratively withdrawn from the course or, when possible, given a grade of Incomplete.

3. Students called to service after the 13th week but for a relatively short duration (which may include exam week) may arrange for an Incomplete with provision to make up the final exam after completing the period of service.

Students who expect to be separated from the institution for more than three weeks during a particular semester may apply for a Military Leave of Absence. Students granted a Military Leave of Absence will not need to apply for readmission nor pay any readmission fees.

## PROCEDURES

- Students who receive orders with sufficient advance notice are expected to notify their professors of their upcoming deployment date and meet with their professors to come to an agreement on what regular course assignments they can reasonably complete prior to the deployment date. The details of this arrangement should be included in a contract initialed by both the instructor and the student and kept on file in the Dean's Office. Students should not be penalized for not completing assignments, quizzes, tests, or exams due after their deployment date.

- No advance notice is required if the giving of such notice is precluded by military necessity (as per regulations prescribed by the Secretary of Defense). Instructors may contact the Center for Veteran, Military, and Family Programs (https://wvuveterans.wvu.edu/) if they have questions about determining advance notice.

## Auditors

A student who audits a course must register and pay full fees for the course but does not receive credit for the course. A student who audits a course must let one semester pass before enrolling in the same course for credit. A student may only change their status from audit to grade or grade to audit through their advisor, during the registration period. Advisors will notify the Office of the University Registrar or Enrollment Services at the Keyser location of the student's intention prior to the end of the drop/add period. Attendance requirements for auditors are determined by the instructor of the course. The instructor may direct the Office of the University Registrar or Enrollment Services at the Keyser location to remove an auditor from a class list or grade report if attendance requirements are not met.

## Registration

Students must use STAR to register for each course they attend in person or online.

1. Athletes, Graduate and Professional Students register first.
2. Undergraduate Students: undergraduate students register by classification, starting with Seniors, then, Juniors, Sophomores, and, finally, Freshmen.
3. Advanced Registration. Certain populations of undergraduate students defined below can register 24 hours before other students with the same classification.
    - Veterans and contracted ROTC students
    - Students who receive advanced registration as part of their ADA accommodations
    - Honor students
4. Proposed plan for Advanced Registration Status
        - Advanced Registration Seniors (seniors who are Veterans, contracted ROTC, Honors, ADA students)
        - All Seniors (including non-priority Seniors)
        - Advanced Registration Juniors (juniors who are Veterans, contracted ROTC, Honors, ADA students)
        - All Juniors
        - Advanced Registration Sophomores (sophomores who are Veterans, contracted ROTC, Honors, ADA students)
        - All Sophomores
        - Advanced Registration Freshmen (freshmen who are Veterans, contracted ROTC, Honors, ADA students)
        - All Freshmen
        - General registration (students who have not utilized their priority dates above)
5. Students will be assigned a preferred time period for registration on the appropriate day through the time ticketing process. The first registration slot will occur each day at 8:30 am. The advanced registration window will open at 12:01 am, giving students 32 hours before the first student of the same class standing (i.e., freshman, sophomore, junior, senior) without advanced status is able to register.

## Course Withdrawal and University Withdrawal Policy

There are three time periods during which students may withdraw from courses. The tuition refund policy can be reviewed on the Refunds tab on the Student Accounts website (https://studentaccounts.wvu.edu/refunds/). The specific term deadlines can be found on the Withdrawal section of the Refunds tab on the Student Accounts website (https://studentaccounts.wvu.edu/refunds/withdrawal/).

### WITHDRAWAL DURING THE DROP/ADD PERIOD

Students may withdraw from an individual course or all courses during the drop/add period, which runs until the end of the first week of a standard fall or spring 16-week term. Withdrawals from courses beginning on different parts of term or in the summer must be within the deadline as indicated on the Add and Drop Dates section of the Calendars tab on the Office of the University Registrar website (https://registrar.wvu.edu/calendars/add-and-drop-dates/). Courses dropped during the appropriate drop/add period will not be recorded on the student’s transcript.

### WITHDRAWAL BY THE WITHDRAWAL DEADLINE

Generally, students can withdraw from one or more courses after the Drop/Add period but prior to the withdrawal deadline published in the University Calendar (during the 13th week of instruction for 16-week courses during the spring and fall terms). A grade of W will be recorded on the transcript, indicating the student withdrew from the course. The grade point average is not affected, but student progress within an identified major may be impacted, as well as the ability to retain financial aid. Additional information can be found about Withdrawing from Courses in the Maintaining Your Aid section of the Home tab on the Student Financial Services website (https://financialaid.wvu.edu/home/maintain/withdrawing/). “Attempted Hours” on the transcript include all courses for which a W is recorded. If a student does not follow the university’s withdrawal procedures, the final grades earned by the student will be recorded on the transcript.

NOTE: No longer attending a course does not constitute withdrawal. Students who do not formally drop or withdrawal from a course they are no longer attending will receive a failing grade for the course.

## WITHDRAWAL FROM ALL COURSES AFTER THE WITHDRAWAL DEADLINE (RETROACTIVE WITHDRAWAL)

Withdrawing from all courses after the withdrawal deadline is considered a retroactive withdrawal from the University for the approved term. A retroactive withdrawal must be requested within 12 months after grades have posted for the term in question. If the withdrawal is granted, a grade of W will be recorded on the transcript for each course. Retroactive withdrawals may not be requested for coursework in a degree that has already been awarded. Students may not request a withdrawal from a specific course or courses after the deadline for withdrawing from that term.

A retroactive withdrawal may be approved in one of two ways: contractual or non-contractual. The student's current college or school determines if a student qualifies for a retroactive withdrawal and then determines the type of withdrawal.

- Contractual retroactive withdrawal: students may request a contractual withdrawal for one semester only. Students will be approved by their current college or school and will receive a contract. If they fulfill all the terms of the contract, the withdrawal will be granted.
  - To qualify for a request for a contractual withdrawal, students must be able to demonstrate the following:
    - Unusually poor academic performance
    - An identifiable event or circumstances that explains the academic performance
    - Demonstrated evidence that corrective steps have been undertaken
- Non-contractual retroactive withdrawal: students may request a non-contractual withdrawal for up to one academic year. Non-contractual withdrawals are granted for extreme circumstances and require the approval of the student's current academic college or school.

***IMPORTANT NOTICE:*** *A retroactive withdrawal does not carry a tuition refund and may result in the recalculation of aid or other educational benefits received. Granted retroactive withdrawals may change a student's probation or suspension status. Financial aid recipients who withdraw from all courses before sixty percent of the term is completed may be required to return a portion of any financial aid disbursed for the term. Grades of W are counted in Attempted Hours and affect student completion rate, one of the standards for determining financial aid satisfactory academic progress. Students who do not receive at least one passing grade in a term may be required to return a portion of any financial aid disbursed for that term according to their last date of attendance or participation on record. If a student, whose financial aid has been impacted, believes this date is incorrect, they may provide documentation that supports attendance or participation beyond the last date of attendance or participation on record.*

***MILITARY NOTE:*** *Students who are called to active military service during a term must submit a copy of their deployment orders to the appropriate institutional officer. For additional information relative to military withdrawals, or if students are being deployed after the 13th week of instruction of the fall or spring terms and want to keep their grades earned at the time of deployment, please refer to the Military Leave section of the undergraduate catalog.*

## PROCEDURES

### Withdrawal during Drop/Add period or by the Withdrawal Deadline

To withdraw from one or more courses by the withdrawal deadline, students should log on to the WVU Portal accessible at https://portal.wvu.edu and drop their courses through STAR.

### Retroactive Withdrawal

To withdraw from the term after the withdrawal deadline, a student must request the retroactive withdrawal in writing from the dean (or designee) of the college of the student's current major. A successful petition should demonstrate that the student's performance was uncharacteristic and that the atypical circumstances interfered with the student's ability to withdraw. Students who are considered for a contractual retroactive withdrawal will need to demonstrate that they can now make satisfactory degree progress. Students may be required to present third party documentation of the qualifying event and/or evidence of corrective steps. If the petition is granted, the dean or designee will request the withdrawal from all courses for the approved term at the appropriate time directly to the designated institutional officer.

## GENERAL CONSIDERATIONS WHEN WITHDRAWING FROM COURSES

- Students who wish to withdraw from one or more courses are encouraged to meet with their academic adviser.
- Students should determine if their course load would be reduced below the minimum requirement set by their program.
- Students should contact the appropriate office to contact to determine if their course load might be reduced below the minimum hours required to qualify for financial aid, scholarships, international full-time student status, or a graduate assistantship or fellowship.
- If a student is enrolled in two co-requisite courses (courses that must be taken and completed simultaneously) and withdraws from one of those courses, the student will be automatically withdrawn from the other co-requisite course as well.
- If withdrawal from the University for a semester would jeopardize the student's standing in a particular program or major.
- Students who receive financial aid, veteran benefits, or scholarships should consult with the appropriate unit to see if the withdrawal will affect their status for the current or subsequent terms.
- It is the student's responsibility to ensure that all outstanding financial obligations to the University are satisfied and all required forms are received and processed. The withdrawal becomes official only after the request is received and processed by the appropriate institutional officer.

- Students withdrawing from all of their courses in a term who are living in university residential housing should vacate housing and turn in keys via the proper procedure. Check with the main desk at the residential hall for procedural details.

## In this section:


- Grading System (p. 36)
- Emergency Grading Policy (p. 36)
- Pass/Fail Grading (p. 36)
- Incomplete Grade Policy (p. 37)
- Grade Point Average (p. 37)
- Repeat Policy (p. 39)
- Grade Reports (p. 39)
- Dean's and President's List (p. 39)
- Transcripts (p. 39)


## Grading System

| Grade | Description |
|---|---|
| A | Excellent (Given only to students of superior ability and attainment) |
| B | Good (Given only to students who are well above average but not in the highest group) |
| C | Fair (Average for undergraduate students) |
| D | Poor but passing (Cannot be counted for graduate credit) |
| F | Failure |
| I | Incomplete |
| W | Withdrawal from a course before the date specified in the University calendar. |
| P | Pass (See Pass/Fail grading below) |
| X | Auditor, no grade and no credit. |
| CR | Credit but no grade |
| PR | Progress; final grade to be issued at end of second semester (HSC) |
| S | Satisfactory |
| U | Unsatisfactory |
| H | Honors course (Professional school courses only) |
| IF | Incomplete grade not removed by next regular term (Computed as an F) |
| UF | Unforgivable F (Not eligible for D/F repeat policy) |
| FNA | Failure Never Attended |
| FSA | Failure Stopped Attending (Last date of attendance required) |

Note: Grades that are not reported by faculty at the end of a term will be designated with an NR on the official transcript.  All grades of NR must be resolved in order to graduate from West Virginia University.

## Emergency Grading Policy

The primary instructor of record assigns final grades; however, under extraordinary circumstances, the dean in consultation with the program chair or director may select a designee to determine and assign grades in a course.

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## Pass/Fail Grading

Non-degree seeking students can take any course P/F. Any full-time, degree-seeking student who has completed fifteen credits or more and has a 2.0 grade point average may take a maximum of four hours each semester or summer term on a pass/fail basis, to a maximum of 18 credits. Any course taken on a pass/fail basis must be a free elective. Courses in the major, courses in other subjects required by the major, courses to be applied to a minor or undergraduate certificate, and courses taken to satisfy University, college, school, or departmental requirements are excluded from pass/fail. For example, courses taken to satisfy general education or foreign language requirements may not be taken for pass/fail grading.

In most cases, experiential education courses (e.g. standalone service learning courses, internships, teaching practicum) are offered Pass/Fail. However, departments and programs may request normal grading for experiential courses or add P/F courses to major requirements by following

the appropriate approval process. Such courses are identified in the student program of study, and are excluded from the maximum of 18 P/F credits allowed as free electives.

Advisory Note: Students who plan to apply for admission to a professional program are advised that courses taken on the Pass/Fail option may hinder admission when GPA is a consideration. Consult the admissions office of the professional school to which they intend to apply.

Students should be aware that some schools, scholarship committees, and honorary societies do not find work taken on a non-graded basis (Pass/Fail) acceptable. Employers may view non-graded (Pass/Fail) course work unfavorably. All students, especially those without a declared major, should be very cautious in using the P/F option.

## PROCEDURES

- Before being allowed to register P/F for a course offered for regular grading, students will need to meet with their academic advisor to discuss possible effect on graduation. If the adviser agrees, the student will contact the Office of the University Registrar (registrar@mail.wvu.edu?subject=P/F%20Registration) and will have to provide an email from the adviser. Once the registration period has ended, he or she may not revert to a regularly graded course.
- The grade of P does not affect the student's grade point average. However, a grade of F will lower the student's grade point average.
- A course taken P/F may be repeated later for a grade.

# Incomplete Grade Policy

A grade of I (Incomplete) is a temporary grade assignment used when unforeseen, non-academic circumstances arise that prohibit students from completing the last course assignments or examinations at the end of the semester. The grade of Incomplete is typically assigned because of an excused absence from the final examination, or because assignments are unavoidably incomplete, as determined by the instructor. Generally, the student will have been active in the course up until the last day of the 13th week of classes and earned at least a D- to be eligible to request an incomplete.

- An instructor may not assign a grade of I without the student's agreement and an Incomplete Contract (https://undergraduate.wvu.edu/strategies/academic-policy-committee/forms/). If a student has not requested an Incomplete, or the request for an Incomplete grade has been denied, the instructor should assign the grade earned in the course.
- Within the Incomplete Contract, the instructor is required to indicate a grade earned for the course assuming no additional work will be completed. Should the signed contract not be fulfilled, the instructor must either submit a grade of F or the grade indicated in the contract.
- If the student is unable to complete the work during the following term for non-academic reasons, the term of the contract may be extended with permission of the Dean. Additionally, the term of the contract can be extended if the instructor is not available for a portion of the course, for some legitimate reason, cannot be completed within the original time frame.
- An Incomplete grade not changed by the end of the next regular term, (fall and spring semesters) will be replaced with a grade of IF, and the class must be retaken to satisfy degree requirements as necessary. Under legitimate, extraordinary circumstances, with supporting documentation and the approval of the Dean, an instructor can submit a grade change for an IF within five years of when the course was taken.
- All grades of I must either be resolved or replaced with an IF in order to graduate from West Virginia University.

## PROCEDURES

- Students who wish to be considered for an Incomplete must request the incomplete grade prior to the end of the term. If instructors agree, they will set the contractual conditions under which the grade of I will be changed to a letter grade, and students will sign their online contracts. The grade of incomplete is not granted until the Incomplete Contract has been approved by the department and college.
- The instructor should establish the date by which all work must be completed. Ideally, the date will be prior to the mid-semester point of the following regular term but may not be later than the last day of class of that term.
- If the student does not complete the terms of the contract, the instructor will assign the earned grade recorded on the contract at the time the Incomplete was assigned.
- The student is not permitted to re-register for the course to complete the missing work and remove the grade of I.
- Students may appeal any final grade imposed by a course instructor/coordinator, institution, or its constituent academic units through the procedures described in the Academic Standards (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/) section of the catalog.

# Grade Point Average (GPA)

## GRADE POINTS

Each letter grade has a numeric value. Grade points are based on this number value and the credit hour value of the course.

- A = 4
- B = 3
- C = 2

- D = 1
- F/FNA/FSA/IF/UF- 0

The GPA is computed on all work for which a student registers, with the following exceptions:

- Courses with a grade of CR, H, PR, P, S, W, I, U, and X carry no grade value.
- When a student receives the grade of "I" and the incomplete grade is replaced, the grade point average is calculated on the basis of the replacement grade. If the "I" grade is not changed within the next semester, the grade is replaced with a grade of IF, which is included in the grade point average.

## GRADE POINT AVERAGE

- The institutional GPA is computed based on all work taken in the West Virginia University system for which a student received a letter grade (A-F) except for grades excluded under the provisions of the D/F Repeat Policy.
- The transfer GPA is computed for all domestic and international transfer work from properly accredited institutions.
- The overall GPA is calculated from the combined institutional and transfer GPA.

### GPA POLICIES

- The overall GPA is used for graduation status, programmatic standards, academic awards, Latin honors, probation and suspension, and state and federal financial aid eligibility. Please review information on the Student Financial Support and Services (https://financialaid.wvu.edu/) page for detailed information regarding financial aid eligibility.
- The transfer GPA is used to decide eligibility for admission to the WVU system and individual majors. Please review Rules Governing Transfer Work in the Coursework Done Out of Residence (http://catalog.wvu.edu/undergraduate/degree_regulations/#Out_of_Residence) Policy.
- To be eligible to receive an undergraduate degree, a student must have an overall GPA of at least 2.0 at the time of graduation. Some degree or certificate programs require an overall GPA higher than a 2.0.
- Certificate or degree programs may require higher and/or specifically defined grade point averages. Please refer to the specific program for more information.

## GPA CALCULATION

The example below illustrates how to calculate a GPA.

Assume a student registered for the following courses and earned the following grades:

- MATH 126 (3 credits) - A
- ENGL 101 (3 credits) - B
- POLS 102 (3 credits) - D
- SPAN 101 (3 credits) - F
- CHEM 111 (4 credits) - C

Multiple the credit by the grade value to get the grade points earned for each course using the values for letter grades as described in the Grade Points section.

(Number of Credit Hours) multiplied by the (Letter Grade Value) = Grade Points

- MATH 126 with a grade of A **(3 credits)** * (Letter Grade Value for an A) **(4 points)** = **12 Quality Points**
- ENGL 101 with a grade of B (**3 credits**) * (Letter Grade Value for a B) **(3 points)** = **9 Quality Points**
- POLS 102 with a grade of D (**3 credits**) * (Letter Grade Value for a D) = **(1 point) = 3 Quality Points**
- SPAN 101 with a grade of F (**3 credits**) * (Letter Grade Value for an F) = **(0 points) = 0 Quality Points**
- CHEM 111 with a grade of C (**4 credits**) * (Letter Grade Value for a C) = **(2 points) = 8 Quality Points**

Add the total quality points earned: 12 + 9 + 3 + 0 + 8 = **32**

Add the total number of credit hours attempted: 3 + 3 + 3 + 3 + 4 = **16**

Divide the total number of quality points earned divided by the total number of credit hours attempted

GPA calculation = **32** (total number of quality points earned) / **16** (total number of credit hours attempted) = **2.0 semester GPA**

Students may also login to Degree Works to utilize the GPA Calculator.

# Repeat Policy

## D/F REPEAT

WVU has a D/F repeat policy for undergraduate students taking undergraduate courses at WVU locations or at other regionally accredited institutions. For transfer students, accepted coursework taken prior to enrollment at WVU from another institution, may be repeated under D/F guidelines at WVU. Coursework taken at WVU locations, may only be repeated **at a WVU location** to obtain D/F repeat calculations. Only the first graded attempt at a course is eligible to be D/F repeated.

When a course is D/F repeated, the following procedure occurs:

1. The original grade is disregarded for the purpose of determining the institutional GPA. It is marked as excluded (E) on the transcript in the semester that the student originally took the course, but it is not deleted from the student's record.
2. The second grade is entered on the student's transcript, included in the institutional GPA, and marked as included (I) in the semester that the course was repeated.
3. Grades of Unforgivable F (UF) are not eligible for D/F repeat.

## OTHER REPEATED COURSES

Courses repeated, but not eligible for the provisions of the D/F repeat policy, follow this procedure:

1. A course is attempted when a grade is recorded on the transcript. Students who have already completed two or more attempts at a course may be required to meet with their academic adviser and complete a Course Attempt Appeal Form (https://salesforceintegration.na1.echosign.com/public/esignWidget/?wid=CBFCIBAA3AAABLblqZhDtHQ3h2_iFUGQ8L1GRZutdtJN6LbtJUmD6MmKkycrCY2PP9Z1xU6XsiRUBuJQExTM*) to determine if they will be permitted an additional attempt and what, if any, performance expectations there will be in order to remain in their current major. Some academic units may also count withdrawals as a course attempt.
2. No course may be attempted more than three times unless approved by the dean of the student's major program. A course is attempted when a grade is recorded on the transcript. Some academic units may also count withdrawals as a course attempt.
3. Students who have already completed three or more attempts at a course must meet with their academic adviser and complete a Course Attempt Appeal Form (https://salesforceintegration.na1.echosign.com/public/esignWidget/?wid=CBFCIBAA3AAABLblqZhDtHQ3h2_iFUGQ8L1GRZutdtJN6LbtJUmD6MmKkycrCY2PP9Z1xU6XsiRUBuJQExTM*) to determine if they will be permitted an additional attempt and what, if any, performance expectations there will be in order to remain in their current major.
4. The original grade is included in determining the institutional GPA. It is excluded from earned or degree hours and is marked with an (A).
5. The original grade is not deleted from the student's permanent record.
6. The second grade is entered on the student's transcript and marked as included (I) in the semester that the course was repeated.
7. At the discretion of the dean of the student's major college, a prior course attempt with a passing grade may fulfill a program requirement.
8. When courses are repeated more than once (including courses originally D/F repeated) the final attempt carries the earned hours. All attempts (excluding an original D/F repeat) are used for determining the institutional GPA.

# Grade Reports

During fall and spring semesters, mid-semester and final grades are submitted through the STAR grade entry system each semester. Instructors submit a mid-semester grade for all students in an undergraduate course. These grades are used for counseling in support of student success, are not recorded on the student's official transcript. A student having an error in a grade received or a grade omitted should contact the instructor immediately.

Final grades are normally due 48 hours after the completion of each final exam. Grades are viewable to students no later than one week after final exam week concludes. The final grades of all seniors provisionally approved for graduation at the close of each semester or summer term are reported to the deans of the students' colleges or schools or the Office of Enrollment Services. Special report forms for this purpose are supplied by the student's dean.

Grades are available through the WVU Portal accessible at https://portal.wvu.edu.

# Dean's and President's List

Outstanding undergraduate academic achievement is recognized by awarding President's List and Dean's List status to students who obtain a 4.0 or minimally a 3.5 GPA, respectively. Only the highest honor is awarded, and it will be noted on the transcript. Students must be enrolled in a minimum of 12 credit hours of graded courses to be eligible for such recognition with no grades of I (incomplete) or NR (not reported). Courses completed with a grade of P, S, or X are excluded from the calculation of credit hours for President's List and Dean's List.

# Official Transcripts

A West Virginia University transcript is a complete record of a student's enrollment at WVU that includes all undergraduate, graduate, and professional courses. The transcript also includes any coursework transferred into the University from a previous institution. A WVU Potomac State College transcript

is a complete record of a student's enrollment at Potomac State College. A WVU Institute of Technology College transcript is a complete record of a student's enrollment at WVU Tech.

Students can order official transcripts through the Request Transcript webpage (https://registrar.wvu.edu/academic-records/request-transcript/) for students at the Morgantown campus location, Transcript Request Procedures webpage (https://admissions.potomacstatecollege.edu/forms/transcript-request-procedures/) for students at the Keyser campus location, or the Transcript Request webpage (https://techregistrar.wvutech.edu/academic-records/transcript-request/) for students at the Beckley campus location. Before ordering transcripts, students should ensure that all grades and degrees have been posted. The option is also available to hold a transcript order until grades or degrees have been posted. Transcript requests are processed immediately on the Morgantown Campus.

# Academic Calendar

## Academic Calendar 2025-2026

The publication of the Fall 2025, Spring 2026 and the 12-Week Summer Session 2026 can be found on the Office of the Provost website.

*The annual academic calendar dates are subject to change. Please refer to the academic calendar on the Office of the Provost website for most up-to-date information.

# Co-Curricular Programs

## In this section:


- Education Abroad (p. 40)
- WVU Exchange Programs (p. 40)
- Faculty-Led Programs (p. 40)
- Affiliate Programs (p. 40)
- Additional Information (p. 41)


## Education Abroad

In today’s increasingly globalized society, direct international experience is a key component of a complete college education. The WVU Office of Global Affairs manages more than 1,000 exciting and life-enriching programs in over sixty countries all around the world. Education Abroad can be a life-changing cultural experience and supports unique inquiry-based and experiential learning. All WVU students (undergraduate, graduate, and professional) are required to register and have program approval with Global Affairs (https://international.wvu.edu/) prior to departure when traveling abroad on university-related activities. Education Abroad program coordinators guide the student through the education abroad process, assist in choosing a program based on interest and needs, ensure appropriate credit transfer, offer travel advice, and provide cultural information about living and learning overseas.

## WVU Exchange Programs

WVU exchange programs are managed directly by Global Affairs in conjunction with over 65 select partner institutions around the world. These programs offer WVU students the opportunity to study abroad for a semester or year at a partner institution. Students pay regular WVU tuition and fees, and the host school provides full reciprocal services at a campus abroad. Room and board are paid either to WVU or the exchange institution, depending on the exchange agreement.

## Faculty-Led Programs

Faculty-led programs are education abroad experiences developed and organized by WVU faculty members in conjunction with the Office of Global Affairs. Students study in rigorous but exciting programs where coursework is directly supervised by WVU faculty members. These programs, available throughout the year, are focused on either general education or on specific disciplines.  WVU offers over 50 short term programs annually, in a variety of different subjects and locations. Programs vary from one week to a full semester abroad.

Contact Education Abroad by visiting the Education Abroad (https://educationabroad.wvu.edu/) website for a current listing of upcoming programs.

## Affiliate Programs

Affiliate programs are education abroad opportunities available to WVU students through affiliations with various education abroad organizations. Affiliate programs are available during the fall, spring, and summer terms as well as for a complete academic year. Students pay program fees directly to the affiliate organization.

## Additional Information

Students must submit application materials to Education Abroad (https://educationabroad.wvu.edu/) and complete the mandatory pre-departure orientation process for credit transfer approval. Students may enroll in courses to fulfill major, minor, General Education Foundations (GEF) requirements or elective credit. Students must be in good academic and disciplinary standing before acceptance to WVU programs or to affiliate programs abroad. Participation in programs requires a minimum 2.5 grade point average. Financial Aid is available for many programs. WVU Promise Scholarship funds may also be used for certain programs. For more information, visit the Student Financial Support and Services (https://financialaid.wvu.edu/) website.

For more information, please visit the Education Abroad (https://educationabroad.wvu.edu/) website or visit the office in Purinton House, PO Box 6313, Morgantown, WV 26506.

## In this section:


- About Air Force ROTC (p. 41)
- Time Requirements (p. 41)
- Curriculum (p. 41)


## About Air Force ROTC

The U.S. Air Force Reserve Officer Training Corps (AFROTC) program is designed to train and commission future officers to become Second Lieutenants in the United States Air Force or Space Force. WVU's program has been in existence since 1948 and is the only AFROTC detachment in West Virginia. The program includes training and education designed to develop leadership, managerial, and interpersonal skills vital to a professional U.S. Air Force or Space Force officer. For more information about the program and how to become a cadet, please visit afrotc.wvu.edu.

You can join AFROTC with **no** commitment for up to two years! If you have already completed your Freshman year, contact us at AFROTC@mail.wvu.edu to discuss how AFROTC can integrate with the remainder of your degree studies.

Students interested in becoming cadets should enroll in the following courses:

**Entering Freshmen:**
During Fall Semester, register for USAF 131 and USAF 100
During Spring Semester, register for USAF 132 and USAF 100

**Entering Sophomores:**
During Fall Semester, register for USAF 131, USAF 251, and USAF 100
During Spring Semester, register for USAF 132, USAF 252, and USAF 100

Once registered, the detachment will send future cadets information on orientation and other program requirements. The most current new cadet guide can also be found on the New Cadets page of the Air Force ROTC webpage (https://afrotc.wvu.edu/join-afrotc/new-cadets/).

We highly recommend contacting the detachment at AFROTC@mail.wvu.edu prior to registering to ensure you will be able to complete the program by graduation.

If interested in an Air Force or Space Force scholarship, you may apply as either a High School senior or while in college. Scholarships are awarded based on merit, to include GPA, physical fitness, and leadership performance. Visit the Scholarships page of the Air Force ROTC webpage (https://afrotc.wvu.edu/scholarships/) for more information.

## Time Requirements

On average, freshman and sophomore cadets can spend five to ten hours a week in AFROTC activities.This includes the required one hour in the classroom (such as USAF 131), two hours at Leadership Laboratory (USAF 100), and two hours at physical training sessions. Outside those five hours of academic and AFROTC requirements, cadets often have a strong community that revolves around additional volunteering and skill building, such as Color Guard, drill practice, football game events, etc.

Juniors and seniors take two additional hours a week, as the one credit hour academic class becomes a three-credit class (e.g. USAF 371). All other commitments remain the same, but with a focus on leading and training the underclassmen.

## Curriculum

### USAF 100 LEADERSHIP LABORATORY (LLAB)

Leadership Laboratory takes an average of four hours per week (two with the entire corps and two small group physical training), every semester, throughout the student’s enrollment in AFROTC. Instruction is conducted in an organized cadet corps with a progression of experiences designed to develop each student’s leadership potential. LLAB involves a study of Air Force customs and courtesies, drill and ceremonies, physical fitness, career

opportunities, and the lifestyle and duties of an Air Force officer. Students develop leadership potential in a practical, supervised training laboratory, which typically includes field trips to Air Force installations.

## USAF 131 AND 132: HERITAGE AND VALUES OF THE UNITED STATES AIR FORCE

Survey course that introduces students to the Department of the Air Force (DAF), which includes both the Air Force and Space Force. It provides an overview of the basic characteristics, missions, communications, and organization of the Department of the Air Force. The course includes an overview of AFROTC and AFROTC special programs intended for first-year AFROTC students.

## USAF 251 AND 252: TEAM AND LEADERSHIP FUNDAMENTALS

Designed to provide a fundamental understanding of both leadership and team building. Students will learn methods and perspectives on followership, problem solving, motivation, human relations, stress management, and decision making. The class is intended for second-year AFROTC students preparing for Field Training and leadership roles within the detachment.

## USAF 371 AND 372: LEADING PEOPLE AND EFFECTIVE COMMUNICATION

Designed for third-year AFROTC cadets to build on the leadership fundamentals taught in USAF 251 and 252. Students will learn about leadership, management, professional knowledge, leadership ethics, and communication skills required of an Air Force or Space Force officer. Case studies are used as a means of exercising practical application of concepts. Special emphasis is placed on enhancing communication skills for practicum in USAF 100.

## USAF 481 AND 482: NATIONAL SECURITY AFFAIRS AND PREPARATION FOR ACTIVE DUTY

Designed for fourth-year AFROTC cadets to understand their role as military officers and how that role directly ties to the National Security Strategy. Provides an overview of the complex social and political issues facing the military profession and examines the national security process, regional studies, national civilian leadership, military leader decision making, and doctrine.

# Minor Code - U040

| Code | Title | Hours |
|---|---|---|
| Minimum grade of C in all courses fulfilling minor requirements. | | |
| Minimum GPA of 2.5 required. | | |
| USAF 251 | Air and Space Power 1 | 1 |
| USAF 252 | Air and Space Power 2 | 1 |
| USAF 371 | Leadership Studies 1 | 3 |
| USAF 372 | Leadership Studies 2 | 3 |
| USAF 481 | National Security/Active Duty 1 | 3 |
| USAF 482 | National Security/Active Duty 2 | 3 |
| Complete 3 credit hours in any HIST, POLS, PE course or USAF 491 (with Department Chair approval). | | 3 |
| Total Hours | | 17 |

# In this section:


- Nature of the Program (p. 41)
- Basic Course (p. 43)
- Advanced Course (p. 43)
- Leadership Laboratory (p. 43)
- Military Science Minor (p. 44)
- Two-Year Program (p. 44)
- Simultaneous Membership Program (SMP) (p. 44)
- Judge Advocate General (JAG) Programs (p. 44)
- Graduate Medical Programs (p. 45)
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- Army ROTC Nursing Program (p. 45)
- Army ROTC Nursing Scholarships (p. 46)
- Additional Opportunities (p. 46)

## Nature of the Program

The curriculum includes the skills expected of a U.S. Army officer, including how to motivate co-workers, cope with unexpected challenges, organize large, complex tasks, build and maintain physical fitness and instruction on the Army's values-based leadership techniques. Additionally, students learn skills in demand today in the civilian and business worlds such as teamwork, tact, and effective communications. There are two- and four-year ROTC programs. The traditional four-year program is composed of the Basic Course and the Advanced Course.

## The Basic Course

The first two years in the ROTC program constitute the Basic Course, which includes:

| Code | Title | Hours |
|---|---|---|
| Military Science | | 1 |
| MILS 101 | Military Science | |
| Military Science | | 1 |
| MILS 102 | Military Science | |
| MILS 201 | Military Science | 2 |
| MILS 202 | Military Science | 2 |
| Weekly Leadership Lab | | |
| PE 110 | Military Physical Conditioning (Optional) | 1 |

These courses involve classroom studies in such subjects as military history, leadership development, national defense, physical training sessions, one weekend "Field Training Exercise", a field trip to a local civil war battlefield, and many more activities designed to increase self-confidence and leadership skills. Students can enroll in the program for the first two years without incurring any future military obligation. However, those who wish to pursue a U.S. Army commission at graduation can commit as early as their sophomore year, compete for an ROTC contract, and receive a tax-free monthly stipend of $420 as contracted cadets. Upon successful completion, students may apply for admission into the Advanced Course.

## The Advanced Course

After successful completion of the Basic Course, students who wish to earn a commission as an officer in the U.S. Army must enter the Advanced Course. It is mandatory for all contracted cadets and recipients of ROTC scholarships. Required classes are:

| Code | Title | Hours |
|---|---|---|
| MILS 301 | Military Science | 3 |
| MILS 302 | Military Science (Military Science) | 3 |
| MILS 401 | Military Science | 3 |
| MILS 402 | Military Science | 3 |
| PE 110 | Military Physical Conditioning | 1 |
| Weekly Leadership Lab | | |
| **Select one of the following:** | | **3** |
| HIST 210 | Modern Military History | |
| HIST 256 | History of the American Revolution: 1763-1790 | |
| HIST 453 | Civil War and Reconstruction | |
| HIST 460 | World War II in America | |

During the Advanced Course, students will put their management and leadership skills to the test while continuing to hone the traits required for commissioning into the U.S. Army. Advanced Course Cadets will lead junior classmates through the same activities outlined in the Basic Course. Additionally, as a cadet in the Advanced Course, you will spend approximately five weeks of the summer between your junior and senior years attending Advanced Camp at Fort Knox, Kentucky. Students receive intensive training in leadership, basic tactics, physical fitness, land navigation, negotiating a confidence obstacle course, and rappelling at this course. They also have the opportunity to lead other cadets through challenging military missions.

While enrolled in the program, ROTC textbooks, uniforms, and essential materials are furnished at no cost. Additionally, Advanced Course students receive a tax-free monthly stipend allowance of $420 per month.

## Leadership Laboratory

Leadership Laboratory is a two hour weekly session held every Thursday afternoon throughout a student's Army ROTC . It features structured activities within an organized cadet Corps, designed to develop leadership potential.

Students apply classroom lessons through practical exercises, including field craft, drill and ceremonies, physical fitness, rappelling, rifle marksmanship, and team-building activities. It is required for all Army ROTC scholarship recipients and contracted cadets.

## Military Science Minor

## Minor Code - U041

Students enrolled in the Army ROTC program may earn a Military Science minor by completing the following Advanced Courses with a minimum cumulative GPA of 2.0.

| Code | Title | Hours |
|---|---|---|
| MILS 301 | Military Science | 3 |
| MILS 302 | Military Science | 3 |
| MILS 401 | Military Science | 3 |
| MILS 402 | Military Science | 3 |
| Select one of the following: | | 3 |
| HIST 210 | Modern Military History | |
| HIST 256 | History of the American Revolution: 1763-1790 | |
| HIST 453 | Civil War and Reconstruction | |
| HIST 460 | World War II in America | |
| Total Hours | | 15 |

## The Two-Year Program

(Sophomores, Junior College Transfers, and Partnership Schools)

If students miss the first two years of Army ROTC, the two-year program offers the opportunity to achieve the same goals and benefits as the four-year program but at an accelerated pace. This is designed for sophomores who could not take the Basic Course or students transferring after attending a junior college or another institution. In this program, students first attend Basic Camp at Fort Knox, Kentucky, in the summer between their sophomore and junior years. This fully paid, four-week training camp is designed to be an accelerated version of the two years of leadership development training cadets receive during their first two years of Army ROTC. The course is broken into four phases; cadets begin physical training, drill and ceremonies, team development, combat water survival, and land navigation. Upon graduation from Basic Camp, students may compete for two-year, campus-based scholarships if their minimum GPA is 2.5, and they will graduate within four semesters. Those cadets who successfully complete Basic Camp and contract may be eligible to receive a $5,000 incentive bonus.

Students currently in the National Guard (Army or Air Force), U.S. Army Reserve, veterans, those with two years of Senior ROTC (SROTC) from another service, or three or more years of High School Junior ROTC (JROTC) experience may qualify for the Advanced Course under this program. Eligibility for contracting requires at least 59 college credit hours with a minimum GPA of 2.0.

## Simultaneous Membership Program (SMP)

Students in the Army National Guard or U.S. Army Reserve can join the Advanced Course as SMP cadets. Benefits include:

- Immediate advancement to sergeant (E-5) for pay purposes in their current unit
- Eligibility for Montgomery and G.I. Bill, GI Bill kicker (if negotiated during enlistment)
- A $420 monthly tax-free stipend
- Tuition assistance from their service

Currently the West Virginia National Guard offers $10,000 towards in-state tuition plus $4,500 in Federal Tuition Assistance for undergraduate or graduate studies. The U.S. Army Reserve offers provides student loan repayment and $4,500 annually in federal tuition assistance.

For more information, visit the WVU ARMY ROTC webpage, call (304) 293-7546, or e-mail armyrotc@mail.wvu.edu.

For a detailed overview, call 1-800-USA-ROTC or visit ARMY ROTC (https://www.goarmy.com/rotc.html) online.

## Judge Advocate General (JAG) Programs

The JAG Corps is the oldest “law firm” in the U.S., dating back to 1775. There are approximately 1,500 active duty (full-time) attorneys and 2,600 Reserve and National Guard (part-time) attorneys. Students in the Advanced Course should take the LSAT before to the fall of their senior year. They must then request an educational delay and branch JAG. The educational delay may be granted if  accepted to the law school of the student’s choice. While in law school, students may apply for one of 100 summer internships offered by the JAG Corps.

## Graduate Medical Programs

The Army offers a variety of graduate programs to ROTC graduates. These include specialties in nursing, dentistry, medicine, psychology, optometry, and veterinary medicine. Interested students must apply for educational delay following graduation and commissioning.

## ROTC Scholarship Program

In addition to world-class leadership training, Army ROTC also offers generous scholarships to qualified students. These scholarships are based solely on the student's merits, not financial needs. These merit-based scholarships are available for two, two-and-a-half, three, three-and-a-half, and four years and are available for both graduate and undergraduate programs. These scholarships pay full tuition and fees or room and board (up to $6,000/each semester). They also provide $600 per semester for books and include a $420 per month tax-free stipend, for up to 10-months a year (during the academic school year). Four-year scholarships are normally reserved for applicants who are high school seniors. The application process starts by applying online at the ROTC Scholarships (https://www.goarmy.com/careers-and-jobs/find-your-path/army-officers/rotc/scholarships/) website or by calling: 1-800-USA-ROTC to receive an application by mail. The remaining scholarships are considered campus-based scholarships given at the discretion of the professor of military science.

Students must meet the following requirements for a four-year Army ROTC scholarship:

- Be a citizen of the United States
- Be between the ages of 17 and under 31 in the year of commissioning
- Have a high school cumulative grade point average of at least 2.5 unweighted
- Have taken the SAT or ACT exams
- Have a high school diploma or equivalent
- Meet the Army's physical and height/weight standards
- Be of good moral character
- Exhibit a strong desire to become an Army officer
- Agree to accept a commission into the Army, Army Reserve or Army National Guard
- Possess leadership potential to become an effective leader. These include appearance, personality, academic excellence, extracurricular activities, and physical fitness
- Be medically qualified by passing a Department of Defense Medical Evaluation Board health physical and eye exam
- Must be eligible for a secret security clearance

Students must meet the following requirements for a three-and-a half, three, two-and-a half and two-year scholarships:

- Be a citizen of the United States
- Be between the ages of 17 and under 31 in the year of commissioning
- Have a college grade point average of at least 2.5
- Have a high school diploma or equivalent
- Meet the Army's physical and height/weight standards
- Be of good moral character
- Agree to accept a commission into the Army, Army Reserve, or Army National Guard
- Exhibit a strong desire to become an Army officer. Possess leadership potential to become an effective leader. These include appearance, personality, academic excellence, extracurricular activities, and physical fitness
- Be medically qualified by passing a Department of Defense Medical Evaluation Board health physical and eye exam
- Must be eligible for a secret security clearance

## Army ROTC Nursing Program

Being an Army nurse is one of the most rewarding careers imaginable. Army nurses are officers—and as such are highly respected professionals. They have the opportunity to assume leadership positions in a hospital setting far more quickly than those working in the private sector. They also have the personal satisfaction of caring for the men and women who defend our freedom.

The Army ROTC program offers some unique hands-on opportunities for nursing students that are not available anywhere else. With the Nurse Summer Training Program (NSTP), Army ROTC nurse cadets have the opportunity for a paid, three-week assignment to army hospitals throughout the United States and Germany. While participating in the program, cadets are introduced to the Army Medical Department (AMEDD) and to the roles and responsibilities of an army nurse corps officer. Cadets gain hands-on experience, under the guidance of an experienced army nurse, allowing them to hone their clinical skills and become comfortable with developing their professional skills as a member of the U.S. Army Healthcare Team. For more information go online to ARMY ROTC Nurse Training & Scholarship Program (https://www.goarmy.com/rotc/courses-and-colleges/programs/nursing.html).

## Army ROTC Nursing Scholarships

Army ROTC offers qualified undergraduate nursing students two-, three-, and four-year scholarships. These scholarships are merit-based and are awarded to those who possess a strong academic achievement record and demonstrate that they have the potential to become leaders. These scholarships defray the full cost of tuition and provide a tax-free allowance for books and necessary materials. Additionally, those awarded an Army ROTC nursing scholarship are eligible to receive a tax-free stipend up to $420 per month, to help defray living expenses, for up to ten months of the academic year. The scholarships would pay full in-state or out-of-state tuition and fees. There will also be incentive items given during their junior and senior years. The nursing scholarship will also cover the cost of the NCLEX review course as well as the cost of the NCLEX test.

## Additional Opportunities

Students enrolled in the Army ROTC program can participate in numerous fully funded military training opportunities during their summer breaks. These opportunities include, but are not limited to Airborne School, Air Assault School, Mountain Warfare School, Pentagon Internship Program, Project Global Officer (GO), and the Nurse Summer Training Program. There are also opportunities to study abroad through numerous fellowship programs.

# Degree Regulations

## In this section


- Undergraduate Degree Requirements (p. 46)
- Credit Residence Requirements (p. 46)
- Coursework Done Out of Residence (p. 47)
- Credit Validation (p. 48)


## Undergraduate Degree Requirements

All undergraduate degree programs include the General Education Foundations (GEF), require a minimum grade point average of 2.0 or higher, and require a minimum of 120 credit hours. In addition, the various colleges and schools may determine their own specific graduation requirements, which may include additional course or credit requirements, minimum course grades, and grade point averages higher than a 2.0.

Every undergraduate degree program at WVU requires that students satisfactorily complete the General Education Foundations. For General Education Foundations definitions, please see the list of approved GEF courses (http://registrar.wvu.edu/gef/). All undergraduate students at WVU are also required to fulfill a Capstone course. Please note that transfer courses do not fulfill the Capstone requirements. Capstone courses can never be transferred from another institution, including courses taken while studying abroad.

Students entering WVU as an undergraduate student with fewer than 24 hours must also earn a passing grade in a First Year Seminar course in their first semester at WVU. Those who do not pass the course must re-enroll for subsequent semesters until they earn a passing grade.

### FIRST YEAR SEMINAR (FYS) WAIVER OR EXEMPTION POLICY

#### Transfer and Non-Traditional Students

Transfer students who have earned 24 or more hours at another institution will have the first-year seminar course (FYS) waived regardless of college (course number indicator of 191). Transfer students who earned credit for a freshman seminar course with similar learning outcomes at another regionally accredited institution can have the course approved as their FYS through the transfer equivalency process. Students who enroll at WVU more than four years after high school graduation, or who have been absent from the institution for more than four years, may have the FYS waived by their college or school.

Note: Students granted a waiver will need to make up the credit hour allocated to the FYS in the Course Program of Study.

#### Dual Enrolled High School Students

Students enrolling as first-time freshmen who are not four years out of high school are not eligible to have the FYS waived regardless of earned credits.

## Credit Residence Requirements

In order to meet residency requirements at West Virginia University locations for a bachelor's degree, students must complete a minimum of 90 total credit hours in residence or 30 of the final 36 credit hours in residence to earn a WVU degree. Individual colleges, schools, or departments may have additional residence requirements as part of their degree or major requirements. Students should consult their respective academic unit with questions regarding specific degree or major residence requirements. Coursework taken at other WVU system campuses, WVU administered credit by examination, placement credit, study abroad credit, military credit and experiential learning credit will not interrupt the final 30 credit hours in residence if earned during this period.

Academic units have discretion to require that up to 9 credits of upper-division coursework in the major, including the Capstone course, be taken in residence in the WVU system. Accredited programs may have higher residency requirements.

In order to meet residency requirements at WVU Potomac State College for an associate's degree, students who have completed all undergraduate work in another West Virginia public higher education system must complete at least 18 hours of work at WVU Potomac State College; 8 of the last 16 hours must be on campus, or complete the final 15 credit hours of work at PSC. Transfer students whose undergraduate work has been completed outside of the West Virginia public higher education system must complete a minimum of 45 total credit hours in residence or complete the final 15 credit hours of work in residence at PSC. Student's may also be required to earn up to 8 credit hours in residence for major fields.

**Note: Resident credit hours are not synonymous with West Virginia State residency definitions for tuition purposes**.

# Coursework Done Out of Residence Policy

## DEFINITIONS

Transfer students are West Virginia University students who have completed post-secondary coursework at a regionally accredited college or university after graduation from high school, but before registering at WVU. Courses brought to WVU upon original matriculation are called transfer work.

Transient students are current West Virginia University students who temporarily matriculate at another accredited institution to take courses to be recorded on their WVU transcript or who return to the University after an absence of one calendar year or less. Courses brought in to WVU from another institution are called transient work. Transient work includes:

- Military credit validated by the American Council on Education (ACE).
- Collegiate work approved through the appropriate workflow and completed at another regionally accredited institution in the United States.
- Collegiate work approved through the appropriate workflow and completed at colleges and universities outside of the United States which are accredited or approved by the Ministry of Education (or other appropriate governmental agency) of the country in which they are located.

## RULES GOVERNING TRANSFER WORK

- Transfer students must have earned a 2.0 GPA in baccalaureate-level work at their institution of origin to be eligible for admission to the West Virginia University system. Individual programs may require a higher transfer GPA and/or other prerequisites for admittance as noted in the University catalog. More information can be found on the WVU Undergraduate Admissions website (https://admissions.wvu.edu/).
- Any remedial courses, or courses taken from a non-regionally accredited institution, that have been included in the grade point average of the institution of origin will be removed before consideration for admission to the West Virginia University system.
- Transfer students who have fewer than twenty-four transferable credit hours must also meet freshman admission standards.
- Upon matriculation to WVU, transfer students holding an Associate of Arts (A.A.), Associate of Science (A.S.), or an Associate of Applied Science (A.A.S) degree from a regionally accredited institution shall be deemed as having satisfied the WVU general education requirement.
- When applying transfer coursework to the WVU system transcript, all credit and grades earned at a regionally or internationally accredited institution will transfer to West Virginia University.
- Transfer credit is adherent to WVU policies. This includes, but is not limited to, repeated coursework policies and D/F repeat calculations (http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#Repeat). If you have questions on how this will impact your standing at WVU, please contact transfercredit@mail.wvu.edu.

## RULES GOVERNING TRANSIENT WORK

- Approved transient courses will be assigned a WVU subject code, course number, grade, and credits and will be recorded on the student's transcript. Unapproved transient courses will be assigned credits and a grade of CR, but will not be translated into an equivalent WVU course. These courses will be designated as NOEQ 1NT and will not fulfill any requirements.
- Only students with a 2.0 GPA will be approved to take course(s) in transient. Students who have matriculated at WVU may take a maximum of eighteen (18) credit hours in transient, no more than nine (9) hours of which may be used to fulfill the major requirements indicated in the university catalog. Transient courses taken prior to fall of 2019 are exempt from the 18/9 restriction, as are courses taken through education abroad, the military, or at other WVU system campuses.
- Students who are advised by the Center for Learning, Advising, and Student Services (CLASS), may take up to the maximum allowable hours in transient. Once a major is declared, the new college can decide to allow or deny further transient work at the Dean's discretion.
- Courses taken in transient and approved by the student's college are recorded on the transcript and must be accepted by all WVU degree programs.
- Transient work may violate the Credit Residency Requirement (http://catalog.wvu.edu/undergraduate/degree_regulations/#Residency_Requirements) and render the student ineligible for graduation.
- Courses completed for a grade other than W (Withdraw) in residence may not be repeated at another school for degree credit via the transient process.
- Students must have completed the required WVU prerequisites to take a course for transient credit or receive WVU credit for a course.

- Undergraduate transfer/transient coursework taken prior to the completion of a baccalaureate degree will not be posted to the student's academic record towards another degree in the WVU system. Undergraduate transfer/transient work taken after completion of a baccalaureate degree may be posted to the academic record towards a second degree in the WVU system.
- A student with extraordinary documented circumstances may appeal a decision regarding transfer or transient credit to the appropriate dean.

## PROCEDURES

- Prospective domestic and international transfer students will work through the TERR system to have their coursework reviewed and evaluated. Determining course equivalencies, retroactive evaluation of NOEQ courses, and requesting an appeal will follow the appropriate workflow. Once transfer coursework has posted to the WVU transcript, students will work with their departmental adviser to select courses for their first semester at West Virginia University and have their advising hold lifted.
- Transient students should work closely with their adviser before they take a course at another institution with the intent of posting the course to their WVU transcript. Detailed instructions for initiating the transient request process can be found on the transfer and transient resource page (https://registrar.wvu.edu/transfer/).
  - The transient process should be completed before registering and paying tuition at another institution. Requesting approval for retroactive transient work is strongly discouraged and is done at the student's own risk.
  - Students should meet with their adviser to discuss the appropriateness of the courses they are planning to transfer and to be informed of the policies governing transient credits.
  - Requests for transient credit must be submitted through the transient application, found on the transfer and transient resource page (https://registrar.wvu.edu/transfer/), and approved by the advisor and appropriate dean.
  - If the course(s) a student plans to take at another domestic or international institution is not already articulated in the TESS system, the student is responsible for submitting all necessary information required for review through the TERR portal accessible via the transfer and transient resource page (https://registrar.wvu.edu/transfer/).

# Credit Validation

Students seeking to complete an undergraduate degree after a significant break in enrollment may be asked to retake certain upper-division courses in their major to validate their subject knowledge (or otherwise demonstrate mastery). This requirement to re-enroll or demonstrate subject mastery in a course is at the discretion of the department chair and dean.

Courses completed in or articulated by the West Virginia University system up to seven years previous must be accepted by the student's program unless a specific accreditation policy invalidates the course. Courses completed more than seven years previous may be excluded from the major at the discretion of the program.

All prior coursework completed at WVU will be factored into the student's institutional GPA. Coursework deemed to be insufficient to meet current course standards may be treated as elective credit but will not satisfy major requirements (as allowed by the student's academic major). Transfer coursework will be evaluated per the University's Transfer Policy.

# In this section:


- Awarding Degrees (p. 48)
- Double Majors (p. 49)
- Dual Degrees (p. 49)
- Second Degrees (p. 49)
- Reverse Transfer (p. 49)
- Diploma Retention Policy (p. 49)



- Awarding Degrees (p. 48)



- Honorary Diplomas Awarded Posthumously (p. 49)


# Awarding Degrees

All degrees (p. 53) are conferred by the WVU Board of Governors as recommended by the faculties of the various colleges and schools. A degree is granted at the end of the semester or summer term in which a student completes all the requirements for that degree, provided the student has submitted an application for graduation at their major department's academic dean's office and the dean has certified completion of all degree requirements.

A student becomes eligible to graduate when they complete the requirements of the University, college or school, and major degree program according to the Undergraduate Catalog in effect at the time the student first entered WVU. With the consent of the student's advisor and dean, a student may choose to meet the conditions published in a later catalog. If a student entered WVU more than seven years previously, the student must complete the requirements in a catalog that is no more than seven years old.

Students must observe any program changes that are enacted by the West Virginia University Faculty Senate, West Virginia University Board of Governors, the West Virginia Higher Education Policy Commission, or by local, state, or federal law.

WVU policy dictates that, in view of their professional responsibilities to the general public, the faculty of a professional school may recommend to the president of the University, in writing, that a student be removed from its rolls. The recommendation of the faculty must indicate that the student is not fit to meet the qualifications and responsibilities of the profession.

A diploma or a transcript will not be issued to any student until payment of all tuition, fees, and other indebtedness to any unit of the University is made. Once a degree is awarded, no changes to the degree and final transcript are permitted.

## Honorary Diplomas Awarded Posthumously

West Virginia University honors the memory of deceased students who did not have the opportunity to complete their degree by awarding a posthumous honorary diploma. After approval of the Dean of the student's college, the diploma can be awarded to a student who has made progress toward a WVU degree.

## Double Majors

The double major is the awarding of one degree with two majors offered by one college/school. For instance, a student who completes majors in English and History earns one B.A. degree. A student who completes multiple majors with the same degree designation offered by different colleges/schools will be awarded dual degrees (p. 49). The completion of double or multiple majors must lead to the same degree and can only be achieved simultaneously. Students must be accepted into each major and fulfill all requirements of each major in addition to satisfying all University requirements. Students who complete multiple majors within one degree will be awarded one degree, and the transcript will list the degree and each major.

## Dual Degrees

The dual degree is the concurrent awarding of two distinct baccalaureate degrees (i.e. B.A., B.S., B.S.E., B.S.J., B.S.B.A.). Dual degrees will not be awarded when a student is completing a double major (p. 49) in the same college/school. Students pursuing two majors in different degree programs are expected to have the full range of skills, competencies, and experiences as students graduating from each of the programs independently. Therefore, students must be admitted into each degree program and fulfill all requirements for each degree. Students should pay particular attention to GEF requirements for each degree. Simultaneous completion of dual baccalaureate degrees from different colleges or schools requires students to complete all college, program, and major requirements in order to earn both degrees.

## Second Degrees

Some students decide to continue their undergraduate studies after receiving their first bachelor’s degree. Students who attempt to earn dual baccalaureate degrees from WVU but do not fully complete requirements for both degrees simultaneously will become second degree candidates. Students who have previously earned a bachelor’s degree, whether from WVU or another institution, must complete a minimum of 30 hours beyond the first degree. Second degree candidates must meet all requirements for their degree program, major, college/school and the University, including residence requirements. General Education Foundations (GEF) requirements, however, are generally considered satisfied by completion of the first undergraduate degree. In the event that courses taken for the first bachelor’s degree are required courses for the second degree program, the college or school granting the second degree may approve course substitutions. In no circumstance may the coursework in the second degree program be fewer than 30 credit hours after the conferral of the first degree.

## Reverse Transfer

Students who are admitted to a professional program in their last year of bachelor’s degree coursework may request reverse transfer of professional coursework to fulfill the requirements of the bachelor’s degree at WVU. Students are required to complete at least 90 hours of the three-year curriculum at WVU with no more than 30 credits transferring in from a regionally accredited professional program. Examples of professional programs may include but are not limited to: Doctor of Veterinary Medicine, Doctor of Medicine, Doctor of Dental Science, etc.

## Diploma Retention Policy

Diplomas retained by or returned to the Office of the University Registrar will only be held for a period of two years from the date of degree conferral. This includes diplomas that are retained in the office for financial holds, that have been returned to sender. After two years, any request for a diploma by the student will incur fees and fall under all policies associated with ordering a replacement diploma.

## In this section:


- Graduation (p. 50)
- Graduation with Honors (p. 50)

## Graduation

In order to graduate, a student is required to complete an application for graduation the semester or summer term in which they expect to graduate. If a student is uncertain about graduation requirements, the student should meet with their academic advisor for guidance.

## Graduation with Honors

WVU recognizes distinguished academic achievement by awarding degrees cum laude, magna cum laude, and summa cum laude. This distinction can be awarded on initial baccalaureates and specified entry-level professional degrees. Students who received academic forgiveness are not eligible to graduate with honors. All eligible candidates for a baccalaureate with a GPA of 3.8 or higher graduate summa cum laude. Those with a grade point average of less than 3.8, but equal to or above 3.6, graduate magna cum laude. Those with a GPA of less than 3.6, but equal to or above 3.4, graduate cum laude. All calculations for Latin Honors will be based on the overall GPA.

The GPA for honors consideration is based on WVU baccalaureate-level college work attempted through the final semester. This calculation includes baccalaureate-level college work transferred to WVU from higher education institutions attended. Credit hours earned with a grade of P or S are not considered in the determination. However, failing grades, are computed as hours attempted. Students must meet residency requirements at WVU to be considered for graduation with honors.

The GPA for honors consideration for entry-level professional degrees is based on professional-level work attempted through the last semester. This calculation includes professional-level college work transferred to WVU from higher education institutions attended. Credit hours earned with a grade of P or S are not considered in the determination.

Students entering and completing a second baccalaureate program, following completion of the initial degree, are not eligible to receive the honors designation.

The grade point average through the penultimate semester will be used for notations in the commencement programs.

# FERPA

## In this section:


- Notice to Students Regarding FERPA (p. 50)
- Designation of Directory Information (p. 50)
- Designation of Limited Use Directory Information (p. 51)
- Withholding Directory Information (p. 51)
- Parent/Guest Access to Online Student Records (p. 51)


## Notice to Students Regarding FERPA

Students at West Virginia University (The WVU System) benefit from the Family Educational Rights and Privacy Act (FERPA) of 1974. This Act, was designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for the correction of inaccurate or misleading data. A more detailed explanation of rights afforded to students by FERPA can be found at the WVU FERPA (http://ferpa.wvu.edu/home/) website.

## Designation of Directory Information

Directory Information is public and may be disclosed at West Virginia University's discretion for any purpose. WVU designates the following categories of student information as “Directory Information".

- Name of Student
- Official Address
- Telephone Number
- Place of Birth
- Age of Student
- Names and Addresses of Parents
- Major and Minor Fields of Study
- Class Status (e.g., freshman)
- Enrollment Status (e.g., full time or part time)
- Dates of Attendance
- Previous Educational Institution(s) Attended
- Degree(s) and Date(s) Conferred, including anticipated graduation dates
- Awards

- Honors
- Participation in Officially Recognized Activities and Sports
- Weight and Height of Members of Athletic Teams
- Duties and Responsibilities, including Dates of Service, of Graduate Assistants, Student Workers, Interns, or Student Volunteers

## Designation of Limited Use Directory Information

WVU designates the following categories of student information as “Limited Use Directory Information":

- University issued student electronic mail addresses (“Email Addresses”)
- Photographs, videos or other media containing a student’s image or likeness (collectively “Student Images”)

Use and disclosure of this information shall be limited to (1) those officials within the University who have access, consistent with FERPA, to such information and only in conjunction with an official institutional purpose; and (2) publication on websites hosted by, on behalf of, or for the benefit of the University, including the online directory available at: http://directory.wvu.edu.

Limited Use Directory Information may only be provided to external parties that are contractually affiliated with the University.

## Withholding Directory Information

Students who do not request withholding of Directory Information are assumed to have approved disclosure of this information. Currently enrolled students, using the official West Virginia University Student Confidentiality Form, (listed under Records of the Forms tab), may withhold disclosure of Directory Information under FERPA. To withhold disclosure, completed forms must be submitted in the Mountaineer Hub or mailed or emailed to the Office of the University Registrar.

A request to withhold Directory Information shall have no effect on disclosures made prior to receipt of the Student Confidentiality Form, and will not revoke third-party access to student records granted through the Parent/Guest Portal. Students may reinstate disclosure of Directory Information by completing the Release Confidentiality (Reinstate Directory Information) form.

## Parent/Guest Access to Online Student Records

The Parent/Guest Portal (https://parent-guest.portal.wvu.edu/) is the exclusive method by which a University student may grant third-party access to their records. Information that is protected from disclosure pursuant to FERPA, such as grades, financial aid details, and student account/billing information is maintained in a secure online environment. A student may grant permission to a parent or guest to access this information and make payments through this portal. A student may restrict the information that a parent or guest is able to access or may revoke access at any time.

For FERPA updates and more information on West Virginia University’s FERPA policy, please visit the WVU FERPA (http://ferpa.wvu.edu/home/) website, or contact the applicable office:

- Office of the University Registrar for the Morgantown location
- Office of Enrollment Services for the Keyser location
- Office of Enrollment Services for the Beckley location

# Financial Aid

## In this section:


- Application Process (p. 51)
- Aid Offer Notification (p. 52)
- Employment Opportunities (p. 52)


To receive an aid offer, a student must be admitted as a degree-seeking student within the WVU System. Students who take courses at a WVU campus but who are not pursuing a degree may be eligible for limited Federal Direct Loans if they meet certain criteria (https://financialaid.wvu.edu/students/non-degree-student/). Students with financial needs should apply as early as possible.

## APPLICATION PROCESS

To apply for federal and some state and institutional aid, students must submit the Free Application for Federal Student Aid (FAFSA). For steps that need to be taken in preparation, see our Preparing for the FAFSA webpage (https://financialaid.wvu.edu/applying-for-aid/preparing-for-fafsa/). Our Complete the FAFSA webpage (https://financialaid.wvu.edu/applying-for-aid/fafsa/) has information on submitting the FAFSA and priority deadlines. WVU will only receive students' FAFSA information electronically, if students include the WVU System school code (003827) on the FAFSA.

## AID OFFER NOTIFICATION

WVU will receive students' FAFSA information electronically if students include the WVU System's school code (003827) on the FAFSA when they submit. Students should monitor their MIX email account after submitting the FAFSA - that is where they will be notified of any additional tasks they may need to complete and where financial aid offer notifications will be sent once available.

## EMPLOYMENT OPPORTUNITIES

Students are encouraged to use the job search database (https://studentemployment.wvu.edu/) on the WVU Career Services Center (https://careerservices.wvu.edu/) website to search for on- and off-campus part-time Federal Work-Study (https://financialaid.wvu.edu/fws/) and regular student employment opportunities.

## In this section:


- Satisfactory Academic Progress (p. 52)
- Consequences of Withdrawal (p. 52)


## Satisfactory Academic Progress

Students must make measurable academic progress toward degree completion to remain eligible for most financial aid programs. Federal regulations require that students meet minimum standards for grade point average, successfully complete a minimum percentage of attempted credit hours, and complete their degree within a certain amount of attempted credit hours. The complete Satisfactory Academic Progress Policy (https://financialaid.wvu.edu/home/maintain/academic-progress/) is available online.

## Consequences of Withdrawal

If a student receives federal, state, or institutional financial aid and withdraws from all classes during the semester, the student may be required to return all or a portion of their financial aid even if it has already disbursed as payment on the student's account. Refer to our Withdrawing from Courses (https://financialaid.wvu.edu/home/maintain/withdrawing/) (https://careerservices.wvu.edu/)webpage (https://financialaid.wvu.edu/home/maintain/withdrawing/) for more information. Withdrawing from one or more classes may also impact future financial aid eligibility per the Satisfactory Academic Progress Policy (http://financialaid.wvu.edu/home/maintain/academic-progress/).

## Additional Information

For more information on applying for financial aid and maintaining aid eligibility, visit the Financial Aid website (https://financialaid.wvu.edu/).

# Minors

## In this section:


- General Statement (p. 52)
- Requirements (p. 52)
- Procedures for Declaring and Completing a Minor (p. 53)


## General Statement

Each academic unit in the University may, at its discretion, offer formal academic minors. The University does not require that an academic program unit offer a minor or that its students take a minor. Minors will be described in the catalog and identified on the student's transcript in the same manner that majors are identified. If a department requires a concentration of courses in a secondary area and that concentration is not a formal minor, then the department should refer to this group of courses as an 'area of emphasis' rather than a 'minor' in order to avoid confusion.

## Requirements

Requirements for a minor are set by the academic unit offering the minor. Substitutions may not be made without written approval of the minor department. Minors must include at least fifteen hours of course work, with a minimum of nine hours at the upper division level (course numbers 300 or above). Units offering a minor may require specific courses and/or may require a minimum performance standard for courses taken to fulfill minor requirements (e.g., "a GPA of 2.0 across courses counted toward the minor is required" or "a grade of 'C' or higher must be earned in all courses counted toward the minor"). Courses in the minor may not be taken pass/fail.

Students may not earn a minor in the same field as their major. Courses required for completion of the student's major may be applied to the completion of a minor, so long as that minor is not in the same field (i.e., offered by the same academic unit) as the major. Each minor must have a minimum of 9 unique credit hours distinct from any other academic credential.

For rules concerning minors that are part of the multidisciplinary studies degree, see the Programs for Multidisciplinary and Interdisciplinary Studies (https://mds.wvu.edu/) website.

The declaration of academic minors does not change or supersede specific college requirements or policies.

## Procedures for Declaring and Completing a Minor

Students declare minors once they enter their major fields of study. A student interested in completing a minor (or minors) works with the major advisor to incorporate minor requirements into schedule planning. Students are welcome to consult with advisors in the minor department. Students who wish to complete a minor in music, women's studies, leadership studies, or ROTC must work directly with advisors for those programs.

The following steps must be followed to assure that completion of a minor is appropriately recognized and posted to the student's transcript:

1. Complete an Academic Status Update (ASU) Form with their advisor.
2. Indicate minor(s) on the Application for Graduation. Failure to declare a minor on the Application for Graduation will result in the minor not appearing on the transcript, regardless of declaration on the ASU form.
3. Review the minor requirements are completed with the major advisor. The student's major advisor/major college advisement office certifies that all minor requirements have been completed.

Note: Minors are only awarded at the time of the conferral of a baccalaureate degree and for dual degree students will only appear once on a transcript.

# Programs, Courses & Credits

## In this section:


- Academic Definitions (p. 53)
- Rules for Attaining Multiple Credentials (p. 54)
- Modality Definitions (p. 55)


## Academic Definitions

The following definitions are applicable to West Virginia University, WVU Potomac State College, and WVU Institute of Technology.

### DEGREE DESIGNATION

A degree, which is an award signifying a rank or level of educational attainment and which is conferred on students who have successfully completed a degree program. The degree is represented by the official degree designation, e.g. B.A. - Bachelor of Arts, B.S. - Bachelor of Science, A.A. - Associate of Arts, etc. The degree designation is noted on the student's diploma and transcript.

### DEGREE PROGRAM

A degree program is defined by the combination of its degree designation (e.g., Bachelor of Science) and a program title that represents the overarching content areas the program's major or majors covers (e.g., Chemistry). Degree programs are approved by the institution and the Board of Governors (BOG) and listed on the official inventory of degree programs. An associate's degree program requires a minimum of 60 credits. A bachelor's degree program requires a minimum of 120 credits. Visit the Curriculum and Catalog page (https://registrar.wvu.edu/curriculum-catalog/) of the Office of the University website regarding additional requirements. A master's degree program requires a minimum of 30 credits. For a doctoral degree, the minimum number of required graduate credits is set by the program. A degree program must include at least one major.

### MAJOR

A major is a field of study within an approved degree program with its own curriculum. Typically, an undergraduate baccalaureate major requires a minimum of 30 credits with the majority of credits at the upper-division level. WVU includes major(s) on the students' diplomas and transcripts.

### MINOR

Minors are only available at the undergraduate level. A baccalaureate minor is an area of study outside of the major that encourages students to pursue a secondary field. A minor comprises at least 15 credits, 9 of which must be upper-division level. Minors are noted on the transcript but not on students' diplomas.

### AREA OF EMPHASIS

An area of emphasis (AoE) is a focused curriculum within an approved major. An area of emphasis adds a specialization within a major area of study. Undergraduate areas of emphasis comprise 12-18 credits, 9 of which must be upper-division level. Graduate areas of emphasis comprise 6-15 credits. If a course is used by all required Areas of Emphasis offered in a major, that course is part of the major's core requirements and cannot be included in the Areas of Emphasis. Areas of emphasis associated with certification or licensure requirements may exceed the credit limit. Areas of emphasis are noted on the transcript but not on the students' diplomas.

## TRACK

Tracks are used in graduate programs to clarify the different program requirements for students depending on whether or not they will pursue a thesis, research, project, or coursework-based path to completion. Tracks are not included on the transcript or on the students' diplomas. Tracks will no longer be permitted in undergraduate program curricula.

## UNDERGRADUATE CERTIFICATE PROGRAM

An undergraduate certificate program is a specialized curriculum designed for students seeking expertise in a specific area for personal or career development. A certificate is awarded with or without an undergraduate degree and comprises 12 to 18 credits of course work, with a minimum of nine hours at the upper-division level (courses numbered 300 or above). Each certificate must have a minimum of 9 unique credit hours, distinct from any other academic credential. The certificate appears on the student's transcript and the institution issues an official certificate of completion. Students who are pursuing an undergraduate certificate without also being enrolled in a bachelor's degree program will not be eligible to receive Title IV federal financial aid.

## GRADUATE CERTIFICATE PROGRAM

A graduate certificate program is a specialized curriculum designed for students who have previously earned a baccalaureate degree or who are enrolled in a WVU graduate or professional program and who are seeking a specific body of knowledge for personal/career development. A graduate certificate program can be completed either independently or along with a degree program and comprises 12 to 21 credits. See the Academic Certificate Policies (http://catalog.wvu.edu/graduate/graduatecertificates/) page for credit limitations applicable to earning a certificate. The certificate appears on the student's transcript and the institution issues an official certificate of completion.

## TEACHER SPECIALIZATION

Teacher specialization is a state-approved curriculum that prepares students to meet teaching certification standards in a specialized content area and at a specific programmatic level. Teacher specializations may be a major, minor or area of emphasis. Teacher specializations are added to a student's transcript only at the time of graduation.

## BACHELOR'S TO JURIS DOCTOR (JD)

Students accepted into an approved 3+3 Program will start the JD at the beginning of what would have been their fourth year of undergraduate studies. By coordinating the plan of study for both degrees via the 3+3 Program, students who successfully complete the program obtain both their bachelor's and JD degrees in 181 credit hours and six years, instead of the 211 credit hours and seven years that a student normally must complete to receive both degrees.

# Rules for Attaining Multiple Credentials

## UNDERGRADUATE MULTIPLE CURRICULA

Multiple curricula refers to the completion of minors, areas of emphasis, or majors in addition to the primary major. If these areas of study are related, some of the credit hours must be unique to each major or minor.

Requirements for multiple curricula include:

- Each baccalaureate major must have a minimum of 50% unique credit hours. Students pursuing a second bachelor’s degree after the conferral of a first bachelor’s degree must complete a minimum of 30 additional credits.
- Each associate major must have 15 unique credit hours.
- A maximum of 6 credits may be shared between multiple areas of emphasis.
- Each minor must have a minimum of 9 unique credit hours distinct from any other academic credential.

*Exceptions:* WVU undergraduate certificate programs that are approved to be applied towards specific bachelor's at the institution may exceed the credit sharing limitations for multiple curricula.

## GRADUATE MULTIPLE CURRICULA

Graduate and professional students may simultaneously or sequentially pursue more than one degree or major (although no more than one PhD degree), one or more certificates in addition to degrees or majors, or more than one area of emphasis within their major(s) according to rules specified below and elsewhere in the Graduate/Professional Catalog. Applicability of courses and credits to degree, major, certificate, or area of emphasis requirements is the decision of the program offering the curriculum. Individual course credits may be applied to no more than two degrees, majors, or certificates.

***Students pursuing multiple curricula are urged to consult with their advisor(s) to ensure adherence to credit sharing limitations.***

***Credit Sharing Limitations for Graduate Degrees and Majors***

No more than a total of 12 of the credits required for a graduate degree (other than PhD degrees, which are not dependent on credit accumulation) can be:

- earned prior to admission to the degree program,
- earned prior to graduation with another WVU degree,
- earned at another institute, OR
- simultaneously applied to other degree programs or certificates (e.g., while enrolled in the degree program).

Students who simultaneously earn credits toward two or more WVU degrees must, in most cases, graduate with all degrees in the same term to ensure that all credits, including up to 12 credits shared by the degrees, can be applied. Once a student is awarded a graduate degree, only 12 credits earned to that point in time can be applied to a subsequent degree or major.

*Exceptions:* Doctoral programs that require or allow students to earn a master's degree in the same discipline may count the courses earned in the master's degree program toward the doctoral program without credit limitations. In addition, some approved dual degree programs (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/#programstext) are allowed to share more than 12 credits.
WVU graduate certificate programs that are approved to be applied towards specific master's at the institution may exceed the credit sharing limitations for multiple curricula; graduate certificates must be completed prior to enrollment in the master's degree for this exception to be applied.

***Credit Sharing Limitations for Graduate Certificates***

See Academic Certificate Polices (http://catalog.wvu.edu/graduate/graduatecertificates/) for credit limitations applicable to earning a certificate. See Credit Sharing Limitations for Graduate Degrees and Majors (p. 54) for limitations on applying credits earned as part of a completed certificate to a graduate degree or major.

***Credit Sharing Limitations for Areas of Emphasis***
Normally, students may share a maximum of 3 credits between areas of emphasis with the same major.

## Modality Definitions

Contingent upon the needs of the unit, faculty/instructors must consult with their respective departmental chairs/college to select the most appropriate instructional delivery modality for their specific course section(s) as noted below. Distance Education Courses are credit-bearing courses in which 50% or more of the course is delivered through distance learning technologies.

All courses should be taught in the modality indicated in the schedule of courses at the time of student registration. In the case of instructor illness or other emergency a course may shift to online instruction with the approval of the appropriate Dean.

## COURSE DELIVERY OPTIONS

- **Asynchronous Online:** (100% online + asynchronous only) 100% of class sessions are delivered via distance education technologies. There are no campus visits or visits to designated sites. No synchronous events, including lectures, examinations, etc. can be required, as all students must have the same access to key components of the course. If synchronous events are offered, they must be optional and for enrichment purposes only (guest speakers, office hours, etc.), the core benefits of which must also be offered in an asynchronous format. Cannot be self-paced. Substantive instructor-initiated interaction is present.

  Examinations in undergraduate courses are administered fully online asynchronously.

- **Synchronous Online:** (100% online + synchronous events) 100% of class sessions are delivered via distance education technologies. There are no campus visits or visits to designated sites. May have *both* synchronous and asynchronous elements. Synchronous learning events may be required throughout the course. Cannot be self-paced. Substantive instructor-initiated interaction is present.

  Examinations in undergraduate courses are fully online, either synchronously (at the regularly scheduled class time) or asynchronously.

- **Arranged Low Residency Online:** (75-99% online*) At least 75% of class sessions are delivered via distance education technologies. This type of course may require students to travel to attend an orientation, take exams, or participate in other on-site experiences. May have *both* synchronous and asynchronous elements. Substantive instructor-initiated interaction is present.

  Examinations in undergraduate courses can be offered online or face-to-face.

- **Correspondence:** (100% online) Course content and exams are usually delivered via distance education technologies. Interaction between the instructor and the student is limited, is not regular, or is not substantive, or is primarily initiated by the student. Can be self-paced.

  Examinations in undergraduate courses are administered fully online asynchronously.

- **Hybrid:** (50-74% online*) At least 50% but less than 75% of instruction is delivered via distance education technologies, but some visits to a classroom or designated instructional site are required. The instructor decides which portions of the class are offered in person vs. online.

Examinations in undergraduate courses may be administered face-to-face or online at the discretion of the instructor.

- **HyFlex:** All core class content is available both face-to-face and online. Students can choose to attend on campus, online, or move back and forth between the two based on their preference. May have both synchronous and asynchronous online elements.

  Examinations in undergraduate courses must be made available to students online, but a face-to-face option may also be offered at the discretion of the instructor.

- **Traditional/ On-Campus**: (less than 50% online*) The majority of instruction is provided in a face-to-face classroom setting and physical attendance is expected. However, students may be expected to regularly supplement their learning through the use of distance learning technology.

Examinations in undergraduate courses are available either synchronously and in-person at the regularly scheduled class time or asynchronously online.

*Percentage is provided as a general guideline and is not intended to be a precise measurement.

## DISTANCE AND EXTENDED EDUCATION PROGRAM DEFINITIONS

https://online.wvu.edu/

At WVU, Distance Programs are categorized in one of the following three ways:

• Fully Online – (100% distant) – No residency requirement - All required credit- bearing and any non-credit bearing courses and activities are conducted at a distance with NO required campus attendance and/or visits to designated locations. Optional campus visits and/or visits to designated locations are permissible.

• Low residency (75-99% distant) – Limited residency requirement - A majority of the credit-bearing and non-credit bearing courses and activities are either entirely online or mostly online. Some credit- or non-credit-bearing activities may require campus visits and/or visits to designated locations. Example activities could be program orientations or cohort-based site visits.

• Blended (50-74% distant) - Extensive residency requirement – At least 50% of the credit-bearing and non-credit bearing courses or activities are delivered entirely online. The remaining credit-bearing courses may be offered as face-to-face, partially at a distance, or as distance delivery courses.

## In this section:


- Accelerated Bachelor's/Master's Programs (p. 56)
- Bachelor's to Juris Doctorate (JD) (p. 56)
- Undergraduate Certificate Programs (p. 57)
- Minors (p. 57)


## Accelerated Bachelor's/Master's Programs

## Bachelor's to Juris Doctor (JD)

Students accepted into an approved 3+3 Program will start the JD at the beginning of what would have been their fourth year of undergraduate studies. By coordinating the plan of study for both degrees via the 3+3 Program, students who successfully complete the program obtain both their bachelor's and JD degrees in 181 credit hours and six years, instead of the 211 credit hours and seven years that a student normally must complete to receive both degrees.

### REQUIREMENTS FOR PARTICIPATION IN THE UNDERGRADUATE 3+3 PROGRAM

Students must declare their intention to pursue the 3+3 Program prior to the start of the spring semester of their sophomore year and must have a minimum of a 3.0 GPA. In order to continue in the program, students must have a minimum GPA of 3.2 after their sophomore year. Students apply to the College of Law by January 15$^{th}$ of their junior year and must have a minimum GPA of 3.4. No student shall be admitted to the College of Law without completing six semesters of post high-school undergraduate work.

### UNDERGRADUATE DEGREE REQUIREMENTS SATISFIED THROUGH FIRST-YEAR LAW COURSES

The first year of law school (32 hours) will fulfill requirements for both the bachelor's degree and the JD. Students successfully completing their first year of law school may apply to graduate with their bachelor's degree with degree conferral after their fourth year.

## GRADING PROCEDURES

Grades earned in first-year law school courses will not be included in the calculation of the final undergraduate GPA. The courses and grades will appear on the student's law school transcript, while a notation will appear on the undergraduate transcript indicating that the last thirty credits of the undergraduate degree were awarded for work during the first year of law school.

## FEE ARRANGEMENTS

Students in the 3+3 Program shall pay university tuition and college tuition fees as undergraduate students the first three years and will pay university tuition and college tuition fees as College of Law professional students upon beginning JD coursework in what would have been the 4th year of undergraduate study. Undergraduate financial aid will discontinue after the completion of the third year of study. Beginning with the fourth year, students may be eligible for graduate financial aid.

## MAJORS APPROVED FOR 3+3

- Eberly College of Arts and Sciences
  - B.A. English
  - B.A. History
  - B.A. Philosophy
  - B.A. Political Science
- John Chambers College of Business and Economics
  - B.S. Economics
- Reed College of Media
  - B.S.J. Advertising and Public Relations
  - B.S.J. Journalism
- Davis College of Agriculture, Natural Resources, and Design
  - B.MdS. Multidisciplinary Studies
  - B.S. Energy Land Management
  - B.S. Environmental and Natural Resource Economics
  - B.S. Environmental and Energy Resource Management

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# Undergraduate Certificate Programs

For a complete list of certificates and information on WVU's undergraduate certificates, please see our Undergraduate Certificates page (p. 65).

# Minors

For a complete list of minors and information on WVU's minors, please see our Minors page (p. 52).

# In this section:


- Abbreviations Used in Course Listings (p. 57)
- Schedule Type Definitions (p. 58)
- Course Number Guide (p. 58)
- Common Course Numbers & Descriptions (p. 59)
- Eligibility to Enroll in 500-Level Courses (p. 59)
- Graduate Credit via Senior Petition (p. 59)
- Independent and Directed Study Classes (p. 59)
- Finals and Last Week of Classes (p. 60)


# Abbreviations Used in Course Listings

| Abbreviation | Description |
|---|---|
| HR | credit hours per course |
| Lec | lecture period |
| Rec | recitation period |
| Lab | laboratory period |
| GLAB | graded lab |
| WEB | web-based course |

| | |
|---|---|
| CONC | concurrent - listed with PR meaning the course may be completed at the same time as enrollment in the course for which it is listed |
| PR | prerequisite - course must be completed in a term prior to enrollment in the course for which it is listed |
| Coreq | co-requisite - courses must be taken in the same term |
| Consent | consent of instructor required |
| CR | credit but no grade |

## Schedule Type Definitions

- Lectures are taught by faculty, can be taught in small or large sections and through various pedagogical strategies. Typical lecture courses award 3 credit hours and thus meet either three times a week for 50 minutes or twice a week for 75 minutes with *twice* that amount of time expected for weekly homework.
- Laboratory courses provide students with experience in manipulating specialized instrumentation, chemicals, other required physical materials, or occur at specific sites. Laboratories are typically attached to a lecture, both of which must be completed at the same time. Typical laboratories meet once a week for two hours. Laboratories may be taught by teaching assistants under the direct supervision of a faculty member. Labs may award credit in which case students will receive a separate grade. When labs do not award separate credit from the lecture, they are calculated as part of the lecture course's grade.
- Studios are taught by faculty, can be taught in small or large sections and have a lecture component that is taught through various pedagogical strategies. Like laboratories, these also provide students with experience in manipulating specialized equipment, other required physical materials, or occur at specific sites. Typical studio courses award 3 credit hours and meet multiple times each week but, like laboratories, may meet for more time than 150 minutes a week. Total meeting time plus expected weekly homework should not exceed 450 total minutes of *combined* time, excepting programs otherwise directed by their accrediting body.
- Recitations accompany large lecture courses and are composed of smaller groups of students from those lecture courses. Recitations award no credit though lectures may require participation in a recitation and use that as part of the lecture course's grade. Recitations meet once a week for 50 minutes but are not directly attached to a particular lecture section. Recitations may be taught by teaching assistants.
- Practicum: Experiential credits to be earned in a supervised setting by an appropriately licensed or credentialed professional or a faculty member typically involving interactions with clients. The practicum experiences are mapped to the program learning goals. On campus practicum will follow the appropriate scheduling guidelines, depending the length and timing of the experience. Off campus courses will meet on a schedule that reflects the professional setting and may include requirements for specific on-site hours based on the program's accreditation requirements or programmatic learning outcomes.
- Clinical: Experiential credits to be earned in a supervised clinical setting by an appropriately licensed or credentialed professional, typically involving interactions with patients/clients. The clinical experiences are mapped to the program learning goals. Typically, clinical courses will meet on a schedule that reflects the working environment of clinical setting and may include requirements for specific on-site hours based on the program's accreditation requirements or programmatic learning outcomes.

## Course Number Guide

For convenience, each course of study is designated by the name of the department in which it is given and by the number of that course. The guide for numbering courses is as follows:

**Courses 1–99** Developmental and community college certificate courses (does not require WVU Faculty Senate approval) and undergraduate professional development courses (courses that are designed for professional development and require students to possess a high school diploma. These courses do not count toward graduation).

**Courses 100** Freshmen/Underclassmen: Intended primarily for freshmen, although upper-division students may take these courses if needed to complete degree requirements.

**Courses 200** Sophomores/Underclassmen: Intended primarily for sophomores. These courses may have 100 or 200-level prerequisites.

**Courses 300** Juniors/Upperclassmen: Intended primarily for juniors. These courses may have extensive prerequisites or be limited to specific majors.

**Courses 400** Seniors/Upperclassmen: Intended primarily for seniors and graduate students. These courses are typically limited to advanced undergraduate students and graduate students within a particular major or degree program.

**Courses 500** Undergraduate Seniors and Master's Level: Courses intended for advanced undergraduate students and graduate students. Undergraduate students must receive approval to enroll in 500-level courses.

**Courses 600** Master's Level: Courses intended for master's degree students (no undergraduates permitted).

**Courses 700** Master's and Doctoral Degree Level: Courses intended for doctoral students and advanced master's students (no undergraduates permitted).

**Courses 800** Master's and Doctoral Degree Level: Courses intended for students in graduate-level professional programs (no undergraduates permitted).

**Courses 900** Professional Development: Courses intended for professional development. Students must possess a bachelor's degree. These courses do not count toward graduation and are not applicable towards a graduate degree. Grading is S/U only.

## Undergraduate Common Course Numbers & Descriptions

199. Orientation to [subject/field]. 1-2 Hr. Orientation to degree programs and requirements, departmental resources, curriculum options, student responsibilities, and opportunities.

293. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

298. Honors. 1-3 Hr. PR: Students in Honors Program and consent by the honors director. Independent reading, study, or research.

393. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

490. Teaching Practicum. 1-3 Hr. PR: Consent. Teaching practice such as a tutor or assistant.

491. Professional Field Experience. 1-18 Hr. PR: Consent. (May be repeated up to a maximum of 18 hours.) Prearranged experiential learning program to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

492. Directed Study. 1-3 Hr. Directed study, reading, and/or research.

493. Special Topics. 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.

494. Seminar. 1-3 Hr. PR: Consent. Presentation and discussion of topics of mutual concern to students and faculty.

495. Independent Study. 1-6 Hr. Faculty-supervised study of topics not available through regular course offerings.

496. Senior Thesis. 1-3 Hr. PR: Consent.

497. Research. 1-6 Hr. Independent research projects.

498. Honors, 1-3 Hr. PR: Students in Honors Program with consent by the honors director. Independent reading, study, or research.

499. Global Service Learning. 1-3 Hr. PR: Consent. Theory and practice of global service-learning. The main objective will be to pair the experiential aspects of meaningful and sustained service in the host community with work from the student's anchor course by offering a methodological framework for cultural immersion and community service as well as adding to the content of the anchor course.

## Eligibility to Enroll in 500-Level Courses

Advanced undergraduate students may request permission to enroll in a graduate course numbered 500-599. Undergraduate students may not enroll in 600 or above level courses unless they are enrolled in a master's degree program as part of an ABM program. To qualify, students must be classified as either a Junior or Senior and have a minimum of a 3.0 cumulative grade point average on a 4.0 scale. To enroll in 500-599 courses, students must complete an Undergraduate Application to Enroll in 500-Level Courses, found on the Office of the University Registrar's website under the Forms (https://registrar.wvu.edu/forms/) tab and Registration section, and have it approved. Non-WVU students will also be required to submit an undergraduate application for admission and have his or her official transcripts sent to the Office of Admissions from all of the colleges and universities previously attended; the transcript cannot be one sent to the student or by email or fax.

## Graduate Credit via Senior Petition

Students classified as seniors may begin graduate study early through the University's senior petition policy. Senior petition applies only to courses numbered 400–599, and students can receive only 15 graduate hours through the senior petition process. If a student is permitted to receive graduate credit, that credit cannot count toward the undergraduate degree. To qualify, students must be classified as seniors and have a minimum of a 3.0 cumulative grade point average on a 4.0 scale. To be granted permission to earn graduate credit as an undergraduate senior, students must complete the Senior Petition to Earn Graduate Credit, found on the Office of the University Registrar's website under the Forms (https://registrar.wvu.edu/forms/) tab and Registration section, and have this approved. Students enrolled in a master's degree program as part of an ABM program may enroll in graduate-level courses approved for their program without completing a Senior Petition.

## INDEPENDENT STUDY CLASSES

Independent study classes are offered to students in order to provide opportunities for content exploration not typically offered via the normal course rotation.

Students interested in pursuing independent study should contact their academic advisers to determine if independent study is a viable option for them and to identify the process specific to their college and major.

## DIRECTED STUDY CLASSES

Directed study classes may occasionally be contracted when:

1. The student has achieved a GPA of 2.0 or higher,
2. The course requested for directed study is a requirement for graduation under the student's major, and

1. There is no possibility of taking the course by the expected graduation date, or
2. Unavoidable schedule conflict between required courses that are part of a sequence for which a real hardship would occur for the student to be able to complete their program within the expected time frame.

Students should consult with their academic advisers to see if directed study is a viable option for them. All requests for directed study classes require official approval.

# Finals and Last Week of Classes


- Examinations (p. 60)
- Final Examination Policy (p. 60)
- Multiple Examinations on the Same Day (p. 61)
- Evening Classes (p. 61)
- Two-Semester Courses (p. 61)
- Examinations (p. 61)
- Common Examinations (p. 61)
- Last Week of Classes and Preparation Days (p. 61)


## EXAMINATIONS

The modality of examinations in a course is dependent on the modality of the section of the course. Please refer to the appropriate section of the catalog for more details.

In undergraduate synchronous courses, whether delivered online or face-to-face, regular examinations take place during set class time, unless the course has been approved for common exams (see below), or in case of courses where a professional program requires a specific testing mode.

Regular Exams and Final Exams are held in the location of the regularly scheduled class meeting unless students are otherwise notified.

## FINAL EXAMINATION POLICY

The last week of each semester of the academic year is designated as finals week. Final examinations for the summer term are given on the last day of classes. The undergraduate final examination schedule for each academic term is determined by the Office of the University Registrar (https://registrar.wvu.edu/) at the Morgantown location, the Office of Academic Affairs (https://academics.potomacstatecollege.edu/) at the WVU Potomac State College, and the Office of the Registrar (https://techregistrar.wvutech.edu/) at WVU Institute of Technology. The final examination date and time for a class is determined by the class meeting time; except for online asynchronous courses, which do not have a set class time..

No change in time from the published official examination schedule is permitted without approval of the dean of the college or school and the Provost's designee at the Morgantown location, Dean of Academic Affairs at the WVU Potomac State College, or the Campus Provost at WVU Institute of Technology. Face-to-face finals are held in the location of the regularly scheduled class meeting unless students are otherwise notified.

Except for evening and asynchronous online classes, no final examinations may be given before the examination period begins, and no change in time from that published in the official examination schedule is permitted without approval, excepting classes testing in the University Testing Center in Hodges Hall. An instructor with a compelling reason to change the time of an examination must obtain the approval of the dean of the college or school and the Provost's designee at the Morgantown location, Dean of Academic Affairs at WVU Potomac State College location, or the Campus Provost at WVU Institute of Technology location. The instructor must then announce the alternative examination procedure to the students via their official institutional email address. Final examinations delivered in the University Testing Center will be made available to students for a minimum of three consecutive days during finals week (the initial scheduled date plus two more consecutive days before or after that date). Students will schedule their own time to take these exams in the University Testing Center.

During regular terms, asynchronous final examinations made available before the beginning of finals week must also be available for a minimum of three consecutive days during finals week.

For all modes of delivery, no class-related activity, except for office hours, may be scheduled during the finals week.

Assignments given in place of a final exam or “take-home” final examinations, excluding projects or assignments that are intended to be completed across the entire semester, may not be due before the final examination date and time for that class.

A student may address complaints related to the final examination procedures in a course to the dean of the college or school in which the course is offered.

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## MULTIPLE EXAMINATIONS ON THE SAME DAY

If a student has more than three final examinations on a single day, they may contact one of their instructors to schedule a make-up examination. If an arrangement cannot be made, the student should contact an associate dean’s office.

If students have two final examinations scheduled during the same common examination time period, they must contact the departments administering the common examinations to make arrangements for a make-up examination.
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## EVENING CLASSES

Final examinations for evening classes (classes meeting at 6 p.m. or later, or classes meeting at 4 p.m. or later if the class meets once a week) are scheduled during the last week of class. Final examinations for evening classes at WVU Institute of Technology occur during finals week and are on the undergraduate final examination schedule from the Office of the Registrar (https://techregistrar.wvutech.edu/) at WVU Institute of Technology.
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## TWO SEMESTER COURSES

In a course extending over two semesters with continuous subject matter, the second-semester final examination may include content from the first semester.
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## EXAMINATIONS

The modality of examinations in a course is dependent on the modality of the section of the course. Please refer to the appropriate section of the catalog for more details.

In synchronous courses, whether delivered online or face-to-face, regular examinations take place during the set class time, unless the course has been approved for common exams (see below), or in case of professional-level courses where a specific testing mode is required by an outside agency.

Regular Exams and Final Exams are held in the location of the regularly scheduled class meeting unless students are otherwise notified.

## COMMON EXAMINATIONS

Some face-to-face and hybrid multi-section courses use a common examination time, as indicated on the Schedule of Courses (Regular Exams) and on the Schedule of Final Exams.

Only approved courses (with days and times listed on the Schedule of Courses or listed on the final examination schedule) may use a common examination time. On the Morgantown location, common examinations may only be administered for courses in which the total course enrollment exceeds 500 students or there are more than 20 sections of the course.

Students will be notified of their assigned location for the common exam.

If a department wants a course to be considered for a common final examination, the unit will need to demonstrate that it is not possible to generate multiple equivalent exams from a test bank, or that, because of documented issues of academic dishonesty, a common examination is required to ensure the integrity of the test. Common examinations are approved at the course level, so all sections of a course must follow the common examination schedule. Requests for a common final examination must be reviewed by the Academic Policy Committee, which will make a recommendation to the appropriate provost.

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## LAST WEEK OF CLASSES AND PREPARATION DAYS

When the calendar permits, a preparation day for finals will be added to the academic calendar. Preparation days for finals are free days on which no papers are due, no quizzes or examinations are administered, and there are no class-related activities other than office hours.

In undergraduate courses of 16 weeks duration, no substantial examinations or quizzes may be given during the last week of classes preceding finals except for practical laboratory tests and make-up examinations. An examination or quiz is considered substantial if it covers 20% percent or more of the course content, or represents more than 20% of the final grade. Exceptions to this policy must be approved by the dean of the college or school.

Additionally, as per Board of Governor's Academic Rule 2.5, instructors who administer such assessments must provide meaningful feedback to students prior to the final examination for the course.
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## In this section:


- Classification of Students (p. 62)
- Course Overload (p. 62)
- Credit Hour Definition (p. 62)
- Credit by Exam and Credit for Prior Learning (p. 63)
- Experiential Learning (p. 64)


## Classification of Students

Undergraduate students are classified as freshmen, sophomores, juniors, or seniors. These classifications are based upon the number of hours completed. The classifications are as follows:

| Classification | Hours |
|---|---|
| Freshman | 1-29 Earned Credit Hours, Inclusive |
| Sophomore | 30-59 Earned Credit Hours, Inclusive |
| Junior | 60-89 Earned Credit Hours, Inclusive |
| Senior | 90 or More Earned Hours |

## Course Overload

Undergraduate students are not permitted to enroll in more than 20 credits in a fall or spring semester or 14 credits in a summer semester without approval. The student's dean or dean's designee may approve requests of 21 credits in the fall or spring semester or 15 credits in the summer semester. Requests to enroll in 22 credits or more must be approved by the student's dean or dean's designee and the Associate Provost for Undergraduate Academic Affairs.

## Credit Hour Definition

West Virginia University courses offered for credit are based on semester hours. Semesters are fifteen weeks long plus one week for final exams. A single credit hour is equivalent to fifty minutes per week of guided instruction within the classroom. An hour of preparation, or related activity outside of the classroom, is equivalent to sixty minutes per week.

- **Full semester lecture**: Fifty minutes (~one hour) of classroom or direct faculty instruction and a minimum of 120 minutes of out-of-class student work each week for approximately fifteen weeks for one semester hour of credit.
  - 1 credit over 15 weeks = (1 hour in class per week x15 weeks) + (2 hours of homework per week x 15 weeks) = 45 hours of coursework
  - 3 credits over 15 weeks = (3x15) + (6x15) = 135 hours of coursework
- **Part Semester Courses**:
  - Courses delivered in a part of term no shorter than 5 weeks long should require an equivalent amount of work
    - 3 credits over 8 weeks = (6 in class per week x 8 weeks) + (11 hours of homework per week x 8 weeks) = 136 hours of course work
  - Courses delivered in a compressed format (typically 4 weeks or less) need not adhere to the definition above but, instead, demonstrate equivalent student outcomes via assessment.
- **Full semester non-lecture courses**: For other activities as established by an institution, including laboratory work, practica, studio work, and other academic work leading to the award of credit hours, where outside of class work is very limited, the calculation typically should still reflect the overall hours of coursework for the length of the semester
  - A lab that meets twice a week for 4 hours would have the following calculation:
    3 credits over 15 weeks = (8 hours in lab per week x 15 weeks) + (1 hour outside of class per week x 15 weeks) = 135 hours of coursework

### FACE-TO-FACE CLASSROOM LEARNING

One credit hour is equivalent to one hour of guided instruction (fifty minute class) and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester. The amount of work students engage in remains the same regardless of term duration (e.g., summer, 8 week). The equivalent amount of work may take place over a different amount of time. One credit hour in other academic activities, as established by the institution, such as laboratory work, internships, practicums, studio work, study abroad, experiential learning opportunities, and online learning, must include an equivalent amount of required work.

### ONLINE LEARNING

One credit hour of online learning is equivalent to a total of fifteen hours of direct instruction and thirty hours of additional student work. Direct instruction can occur via computer-assisted (modules), multi-media interaction, discussions, and/or completion of exams/quizzes/assessments as documented

in the course syllabus. Student work includes activities like readings and supplemental assignments. Students must fulfill these hours to complete the course requirements as set forth by the course instructor. Online courses developed from existing face-to-face instruction adhere to the defined learning outcomes and assessments of the original face-to-face format for the course. All WVU online programs are reviewed for nationally accepted standards for online learning.

## EXPERIENTIAL LEARNING

Experiential learning, includes opportunities associated with laboratory/lecture courses, research (with or without laboratory), professional development internships, clinical experiences, and service learning. Three hours of experiential learning per week over a period of fifteen weeks receives one credit hour. Students are required to document progress during the course and completion of the stated learning objectives for each experience. Experiential learning courses are expected to adhere to and follow the institutional policy for reporting midterm and final grades. All credit-bearing courses require a syllabus.

## AWARDING MILITARY CREDIT

West Virginia University awards college credit for military service listed on a student's Joint Services Transcript (JST). Veterans and current student service members may request credits be articulated in coordination with guidance from their academic advisor and the approval of the Dean of their academic college. Care will be taken to ensure that articulating JST credits is in the student's best academic interest. When approved, WVU will award equivalent course credit. Otherwise, elective credit at the lower (100 level) and upper (300 level) division may be awarded based on the American Council on Education (ACE) recommended credit totals for each ACE ID on a student's JST.

## STUDY ABROAD

Study Abroad programs include exchange programs (https://educationabroad.wvu.edu/why-study-abroad/wvu-exchange/), short-term programs (https://educationabroad.wvu.edu/why-study-abroad/short-term/), affiliate programs (https://educationabroad.wvu.edu/why-study-abroad/affiliates/) and other programs (https://educationabroad.wvu.edu/why-study-abroad/other/) that are outside of WVU's pre-approved programs requiring special approval. One credit hour is equivalent to fifteen hours of guided instruction and thirty hours of cultural, linguistic or other types of engagements as described by the syllabus and approved by the faculty, department Chair, Dean, and Associate Provost. Exceptions to this general rule would need to be justified and approved on an individual basis.

## STUDIO/ENSEMBLE WORK

In studio courses in the arts, design, and theatre, one credit hour is equivalent to one and a half hours of guided instruction and three hours for studio class practice or projects each week for fifteen weeks as defined by the National Association of Schools of Art and Design (NASAD). In accordance with the National Association of Schools of Music standards, one credit hour of ensemble work in the music field represents three hours of practice each week, on average, for a period of fifteen weeks plus the necessary individual instruction as defined by the major subject.

## VARIABLE CREDIT OFFERINGS

Variable credit courses often represent student experiences that range in credit hours based on the focus and discipline of the experience. Practicums (teaching and research), field experience, research and laboratory rotations and credit, and independent studies offer a range of contact. One credit hour is equivalent to 15 contact hours of guided instruction (e.g., student progress meetings, mentoring) and thirty hours of student work to complete the requirements set forth by the advisor or course instructor (e.g., team meetings, review sessions, thesis/dissertation preparation) over a 15-week period. Instructors/mentors and students should discuss the appropriate number of total credit hours for a given course based on the time needed to attain outcomes of the particular endeavor.

# Credit by Exam

Currently enrolled students with life experiences in an academic subject area may seek to receive credit for a course(s) upon demonstration of competency. Credit is given when a satisfactory degree of competency as defined by the academic unit is shown; no grades will be awarded.

Students may only attempt a course’s credit by exam once. Students may not be, or have been, registered in the current term in the course for which they are seeking credit by exam. Students may not seek credit by exam for any course in which they have previously earned a failing grade.

Beyond the comprehensive assessment measure used to determine competency, an academic unit may also ask a student to prepare a self-evaluation statement prior to taking the exam. The purpose of the statement is to help determine competency as well as to identify the methods by which it was achieved.

WVU administered credit by examination and placement credit is recorded on the transcript as transfer credit, but it does not violate the requirement for 30 of the final 36 credit hours to be taken in residence.

Contact the appropriate academic unit to determine if a course is available for credit by exam.

## Credit for Prior Learning

In certain cases, and at the discretion of an academic unit, currently enrolled students with documented but untranscripted prior learning experiences such as military training, licensure, software certification, and professional training may seek to receive major specific credit for those experiences.

Students should present documentation to their academic adviser to determine if any previous experiences, prior to enrollment at WVU, may receive transcripted credit in their program and to evaluate the potential benefits and financial aid implications of receiving credit for prior learning.

WVU administered credit by examination and placement credit is recorded on the transcript as transfer credit, but it does not violate the requirement for 30 of the final 36 credit hours to be taken in residence.

Students may not be awarded more than 45 credits for prior learning to be applied to their associate degree, 90 credits for prior learning experiences to be applied to their bachelor's degree, and 15 credit hours of prior learning to be applied to their master's degree. Students awarded credit for prior learning must meet the minimum credit hour residency requirement for their degree program level.

## Experiential Learning

Each academic unit has a policy of general applicability controlling the allocation of credit for ad hoc experiential learning. No credit shall be granted for ad hoc experiential learning that is not sanctioned by an approved policy. At a minimum, each discipline shall adhere to accreditation standards of that discipline with respect to credits given toward student advancement based on experiential learning. There should be an equivalence in quantity and quality of ad hoc experiential learning effort and conventional academic effort for a set amount of credit within a discipline. Credit awarded for experiential learning will be posted as transfer work to West Virginia University with the course number of three zeros (000). The course prefix will vary by department granting credit. Credits applied to a student’s record through experiential learning will count in degree (or earned) hours. No formal grade will be entered. While WVU administered experiential learning credit will be excluded from WVU residence credit, it does not interrupt the final thirty credit hours in residence if earned during this period.

# Tuition, Fees and Residency

## In this section:


- Cost of an Academic Year's Work (p. 64)
- Identification Card (p. 64)


## Cost of an Academic Year’s Work

Tuition and fee structures (http://revenueservices.wvu.edu/tuition-and-fees/) vary by residency classification and academic program at WVU locations. Students are charged for University tuition, college tuition, and University fees. Some programs may require additional charges. Students may also be charged an additional fee for WVU Online courses or programs. Senior citizens (https://admissions.wvu.edu/how-to-apply/senior-citizen-students/) of West Virginia (age 65 and older) may take courses at WVU for reduced tuition and fees.

Additional cost may include room and board, books and supplies, transportation, and personal expenses.

## Identification Card

Registered students are eligible for an identification card and can find more information at Mountaineer Card Services (https://mymountaineercard.wvu.edu). The Mountaineer Card gives access to certain activities and privileges on campus. For example, students may be given access to the Student Recreation Center, the PRT, and athletic events, and may ride the local bus system, Mountain Line Transit Authority (https://www.busride.org/), by using their ID card.

WVU reserves the right to refuse issuance of an identification card. Misuse may result in confiscation of the card. Lost or broken cards can be replaced for a fee.

## Residency Status

The Residency Policy is established by and can be found at the BOG Academics Rule 2.4, Residency Status for Admission, Tuition, and Fee Purposes webpage (https://policies.wvu.edu/finalized-bog-rules/bog-academics-rule-2-4-residency-status-for-admission-tuition-and-fee-purposes/). The WVU Office of Admissions assigns students a residency status for admission, tuition, and fee purposes. Students who are determined to be residents of West Virginia pay “resident” tuition and fees at WVU; students who are residents of other states and nations pay “non-resident” tuition and fees.

## Tuition and Fee Regulations

Policies concerning late fees, financial holds, removal from classes, and collections can be found on the Student Accounts Financial Responsibilities (https://studentaccounts.wvu.edu/policies/) page. Students can review their charges, waivers (university tuition, housing, or dining), scholarships, and payments online through the WVU MyAccount, which can be accessed through the WVU Portal at portal.wvu.edu (https://portal.wvu.edu). Payments of tuition and fees and other charges can be made through the WVU Portal. A processing fee is added to credit card payments. Excess

payments or financial aid remaining in a student's account after all University charges are paid are returned to the student via a refund (https://studentaccounts.wvu.edu/refunds/).

WVU places restrictions on students who have outstanding debts to the University. Restrictions may include, but are not limited to, the withholding of a student's registration, diploma, or transcript. Transcripts will not be issued to any student before payment is made for all tuition, fees, and other indebtedness to any unit of the University.

Students who fail to drop courses prior to the end of the add/drop period are responsible for tuition and fees whether or not they attend those courses. Withdrawal Policies (https://registrar.wvu.edu/registration/withdrawal-policies/) are explained on the Office of the University Registrar website.

### SECTION 103 INFORMATION FOR STUDENTS USING U.S. DEPARTMENT OF VETERAN AFFAIRS BENEFITS

On December 31, 2018, the President signed into law the Veterans Benefits and Transition Act of 2018. It contains a provision (Section 103) that took effect on August 1, 2019. Therefore, despite any policy to the contrary, for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, while payment to the institution is pending from the VA, WVU will not:

- Prevent their enrollment;
- Assess a late penalty fee to;
- Require they secure alternative or additional funding;
- Deny their access to any resources (access to classes, libraries, or other institutional facilities) available to other students who have satisfied their tuition and fee bills to the institution.

However, to qualify for this provision, such students may be required to:

- Produce the VA's Certificate of Eligibility by the first day of class;
- Provide written request to be certified;
- Provide additional information needed to properly certify the enrollment as described in other institutional policies (see our VA School Certifying Official for all requirements).

# Undergraduate Certificates

## Academic Certificate Policies

A baccalaureate certificate program (as distinguished from the one-year Certificate Degree Program offered by community and technical colleges) is a specialized curriculum designed for students seeking a specific body of knowledge for personal/career development. A certificate is awarded with the degree and comprises 12 to 18 credits, which may overlap with other degree requirements. The certificate appears on the student's transcript and the institution will issue an official certificate of completion.

Academic certificates at the undergraduate level may only be awarded simultaneously with a baccalaureate degree. Completion of an academic certificate will be noted on students' transcripts.

Certificate programs may require admission to the certificate program prior to enrollment in specified certificate courses. Students must be admitted to the certificate program in order to be awarded the certificate.

See information on Undergraduate Multiple Curricula on the Academic Definitions (http://catalog.wvu.edu/undergraduate/programs_courses__enrollment/#academicdefinitionstext) tab for rules concerning the application of credits.

## Certificates offered, by college/school:


- Academic Affairs (p. 65)
- Benjamin M. Statler College of Engineering and Mineral Resources (p. 66)
- Eberly College of Arts and Sciences (p. 66)
- School of Medicine (p. 66)


## Academic Affairs

- Global Mountaineers Certificate Program (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/globalmountaineers/)

## Benjamin M. Statler College of Engineering and Mineral Resources

- Biomedical Engineering (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/biomedicalengineering/)
- Global Competency (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/globalcompetency/)
- Mine Safety Practices and Health (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/minesafetypracticesandhealth/)

## Eberly College of Arts and Sciences

- Behavior Analysis (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/behavior_analysis/)

## School of Medicine

- The Country Roads Certificate Program (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/countryroads/)

# Veterans

## In this section:


- Center for Veteran, Military and Family Programs (p. 66)
- Credit Hours for Full Time Status (p. 67)
- Registration for Veterans (p. 67)
- Student Account Policies (p. 68)


## Center for Veteran, Military and Family Programs

The Center for Veteran, Military and Family Programs (https://wvuveterans.wvu.edu/home/) (CVMF) at WVU assists in providing academic, personal and professional support for all military connected students in a welcoming environment. The center is open to all veterans, armed forces personnel and dependents of current and former military service members.

For information on how to begin your VA educational benefits (Chapter 30, 33, 35, and 1606) go to: VA Education And Training Benefits | Veterans Affairs (https://www.va.gov/education/).

All students receiving VA educational benefits for the first time will need to apply for the benefit at VA Education And Training Benefits | Veterans Affairs (https://www.va.gov/education/). If you are approved, you will be sent a Certificate of Eligibility (CoE) in the mail. Please note this process may take 30-45 days. All students using VA educational benefits and Chapter 31 will need to complete the Intake Form found on the main page of Veterans at West Virginia University (https://veterans.wvu.edu/).

Veterans who meet qualifications for Veteran Readiness and Employment (VR&E), must apply through Veteran Readiness and Employment (Chapter 31) | Veterans Affairs. If approved, the assigned VA counselor will be your point of contact for any changes to your education plan.

Undergraduate students who wish to receive the full stipend of VA Educational benefits in the fall and spring semesters, must maintain a minimum of 12-degree pursuant credit hours for the full semester. Degree pursuant coursework can be defined as courses recorded as degree requirements, degree electives, course prerequisites, required general education courses, military science credit for ROTC and minors **required** by a chosen major as stated in the WVU Catalog (http://catalog.wvu.edu/).

CVMF automatically certifies students for fall and spring semesters; however, for other semesters such as Winter Intersession, Maymester and summer classes, the student must request to be certified in writing. The student can email veterans@mail.wvu.edu or contact their designated certifying official.

Students receiving Chapter 33 (Post 9/11) benefits, please note, any charges for housing and meal plans will be the student's responsibility to pay up front.

Students receiving a book stipend from the VA (Chapter 33) who **DO NOT** opt-out of First Day Complete, must pay the $360 book charge from the book stipend money provided by the VA.

Chapter 31 students will receive a book voucher from the assigned VA Counselor; therefore, will need to **OPT-OUT** of First Day Complete.

### DECLARING A MAJOR

Undergraduate students receiving benefits must declare a major or non-exploratory pathway by the time they reach 29 earned hours. Students must matriculate into their intended degree program by 59 earned hours. If this does not happen, the student cannot be certified for benefits.

### MODALITY OF COURSES AND MHA

For VA purposes, students receiving benefits will be certified as on-campus, hybrid (low-modality) or online. On-campus and hybrid programs receive a higher rate for Monthly Housing Allowance (MHA) than completely online students. Visit the GI Bill Comparison Tool (https://www.va.gov/education/gi-bill-comparison-tool/) to compare rates. Hybrid programs are those in which on-campus student attendance is required at least one time per term.

Students must sign in for the academic session and inform the professor to send proof of attendance to the certifying official on campus. The certifying official will recertify benefits at the higher MHA rate. Meetings that take place before or after the class begins or ends (such as orientations), will not count toward hybrid certification. *MHA will not be affected for active duty students receiving Federal Tuition Assistance.

For more information on modality definitions, visit WVU Catalog (http://catalog.wvu.edu/undergraduate/programs_courses__enrollment/#Modality).

## IN-STATE TUITION

Any veteran with at least a general discharge (to include National Guard/Reservist), students using GI Bill® benefits, students who are actively serving in a WV National Guard/WV Reserve unit and dependents with a sponsor on active duty orders, will receive in-state tuition rates.

If benefits exhaust while attending WVU, the student will remain at the in-state rate.

Veterans who meet the criteria above, but do not have GI Bill® benefits to use, will need to work with the Office of Admissions to receive the in-state rate. All students with benefits will be served through CVMF.

Any scholarships assessed at the out-of-state rate will be reassessed at the in-state rate. This will impact the amount of scholarship money received. Please reach out to financial aid at Scholarships | Financial Aid | West Virginia University (https://financialaid.wvu.edu/home/scholarships/) to discuss the impact of being reassessed at in-state rates.

*In-state rates will not be applied until all required documents have been received, i.e. DD-214, Certificate of Eligibility or sponsor's active duty orders.

## STATE TUITION ASSISTANCE

West Virginia Army and Air National Guard will apply for state tuition assistance by going to: WV Educational Encouragement Program (https://apps.wv.gov/WVEEP/).

WV Army National Guard students must apply for and be approved for Federal Tuition Assistance before State Tuition Assistance will be approved. Please contact WVNG for any questions.

## FEDERAL TUITION ASSISTANCE

Active duty service members and WV Army National Guard Students and Reservist can use federal tuition assistance. Please visit the Center for Veteran, Military and Family Programs (https://wvuveterans.wvu.edu/home/) to see the stipulations for each branch of service.Once approved for FTA, student will need to send the approved funding document to veterans@mail.wvu.edu and OSATPS@mail.wvu.edu. This is needed for student accounts to apply FTA money to your account.

If you have questions or issues with FTA, please contact your education center.

# Credit Hours for Full Time Status

For information concerning full time status, eligibility of benefits, book stipends, and housing rates for WVU, call the VA Education Hotline at 888-442-4551 or visit the GI Bill Comparison Tool. (https://www.va.gov/education/gi-bill-comparison-tool/)

*Graduate hours needed for full time status may change depending on how many weeks the class is in session.

*GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at https://www.benefits.va.gov/gibill (https://www.benefits.va.gov/gibill/).

# Registration for Veterans

West Virginia University offers priority registration to veterans as part of the Forever GI Bill - Harry W. Colmery Veterans Educational Assistance Act.

Additional information regarding attendance, leave policies for activations and withdrawal policies can be found under the Enrollment tab of the Advising, Enrollment and Grades (http://catalog.wvu.edu/undergraduate/enrollmentandregistration/) section of the catalog.

**Contact Information:**

The Center for Veteran, Military, and Family Programs (CVMF)
Aka "Mountaineer Bunker"
WVU Mountainlair, Room 214
Email: veterans@mail.wvu.edu
Phone: 304-293-8825
Website: https://veterans.wvu.edu/
Facebook: WVUVeteransHQ
Instagram: wvuveterans

# Student Account Policies

Policies are in place concerning late fees, financial holds, removal from class and collections. Students should review the Student Accounts Financial Responsibility (https://studentaccounts.wvu.edu/policies/) page for the most up to date information about Payment Due Dates, Late Payment Fees, Financial Holds and the Collection Policy.

## SECTION 103

On December 31, 2018, the President signed into law the Veterans Benefits and Transition Act of 2018. It contains a provision (Section 103) that took effect on August 1, 2019.  Therefore, despite any policy to the contrary, for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, while payment to the institution is pending from the VA, WVU will not:

- Prevent their enrollment;
- Assess a late penalty fee to;
- Require they secure alternative or additional funding;
- Deny their access to any resources (access to classes, libraries, or other institutional facilities) available to other students who have satisfied their tuition and fee bills to the institution.

However, to qualify for this provision, such students may be required to:

- Produce the VA's Certificate of Eligibility by the first day of class;
- Provide written request to be certified;
- Provide additional information needed to properly certify the enrollment as described in other institutional policies (see our VA School Certifying Official for all requirements).

# Davis College of Agriculture and Natural Resources

The Davis College offers students career paths that are exciting and rewarding. Through our diverse academic programs, students and faculty team up to discover agricultural practices that increase yields while improving the environment, producing bio-based energy alternatives, creating more nutritious and flavorful foods, restoring degraded ecosystems, conserving forests and natural resources, and designing both built and natural environments. Graduates of the Davis College pursue scientific and management careers that foster the wise management, utilization, and conservation of our soils, water, forests, wildlife, domestic animals, food, fiber, and living spaces, as we work toward our vision of a world sustainably fed, clothed, and sheltered.

The Davis College helps students adjust to their major and get to know their fellow students and professors. Distinguished faculty share their knowledge through hands-on learning in the field, classroom, and lab, and through academic advising. In the Davis College, we are committed to helping students succeed through a strong academic support system. Whether students are interested in animals, design, the environment, biosciences, or food and health, the Davis College is the perfect place for academic and personal growth.

## Majors

At the WVU Davis College of Agriculture and Natural Resources, we pride ourselves on our small-school environment and high-quality undergraduate education – while offering all of the resources of a large university.

We're more than a college – we're a community. At the Davis College, we'll know your name (and your major – and probably your hometown, too). You'll get a personalized education with the quality and opportunities of a top research university.

### SCHOOL OF AGRICULTURE AND FOOD SYSTEMS

- Animal and Nutritional Sciences
- Biochemistry
- Horticulture and Plant Sciences
- Human Nutrition and Foods

### SCHOOL OF COMMUNITY AND ECONOMIC DEVELOPMENT

- Agricultural and Extension Education
- Agribusiness Management and Applied Economics
- Landscape Architecture
- Sustainable Design and Development

### SCHOOL OF NATURAL RESOURCES AND THE ENVIRONMENT

- Environmental, Energy, and Land Management
- Environmental, Soil, and Water Sciences
- Forest Resources and Conservation
- Wildlife and Fisheries Resources

**About the College**

As WVU's oldest academic unit, the Davis College is central to the University's mission to advance the people and places of West Virginia and beyond. The College offers a wide range of undergraduate and graduate degree programs that cover life sciences, applied and basic research, and economic and social relationships among people as they live and work in a wide variety of settings. With an extensive research portfolio in areas related to food, water quality, natural resource and landscape management, the College is a leader in making discoveries that change lives.

The Davis College is named for two Morgantown sisters, Gladys Gwendolyn Davis and Vivian Davis-Michael, in recognition of their $18.4 million gift. The College offers 22 undergraduate majors, as well as 18 masters programs and seven doctoral degree programs. It maintains thousands of acres of farmland and forests throughout the state which provide opportunities for learning beyond the classroom, research and facilitate valuable community service.

## Accredited Programs

The following programs within the College are accredited by nationally or internationally recognized organizations:

- Agricultural and Extension Education (National Council for Accreditation of Teacher Education)
- Biochemistry (American Chemical Society and American Society for Biochemistry and Molecular Biology)

- Forest Resources Management (Society of American Foresters)
- Human Nutrition & Foods (Accreditation Council for Education in Nutrition and Dietetics)
- Landscape Architecture (Society of Landscape Architecture)
- Recreation, Parks and Tourism Resources (Society of American Foresters)
- Wood Science and Technology (Society of Wood Science and Technology)

## Honoraries and Student Organizations

You're encouraged to become active in honoraries and student professional associations and organizations. Within the College, outstanding students may be chosen for membership in Alpha Tau Alpha, Gamma Sigma Delta, Phi Upsilon Omicron or Alpha Zeta. There are over twenty student clubs and organizations that you can get involved with.

## Multidisciplinary Studies Major

The Davis College offers a Multidisciplinary Studies major that requires completion of three minors – two from the Davis College and one in another WVU college. This major provides flexibility in defining an academic program that fits your career goals.

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# ADMINISTRATION

### DEAN

- Jorge H. Atiles - Ph.D (Virginia Tech University)
  Director, Director, WVU Division for Land Grant Engagement

### ASSOCIATE DEAN OF ACADEMIC AFFAIRS

- Kimberly M. Barnes - Ph.D. (University of Nebraska-Lincoln)
  Academic Affairs

### ASSOCIATE DEAN FOR RESEARCH AND OUTREACH

- Jason Hubbart - Ph.D. (University of Idaho)
  Associate Director, West Virginia Agricultural and Forestry Experiment Station

### SCHOOL/DIVISION DIRECTORS

- Christopher Ashwell - Ph.D. (Wake Forest University)
  School of Agriculture and Food Systems
- Jessica Blythe - Ph.D. (University of Florida)
  School of Community and Economic Development
- Amy Welsh - Ph.D. (University of California - Davis)
  School of Natural Resources and the Environment

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# FACULTY

### DIVISION DIRECTORS

- Christopher M. Ashwell - Ph.D. (Wake Forest University)
  Functional genomics

## Davis College of Agriculture and Natural Resources Minors

There are a wide variety of approved minors in the Davis College. Minors can be combined with major fields to broaden or further focus the student's academic studies. In addition, three minors can be combined in a Multidisciplinary Studies (MDS) major. You can earn an MDS degree in the Davis College or in other WVU colleges.

- Applied and Environmental Microbiology (http://catalog.wvu.edu/undergraduate/minors/applied_and_environmental_microbioloogy/)
- Environmental Protection (http://catalog.wvu.edu/undergraduate/minors/environmental_protection/)
- Equine Studies (http://catalog.wvu.edu/undergraduate/minors/equine_management/)
- Family and Consumer Science (http://catalog.wvu.edu/undergraduate/minors/family_and_consumer_sciences/)
- Food Science and Technology (http://catalog.wvu.edu/undergraduate/minors/food_science_and_technology/)
- Food Service Production (http://catalog.wvu.edu/undergraduate/minors/food_service_production/)
- Horticulture (http://catalog.wvu.edu/undergraduate/minors/horticulture/)
- Nutrition and Food Studies (http://catalog.wvu.edu/undergraduate/minors/nutritionandfoodstudies/)

- Pest Management (http://catalog.wvu.edu/undergraduate/minors/pest_management/)
- Soil Science (http://catalog.wvu.edu/undergraduate/minors/soil_science/)
- Landscape Studies (http://catalog.wvu.edu/undergraduate/minors/landscape_studies/)
- Rural Community Development (http://catalog.wvu.edu/undergraduate/minors/rural_community_development/)
- Sustainable Trails Development (http://catalog.wvu.edu/undergraduate/minors/sustainable_trails_dev/)
- Agribusiness Management (http://catalog.wvu.edu/undergraduate/minors/agribusiness_management/)
- Agriculture and Natural Resources Law (http://catalog.wvu.edu/undergraduate/minors/agriculturalandnaturalresourceslaw/)
- Arboriculture (http://catalog.wvu.edu/undergraduate/minors/aboriculture/)
- Conservation Ecology (http://catalog.wvu.edu/undergraduate/minors/conservation_ecology/)
- Environmental Economics (http://catalog.wvu.edu/undergraduate/minors/environmental_economics/)
- Forestry Resource Management (http://catalog.wvu.edu/undergraduate/minors/forest_resource_management/)
- Land Reclamation (http://catalog.wvu.edu/undergraduate/minors/land_reclamation/)
- Sustainable Low-Rise Residential Construction (http://catalog.wvu.edu/undergraduate/minors/sustainablelowriseresidentialconstruction/)
- Wildlife and Fisheries Resources (http://catalog.wvu.edu/undergraduate/minors/wildlife__fisheries_resourses_management/)
- Wood Science and Technology (http://catalog.wvu.edu/undergraduate/minors/wood_science_and_technology/)

## Accreditation

Agricultural & Extension Education- Agricultural Teacher Education within the Davis College of Agriculture and Natural Resources has specialized accreditation through the National Council on Accreditation of Teacher Education.

Biochemistry, an intercollegiate program shared with the Eberly College of Arts and Sciences, has accreditation from both the American Chemical Society (ACS Track) and the American Society for Biochemistry and Molecular Biology (ASBMB Track)

Forest Resources Management within the Davis College of Agriculture and Natural Resources has specialized accreditation through the Society of American Foresters.

Human Nutrition & Foods within the Davis College of Agriculture, Natural Resources and Design has accreditation through the Accreditation Council for Education in Nutrition and Dietetics.

Landscape Architecture within the Davis College of Agriculture and Natural Resources has specialized accreditation through the Landscape Architecture Accreditation Board of the American Society of Landscape Architecture.

Wood Science & Technology within the Davis College of Agriculture and Natural Resources has specialized accreditation through the Society of Wood & Technology.

# Agribusiness Management and Applied Economics, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The goal of this major is to provide students with a breadth of knowledge that will prepare them for employment in the fields of food, agricultural, or environmental & natural resource economics. This major opens doors to a range of career paths from entrepreneurship and joining family-owned businesses, to working in the banking/finance sector, to being hired by state or federal agencies, or to seeking employment in large food or agribusiness firms. Students will work with their advisors to select an AOE and restricted electives that meets their goals.  The Agribusiness Management AOE gives students a background in accounting, marketing, sales, strategic management, and new venture creation such that they will gain practical prowess to excel in agricultural and food-related businesses. The objective of the Environmental and Natural Resource Economics AOE is to provide students with the necessary training for the application of economic theory and analysis to environmental and natural resource issues to prepare them for careers as analysts, in government, or to continue to graduate school.

## Admissions for 2026-2027

First-Time Freshman requirements for admission into this major are the same as the general high school credit requirements for admission into the University.

Students transferring from another major within WVU will need at least a 2.00 in order to transfer into the Agribusiness Management and Applied Economics major.  All transfer students will be assigned a Professional Advisor (Barry Stephens) as their advisor.  Students are encouraged to contact Mr. Stephens at barry.stephens@mail.wvu.edu or 304-293-5396 with questions about transferring to this major.

Students transferring from another institution will need to meet admission requirements of the University. All transfer students will be assigned to a Professional Advisor (Barry Stephens) as their advisor. Students are encouraged to contact Mr. Stephens at barry.stephens@mail.wvu.edu or 304-293-5396 with questions about transferring to this major.

Major Code: 1702

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 41 |
| Agribusiness Management and Applied Economics Major Requirements | | 79 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 5, 6, 7, and 8 | | 22 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 18 |
| Total Hours | | 41 |

## Agribusiness Management and Applied Economics Major Requirements

| Code | Title | Hours |
|---|---|---|
| Minimum GPA of 2.0 is required in all Agribusiness Management and Applied Economics Major Requirements. | | |
| AGEE 110 | Microcomputer Applications in Agricultural Education | 3 |
| or CS 101 | Intro to Computer Applications | |
| ARE 150 | Introductory Agricultural and Agribusiness Economics (GEF 4) | 3 |
| or ECON 201 | Principles of Microeconomics | |
| ECON 202 | Principles of Macroeconomics (GEF 8) | 3 |
| ARE 204 | Agribusiness Management | 3 |
| ARE 220 | Introductory Environmental and Resource Economics (GEF 8) | 3 |

| | | |
|---|---|---|
| STAT 111 | Understanding Statistics (GEF 3; ENRE AOE must take STAT 211) | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| **Intermediate Theory and Analysis** | | |
| Select two of the following: | | 6 |
| ECON 301 | Intermediate Micro-Economic Theory | |
| ECON 302 | Intermediate Macro-Economic Theory | |
| ARE 406 | Applied Quantitative Methods | |
| ARE 462 | Records and Analysis for Sustainable Agribusinesses | |
| ARE 440 | Futures Markets and Commodity Prices | |
| **Law & Policy** | | |
| Select two of the following: | | 6 |
| ARE 382 | Agricultural and Natural Resources Law | |
| ARE 482 | Enterprise Operation Law | |
| RESM 450 | Land Use Planning Law | |
| ARE 450 | Agriculture, Environmental and Resource Policy | |
| ARE 488 | Career Development | 1 |
| Capstone Experience: | | 3 |
| ARE 491 | Professional Field Experience | |
| or ARE 496 | Senior Thesis | |
| **Area of Emphasis** | | **18** |
| Agribusiness Management | | |
| Environmental and Natural Resource Economics | | |
| **Restricted Electives (12 hours must be upper-division)** | | **27** |
| The restricted electives must be selected in consultation with the advisor, and selected from the list below. A minor and/or second AOE can be used to satisfy restricted elective courses. | | |
| Upper-division (300-400 level) courses from the following subjects: ADV, AGBI, AGEE, ARE, AGRN, ANNU, ANPH, ANPR, A&VS, AEM, BCOR, BIOL, COMM, DSGN, ECON, ENLM, ENTO, ENTR, ENVP, FIN, FDST, FMAN, FOR, GEOG, GEOL, HORT, HN&F, LARC, LDR, MKTG, PLSC, POLS, PSYC, PR, RPTR, RESM, SOCA, WMAN, WGST, and WDSC. | | |
| STAT at 200-level or higher. | | |
| AGEE 220 | Group Organization and Leadership | |
| ANNU 260 | Animal Nutrition | |
| A&VS 251<br>& 251L | Principles of Animal Science<br>and Principles of Animal Science Laboratory | |
| A&VS 281 | Introduction to Equine Care and Use | |
| DSGN 280 | Sustainable Design and Development | |
| ESWS 202<br>& 202L | Principles of Soil Science<br>and Principles of Soil Science Laboratory | |
| FDST 200 | Food Science and Technology | |
| HORT 220<br>& 220L | General Horticulture<br>and General Horticulture Laboratory | |
| PLSC 206<br>& 206L | Principles of Plant Science<br>and Principles of Plant Science Laboratory | |
| POLS 210 | Law and the Legal System | |
| Total Hours | | 79 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARE 150 (GEF 4) | 3 | STAT 111 (GEF 3) | 3 |
| ENGL 101 (GEF 1) | 3 | AGEE 110 or CS 101 | 3 |
| GEF 5, 6, or 7 | 3 | GEF 5, 6, or 7 | 3 |
| GEF 2 | 4 | GEF 5, 6, or 7 | 3 |
| ANRD 191 | 1 | General Elective | 3 |

| | | | |
|---|---|---|---|
| General Elective | | 1 | |
| | | 15 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARE 204 | | 3 ECON 202 (GEF 8) | 3 |
| ARE 220 (GEF 8) | | 3 Intermediate Theory and Analysis Course | 3 |
| ENGL 102 (GEF 1) | | 3 Restricted Elective | 3 |
| Restricted Elective | | 3 General Elective | 3 |
| General Elective | | 3 GEF 8 | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARE 488 | | 1 Intermediate Theory and Analysis Course | 3 |
| Law & Policy Course | | 3 AOE Course | 3 |
| AOE Course | | 3 AOE Course | 3 |
| Restricted Elective | | 3 Restricted Elective | 3 |
| General Elective | | 3 Restricted Elective | 3 |
| General Elective | | 2 | |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AOE Course | | 3 AOE Course | 3 |
| AOE Course | | 3 Law & Policy Course | 3 |
| Restricted Elective | | 3 Restricted Elective | 3 |
| Restricted Elective | | 3 Restricted Elective | 3 |
| ARE 491 | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Areas of Emphasis

- Agribusiness Management (p. 74)
- Environmental and Natural Resource Economics (p. 74)

## Agribusiness Management Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| ARE 110 | Agribusiness Accounting | 3 |
| ARE 380 | Agribusiness Sales and Management | 3 |
| ARE 422 | New Venture Creation | 3 |
| Select one of the following: | | 3 |
| ARE 431 | Marketing Agricultural Products | |
| ARE 435 | Marketing Livestock Products | |
| ARE 461 | Agribusiness Finance | 3 |
| ARE 484 | Agribusiness Strategic Management | 3 |
| Total Hours | | 18 |

## Environmental and Natural Resource Economics Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| MATH 150 | Applied Calculus | 3 |
| ARE 410 | Environmental and Resource Economics | 3 |

| | | |
|---|---|---|
| RESM 440 & 440L | Foundations of Applied Geographic Information Systems and Foundations of Applied Geographic Information Systems Laboratory | 3 |
| RESM 480 | Environmental Regulation | 3 |
| ARE 485 | Economics of Water Resources and Energy | 3 |
| Select one of the following: | | 3 |
| ECON 421 | Introduction to Mathematical Economics | |
| ECON 425 | Introductory Econometrics | |
| Total Hours | | 18 |

## Major Learning Outcomes

### AGRIBUSINESS MANAGEMENT AND APPLIED ECONOMICS

After completing this major students will be able to:

1. Explain the major concepts in economics, management, law, and policy as applied to agribusiness and/or environmental & natural resource economics.
2. Communicate effectively in a business or professional setting (written and oral).
3. Synthesize knowledge from across the curriculum to solve management and economic questions.
4. Demonstrate proficiency in the application of relevant software and quantitative techniques.
5. Work cooperatively within a business or professional setting.

# Agricultural and Extension Education, B.S.Agr.

## Degree Offered

- Bachelor of Science in Agriculture

## Nature of the Program

The Agricultural and Extension Education curriculum is designed to prepare students for entry into agricultural teaching, extension, or other professional employment in government, industry, or entrepreneurship where competence in communications and leadership are required. In order to prepare career-ready graduates, the curriculum provides flexibility to develop programs in options emphasizing teacher preparation, extension education, or production and technical agriculture. Courses are selected by the student in consultation with an advisor that will prepare the student to achieve their aspirations.

## Admissions for 2026-2027

First time students who meet University requirements are directly admitted to the Agricultural and Extension Education program.

All Agricultural and Extension Education students will enter the major in a basic program of study. Students will devote their freshman and sophomore years (first 58 hours) to the completion of GEF and basic agriculture curricula.

To continue in the major beyond the sophomore year, a student must apply for and be accepted into one of three areas of emphasis: teacher education, extension education, or agricultural and environmental technology. The application process will occur during the semester a student has completed or will complete the requirements for “junior” status (59 hours or greater) at West Virginia University. Once a student enters an area of emphasis, he/she will proceed through key courses as a member of a cohort composed of students entering the area of emphasis during the same year.

To be admitted into one of three areas of emphasis, a student must complete the following courses: Engl 101, Engl 102, Math 124, Chem 111, Biol 101/103, and AGEE 103.

To enter the teacher education area of emphasis, students must meet the following:

- 2.50 or greater GPA
- Complete AGEE 202

To enter the extension education area of emphasis, students must meet the following:

- 2.00 or greater GPA

To enter the agricultural and environmental technology areas of emphasis, students must meet the following:

- 2.00 or greater GPA

Major Code: 1710

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 25 |
| Agriculture Extension Education Major Requirements | | 95 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 3, 5, and 6 | | 15 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 9 |
| Total Hours | | 25 |

## Agriculture Extension Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| AGEE 101 | Global Food and Agricultural Industry (GEF 7) | 3 |
| AGEE 102 | Educational Colloquium in Agricultural and Extension Education | 1 |
| AGEE 103S | Basics of Agricultural Mechanization | 3 |
| AGEE 110 | Microcomputer Applications in Agricultural Education | 3 |
| or CS 101 | Intro to Computer Applications | |
| AGEE 203 | Agriculture Mechanics Practica | 3 |
| AGEE 220 | Group Organization and Leadership (GEF 4) | 3 |
| AGEE 421 | Agricultural and Natural Resource Communications | 3 |
| AGEE 431 | Adult Education in Agriculture and Natural Resources | 2 |
| AGEE 440 | Principles of Cooperative Extension | 2 |
| Select one of the following: | | 12 |

| | | |
|---|---|---|
| AGEE 488 | Professional Agricultural Internship | |
| AGEE 491 | Professional Field Experience | |
| AGEE 489 | Agriculture and Extension Education Reflective Seminar (Capstone - fulfills Writing and Communication Skills requirement) | 1 |
| ESWS 202 | Principles of Soil Science | 3 |
| ESWS 202L | Principles of Soil Science Laboratory | 1 |
| ARE 204 | Agribusiness Management | 3 |
| or ARE 380 | Agribusiness Sales and Management | |
| A&VS 251<br>& 251L | Principles of Animal Science<br>and Principles of Animal Science Laboratory | 4 |
| PLSC 206<br>& 206L | Principles of Plant Science<br>and Principles of Plant Science Laboratory | 4 |
| or HORT 220<br>& 220L | General Horticulture<br>and General Horticulture Laboratory | |
| PSYC 101 | Introduction to Psychology (GEF 8) | 3 |
| PSYC 241 | Introduction to Human Development (GEF 8) | 3 |
| Select one of the following (GEF 8): | | 4 |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| Select one of the following (GEF 2): | | 4 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory | |
| Area of Emphasis (Select One) | | 18 |
| Upper-Division Restricted Electives | | 12 |
| Courses from the following subjects: A&VS, AEM, AGBI, AGEE, AGRN, ANNU, ANPH, ANPR, ANRD, ARE, CDFS, DSGN, ENTO, ENVM, ENVP, FDM, FDST, FMAN, FOR, GEN, HORT, ID, LARC, PLSC, PPTH, RESM, RPTR, WDSC, or WMAN | | |
| Total Hours | | 95 |

## Areas of Emphasis

- Agricultural & Environmental Technology (p. 77)
- Agricultural Teacher Education (p. 78)
- Extension Education (p. 80)

## AGRICULTURAL & ENVIRONMENTAL TECHNOLOGY AREA OF EMPHASIS

Today agriculture faces a tremendous challenge to provide food, fiber, and industrial raw supplies for billions of people at a time when resources are becoming more limited. Agriculture, meanwhile, has become more technical and complex, and qualified college graduates are needed to meet the future demands in this vital field.

This option is an undergraduate studies program that allows students some measure of flexibility in meeting their own educational objectives, particularly when those objectives may not be fulfilled entirely by any other single college major. This option prepares students to enter into the broad field of production and technical agriculture. The curriculum combines a broad range of technical courses in animal science, crop and soil science, horticulture, biological systems, agricultural mechanics, and agricultural economics. Additional courses in interpersonal and group leadership and communications training give students a competitive edge in the job market.

Students who desire to become owners, managers, or employees in production and or technical agriculture realize that they need a broad-based preparation. Agriculture presents opportunities in the farming and ranching business and industry, research and development, education, communications, governmental employment, and conservation and recreation.

The experiences gained through coursework and internships prove invaluable. General agriculture internships in production and technical agriculture, agribusiness, and commodity organizations enable students to enhance their communications, problem-solving and technical abilities, and management and decision making abilities. A twelve credit, twelve week internship related to the student’s career objective is required.

## REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Upper-Level courses selected from the other divisions in the college in consultation with Advisor | | 18 |
| Courses from the following subjects: AEM, AGBI, AGRN, AGEE, AGRN, ANNU, ANPH, ANPR, ARE, A&VS, CDFS, DSGN, ENTO, ENVM, ENVP, FDM, FDST, FNRS, GEN, HORT, ID, LARC, PLSC, PPTH, RESM, RPTR, or WMAN | | |
| Total Hours | | 18 |

## SUGGESTED PLAN OF STUDY FOR AGRICULTURAL & ENVIRONMENTAL TECHNOLOGY AREA OF EMPHASIS

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AGEE 102 | 1 | MATH 121 (GEF 3) | 3 |
| AGEE 103S | 3 | AGEE 101 (GEF 7) | 3 |
| ENGL 101 (GEF 1) | 3 | AGEE 110 | 3 |
| A&VS 251 & 251L | 4 | AGEE 220 (GEF 4) | 3 |
| BIOL 101 & 101L (GEF 2) | 4 | PSYC 101 (GEF 8) | 3 |
| ANRD 191 | 1 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | AGEE 203 | 3 |
| PLSC 206 & 206L | 4 | CHEM 111 & 111L (GEF 8) | 4 |
| PSYC 241 (GEF 8) | 3 | GEF 6 | 3 |
| ARE 204 or 380 | 3 | General Elective | 3 |
| GEF 5 | 3 | | |
| | 16 | | 13 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ESWS 202 | 3 | AGEE 421 | 3 |
| ESWS 202L | 1 | Ag. Elective (Upper Division) | 12 |
| AGEE 440 | 2 | | |
| Ag. Elective (Upper Division) | 6 | | |
| General Elective | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AGEE 431 | 2 | AGEE 489 | 1 |
| Ag. Elective (Upper Division) | 9 | AGEE 491 | 12 |
| General Elective | 3 | Ag. Elective (Upper Division) | 3 |
| | 14 | | 16 |

Total credit hours: 120

## AGRICULTURAL TEACHER EDUCATION AREA OF EMPHASIS

An effective agriculture teacher can assist in the economic and social development of a community. Middle school, high school, and adult classes strengthened by supervised agricultural experience programs are the methods whereby the agriculture teacher helps students become involved and established in production agriculture and off-farm occupations that require agricultural knowledge and skills.

Students completing this program will meet the requirements for certification by the West Virginia Department of Education. The program provides graduates with the opportunity to become qualified to teach in the broad field of agriculture as well as to become prepared to teach in such areas as

production, agribusiness, conservation and forestry, agricultural mechanics, processing, horticulture, and natural resources. In addition to teaching, graduates have the opportunity for employment with governmental agencies and in private enterprise.

To be eligible for student teaching and subsequent certification to teach, the student must:

- possess a 2.5 grade point average on the total of all college credits, including hours earned in professional education and technical agriculture courses
- must pass competency tests in reading, writing, mathematics (Praxis Core Academic Skills for Educators) and agriculture content endorsement (Praxis II - Agriculture) prior to student teaching
- must pass the principles of teaching and learning test (Praxis Principles of Learning and Teaching Grades 7-12) for grades 7-12
- complete the required agriculture and professional education courses

## REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| AGEE 202 | Site Based Tutoring in Agriculture and Extension Education | 1 |
| AGEE 330 | Shop Theory and Methods | 3 |
| AGEE 426 | Directing Future Farmers of America and Supervised Agricultural Experiences | 3 |
| AGEE 430 | Methods of Teaching Agriculture | 2 |
| AGEE 430L | Methods of Teaching Agriculture Laboratory | 1 |
| AGEE 434 | Managing Learning Environment | 3 |
| AGEE 438 | Agriculture Education Curriculum Development | 2 |
| AGEE 490 | Teaching Practicum | 3 |
| RDNG 422 | Reading in the Content Areas | 3 |
| SPED 404 | Special Education in Contemporary Society | 3 |
| SPED 460 | Differentiation of Instruction | 3 |
| Total Hours | | 27 |

## SUGGESTED PLAN OF STUDY FOR AGRICULTURAL TEACHER EDUCATION AREA OF EMPHASIS

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AGEE 102 | 1 | MATH 124 (GEF 3) | 3 |
| AGEE 103S | 3 | AGEE 101 (GEF 7) | 3 |
| ENGL 101 (GEF 1) | 3 | AGEE 110 | 3 |
| A&VS 251 & 251L | 4 | AGEE 220 (GEF 4) | 3 |
| BIOL 101 & 101L (GEF 2) | 4 | PSYC 101 (GEF 8) | 3 |
| ANRD 191 | 1 | AGEE 202 | 1 |
| | 16 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | CHEM 111 & 111L (GEF 8) | 4 |
| PLSC 206 & 206L | 4 | SPED 404 | 3 |
| PSYC 241 (GEF 8) | 3 | Ag. Elective (Upper Division) | 6 |
| ARE 204 or 380 | 3 | | |
| AGEE 203 | 3 | | |
| | 16 | | 13 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ESWS 202 | 3 | AGEE 330 | 3 |
| ESWS 202L | 1 | AGEE 434 | 3 |

| | | | |
|---|---|---|---|
| AGEE 440 | | 2 Ag. Elective (Upper Division) | 3 |
| AGEE 421 | | 3 GEF 5 | 3 |
| Ag. Elective (Upper Division) | | 3 GEF 6 | 3 |
| AGEE 430 | | 2 | |
| AGEE 430L | | 1 | |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AGEE 490 | | 3 AGEE 488 | 12 |
| AGEE 426 | | 3 AGEE 489 | 1 |
| AGEE 431 | | 2 | |
| AGEE 438 | | 2 | |
| SPED 460 | | 3 | |
| RDNG 422 | | 3 | |
| | | 16 | 13 |

Total credit hours: 120

## EXTENSION EDUCATION AREA OF EMPHASIS

This option prepares students with a foundation for extension education, agribusiness positions related to human resource management, international and corporate training and development, agricultural literacy and public relations, political interests, and commodity service organizations.

Coursework in this option will focus on a core of agricultural courses along with emphasis in non-formal education, designing educational/training programs and professional presentations, leadership development, teaching/training methods, and interpersonal communications. A twelve credit, twelve week internship related to the student's career objective is required.

## REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| AGEE 430 | Methods of Teaching Agriculture | 2 |
| AGEE 430L | Methods of Teaching Agriculture Laboratory | 1 |
| MDIA 101 | Media and Society | 3 |
| POLS 102 | Introduction to American Government | 3 |
| POLS 220 | State and Local Government | 3 |
| CDFS 110 | Families Across the Life Span | 3 |
| or ORGL 410 | Youth Leadership Development | |
| PR 215 | Introduction to Public Relations | 3 |
| Total Hours | | 18 |

## SUGGESTED PLAN OF STUDY FOR EXTENSION EDUCATION AREA OF EMPHASIS

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AGEE 102 | | 1 MATH 124 (GEF 3) | 3 |
| AGEE 103S | | 3 AGEE 101 (GEF 7) | 3 |
| ENGL 101 (GEF 1) | | 3 AGEE 110 | 3 |
| A&VS 251 & 251L | | 4 AGEE 220 (GEF 4) | 3 |
| BIOL 101 & 101L (GEF 2) | | 4 PSYC 101 (GEF 8) | 3 |
| ANRD 191 | | 1 AGEE 202 | 1 |
| | | 16 | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | | 3 AGEE 203 | 3 |

| | | | |
|---|---|---|---|
| PLSC 206 & 206L | 4 | CHEM 111 & 111L | 4 |
| PSYC 241 (GEF 8) | 3 | MDIA 101 | 3 |
| ARE 204 or 380 | 3 | GEF 6 | 3 |
| GEF 5 | 3 | General Elective | 3 |
| | 16 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ESWS 202 | 3 | CDFS 110 or ORGL 410 | 3 |
| ESWS 202L | 1 | PR 215 | 3 |
| AGEE 440 | 2 | AGEE 421 | 3 |
| POLS 102 | 3 | Elective (Upper Division) | 6 |
| Elective (Upper Division) | 6 | AGEE 441 | 2 |
| | 15 | | 17 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AGEE 489 | 1 | AGEE 491 | 12 |
| POLS 220 | 3 | | |
| AGEE 431 | 2 | | |
| General Electives | 6 | | |
| | 12 | | 12 |

Total credit hours: 120

# Major Learning Outcomes

## AGRICULTURE AND EXTENSION EDUCATION

All students in the Agricultural and Extension Education undergraduate program will:

- Complete a core curriculum in general education foundations.
- Complete a core curriculum in basic agricultural knowledge.
- Complete a core curriculum in technology, leadership, and communication.
- Complete at least one area of emphasis (teacher education, extension education, or agricultural and environmental technology) in agricultural and extension education.

Students in the teacher education area of emphasis will:

- Develop the pedagogical skills necessary to enter and be successful in a high school teaching position.
- Complete all PRAXIS tests required for teacher certification in West Virginia.
- Complete a twelve week internship/student teaching placement in a middle/high school agricultural education program.

Students in the extension education area of emphasis will:

- Develop the academic knowledge and skills necessary to enter and succeed in a Master of Science program.
- Develop the educational and communication skills necessary to successfully enter and succeed in an Extension position.
- Complete a twelve week internship in an Extension related position.

Students in the agricultural and environmental technology area of emphasis will:

- Develop the educational and communication skills necessary to successfully enter and succeed in an agriculturally related career.
- Develop the academic knowledge and skills needed to enter and succeed in an agriculturally related career.
- Complete a twelve week internship in an area related to their career goal.

# Animal and Nutritional Science, B.S., B.S.Agr.

## Degrees Offered

- Bachelor of Science
- Bachelor of Science in Agriculture

*Students are not eligible to earn both a B.S. and a B.S.Agr. in Animal and Nutritional Sciences.

## Bachelor of Science - Animal & Nutritional Sciences Major

The curriculum in science, with its flexible design, provides the necessary background in biochemistry, chemistry, mathematics, physics, and modern concepts of biology in preparation for professional schools of dentistry, human medicine, optometry, pharmacy, veterinary medicine or graduate study in such fields as animal breeding, animal physiology, biochemistry and nutrition.

## Bachelor of Science in Agriculture - Animal & Nutritional Sciences Major

This curriculum provides the necessary background in agricultural economics, agronomy, breeding, nutrition, and physiology to prepare for careers in production and management of cattle, small ruminants, pigs, horses, companion animals or poultry, and in food processing and technology.

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## FACULTY

### DIRECTOR

- Christopher M. Ashwell - Ph.D. (Wake Forest University)
  Functional genomics

### PROFESSORS

- Scott A. Bowdridge - Ph.D. (Virginia Tech)
  Food animal production, parasite immunology
- Robert A. Dailey - Ph.D. (University of Wisconsin)
  Reproductive physiology
- P. Brett Kenney - Ph.D. (Kansas State University)
  Meat science
- Hillar Klandorf - Ph.D. (British Council for National Academic Awards)
  Physiology
- Joseph S. Moritz - Ph.D. (Kansas State University)
  Nutrition and feed manufacture
- Matthew E. Wilson - Ph.D. (Iowa State University)
  Reproductive physiology
- Jianbo Yao - Ph.D. (McGill University)
  Functional genomics

### ASSOCIATE PROFESSORS

- Kimberly M. Barnes - Ph.D. (University of Nebraska)
  Lipid metabolism
- Eugene E. Felton - Ph.D. (University of Missouri)
  Animal science and ruminant nutrition
- K. Marie Krause - Ph.D. (University of Wisconsin-Madison)
  Ruminant nutrition

### ASSISTANT PROFESSOR

- Ibukun Ogunade - Ph.D. (University of Florida)
  Livestock production

### TEACHING PROFESSORS

- Margaret A. Minch - D.V.M. (Ohio State University)
  Veterinary medicine
- Crystal E. Smith - Ed.D. (West Virginia University)
  Equine management

### TEACHING ASSISTANT PROFESSOR

- Cassandra Lamb - Ph.D. (Cornell University)
  Biochemistry

### SERVICE ASSISTANT PROFESSOR

- Madonna Higgins - D.V.M. (Auburn University)
  Veterinary medicine

### VISITING INSTRUCTOR

- Lindsay Livengood - Director of Operations (West Virginia University)
  Hearts of Gold Service Dogs

## Admissions for 2026-2027

- First-Time Freshman are admitted directly into the Animal and Nutritional Science major.
- Students transferring from another major within WVU are directly admitted to the Animal and Nutritional Science major if they are in good academic standing (2.0 or higher GPA).
- Students transferring from another institution are directly admitted to the Animal and Nutritional Science major if they are in good academic standing (2.0 or higher GPA).

Major Code: 1703 B.S., 1711 B.S.Agr.

# Animal and Nutritional Science, B.S.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 50 |
| Animal and Nutritional Sciences Program Requirements | | 40 |
| Animal and Nutritional Sciences Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundation (GEF) Requirements 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 31 |
| Total Hours | | 50 |

## Animal and Nutritional Sciences Program Requirements

| Code | Title | Hours |
|---|---|---|
| Biology Requirement: | | 8 |
| BIOL 101 | General Biology 1 | |
| & 101L | and General Biology 1 Laboratory | |
| & BIOL 102 | and General Biology 2 | |
| & BIOL 102L | and General Biology 2 Laboratory | |
| BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| & BIOL 117 | and Introductory Physiology | |
| & BIOL 117L | and Introductory Physiology Laboratory | |
| CHEM 115 | Fundamentals of Chemistry 1 | 4 |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 116 | Fundamentals of Chemistry 2 | 4 |
| & 116L | and Fundamentals of Chemistry 2 Laboratory | |
| Physics Requirement | | 8 |
| PHYS 101 | Introductory Physics 1 | |
| & 101L | and Introductory Physics 1 Laboratory | |
| & PHYS 102 | and Introductory Physics 2 | |
| & PHYS 102L | and Introductory Physics 2 Laboratory | |
| OR | | |
| PHYS 111 | General Physics 1 | |
| & 111L | and General Physics 1 Laboratory | |
| & PHYS 112 | and General Physics 2 | |
| & PHYS 112L | and General Physics 2 Laboratory | |
| Math Requirement (also fulfills GEF 3 requirement) | | 6 |
| Calculus or Advanced Chemistry Requirement | | 6 |
| CHEM 231 | Organic Chemistry: Brief Course | |
| & 231L | and Organic Chemistry: Brief Course Laboratory | |
| CHEM 233 | Organic Chemistry 1 | |
| & 233L | and Organic Chemistry 1 Laboratory | |
| CHEM 234 | Organic Chemistry 2 | |
| & 234L | and Organic Chemistry 2 Laboratory | |
| AGBI 410 | Introductory Biochemistry | |
| MATH 150 | Applied Calculus | |
| MATH 153 | Calculus 1a with Precalculus | |
| MATH 154 | Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 | |
| MATH 156 | Calculus 2 | |
| Science Electives (as necessary to reach at least 40 hours of science credits) | | 4 |
| Total Hours | | 40 |

## Animal and Nutritional Sciences Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Courses in Agriculture** | | **24** |
| 12-Credits at the 300 or 400-Level | | |

| | | |
|---|---|---|
| **Writing and Communication Skills Requirement** * | | **3** |
| A&VS 402 | Values and Ethics | |
| A&VS 451 | Current Literature in Animal Science | |
| **Capstone Experience** * | | **3** |
| A&VS 402 | Values and Ethics | |
| A&VS 491 | Professional Field Experience | |
| A&VS 496 | Senior Thesis | |
| Total Hours | | 30 |

*

Students completing A&VS 402 as the Writing and Capstone requirements will be required to complete an additional Course in Agriculture.

## SUGGESTED PLAN OF STUDY FOR BACHELOR OF SCIENCE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| A&VS 191 | 1 | A&VS 150 | 2 |
| ENGL 101 (GEF 1) | 3 | BIOL 117 & 117L (GEF 8) | 4 |
| CHEM 115 & 115L (GEF 8) | 4 | CHEM 116 & 116L (GEF 8) | 4 |
| BIOL 115 & 115L (GEF 2) | 4 | MATH 128 (if needed or Elective) | 3 |
| Depending on QRA score select one of the following (GEF 3):<br>MATH 124<br>MATH 126<br>MATH 129<br>MATH 150<br>MATH 153<br>MATH 155 | 3 | GEF 4 | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| A&VS 251 & 251L | 4 | ANNU 260 | 3 |
| CHEM 233 | 3 | CHEM 234 | 3 |
| CHEM 233L | 1 | CHEM 234L | 1 |
| PHYS 101 & 101L | 4 | PHYS 102 & 102L | 4 |
| ENGL 102 (GEF 1) | 3 | GEF 6 | 3 |
| | | GEF 7 | 3 |
| | 15 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANPH 301 | 3 | GEN 371 & 371L | 4 |
| AGBI 410 | 3 | Electives | 9 |
| AEM 341 | 3 | | |
| AEM 341L | 1 | | |
| Electives | 6 | | |
| | 16 | | 13 |

| **Fourth Year** | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| Electives | | 9 Electives | 7 |
| Science Elective | | 3 Capstone | 3 |
| GEF 5 | | 3 Writing and Communication Skills Requirement | 3 |
| | | 15 | 13 |

Total credit hours: 120

## Major Learning Outcomes

### ANIMAL & NUTRITIONAL SCIENCES

1. Graduates will acquire a high level of competency in the basic sciences required for disciplinary competency.
2. Graduates will integrate basic knowledge and managerial skills related to the animal, nutritional and food sciences disciplines.
3. Graduates will acquire sufficient written and oral communication skills, problem solving and critical thinking skills to effectively impact lifelong societal and professional developments critical to their respective discipline of interest.
4. Graduates will attain depth of knowledge relative to the scope of subfields of the animal and nutritional sciences:
    a. Animal production, management and marketing
    b. Animal nutrition
    c. Environmental stewardship

# Animal and Nutritional Science, B.S.Agr.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| **Code** | **Title** | **Hours** |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| **Code** | **Title** | **Hours** |
|---|---|---|
| University Requirements | | 51 |
| Animal and Nutritional Sciences Program Requirements | | 24 |
| Animal and Nutritional Sciences Major Requirements | | 45 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) Requirements 1, 2, 3, 4, 5, 6, 7 and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 32 |
| Total Hours | | 51 |

## Animal and Nutritional Sciences Program Requirements

| Code | Title | Hours |
|---|---|---|
| Biology Requirement: | | 8 |
| BIOL 101 | General Biology 1 | |
| & 101L | and General Biology 1 Laboratory | |
| & BIOL 102 | and General Biology 2 | |
| & BIOL 102L | and General Biology 2 Laboratory | |
| BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| & BIOL 117 | and Introductory Physiology | |
| & BIOL 117L | and Introductory Physiology Laboratory | |
| A&VS 251 | Principles of Animal Science | |
| PLSC 206 | Principles of Plant Science | |
| Chemistry Requirement | | 8 |
| CHEM 111 | Survey of General, Organic, and Biological Chemistry 1 | |
| & 111L | and Survey of Chemistry 1 Laboratory | |
| & CHEM 112 | and Survey of General Organic Biological Chemistry 2 | |
| & CHEM 112L | and Survey of Chemistry 2 Laboratory | |
| CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| MATH 124 | Algebra with Applications (or higher) | 3 |
| Science Electives | | 5 |
| Total Hours | | 24 |

## CURRICULUM REQUIREMENTS FOR BACHELOR OF SCIENCE IN AGRICULTURE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

| Code | Title | Hours |
|---|---|---|
| **Courses in Agriculture** | | **39** |
| 21-Credits at the 300 or 400-Level | | |
| Elect a minimum of a three-credit course, excluding Assigned Topics, in each of the following categories. Elect additional courses to obtain a total of 45 hours in the college. | | |
| Animal Science | | |
| Plant Science | | |
| Soil Science | | |
| Agriculture Economics | | |
| **Capstone Experience** | | **3** |
| A&VS 402 | Values and Ethics | |
| A&VS 491 | Professional Field Experience | |
| A&VS 496 | Senior Thesis | |
| **Fulfills Writing and Communication Skills Requirement** | | **3** |
| A&VS 402 | Values and Ethics | |

| | | |
|---|---|---|
| A&VS 451 | Current Literature in Animal Science | |
| Total Hours | | 45 |

*

Students completing A&VS 402 as the Writing and Capstone requirements will be required to complete an additional Course in Agriculture.

## SUGGESTED PLAN OF STUDY FOR BACHELOR OF SCIENCE IN AGRICULTURE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | A&VS 150 | 2 |
| A&VS 191 | 1 | ARE 150 (GEF 4) | 3 |
| Select one of the following: | 4 | Select one of the following: | 4 |
| BIOL 101 & 101L | | BIOL 102 & 102L | |
| A&VS 251 | | A&VS 251 & 251L | |
| PLSC 206 | | PLSC 206 & 206L | |
| CHEM 111 & 111L (GEF 2) | 4 | CHEM 112 & 112L (GEF 8) | 4 |
| MATH 124 (GEF 3) | 3 | GEF 5 | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | ANPH 301 | 3 |
| WMAN 150 (GEF 7) | 3 | Science elective | 3 |
| Science elective | 3 | Electives | 6 |
| GEF 6 | 3 | Agriculture Course or Elective | 3 |
| Agriculture Course or Elective | 4 | | |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANNU 361 | 3 | ESWS 202 & 202L | 4 |
| ANPR 341 | 3 | ANPH 400 | 3 |
| ANPR 341L | 1 | ANPR 338L | 3 |
| ARE 382 | 3 | Agriculture Courses | 5 |
| GEF 8 or Elective | 3 | | |
| Agriculture Course | 3 | | |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARE 435 | 3 | Capstone | 3 |
| ANPR 339L | 2 | Writing and Communication Skills | 3 |
| A&VS 409 | 3 | Electives | 6 |
| Agriculture Course | 4 | | |
| Elective | 3 | | |
| | 15 | | 12 |

Total credit hours: 120

## Major Learning Outcomes

### ANIMAL & NUTRITIONAL SCIENCES

1. Graduates will acquire a high level of competency in the basic sciences required for disciplinary competency.
2. Graduates will integrate basic knowledge and managerial skills related to the animal, nutritional and food sciences disciplines.
3. Graduates will acquire sufficient written and oral communication skills, problem solving and critical thinking skills to effectively impact lifelong societal and professional developments critical to their respective discipline of interest.
4. Graduates will attain depth of knowledge relative to the scope of subfields of the animal and nutritional sciences:
    a. Animal production, management and marketing
    b. Animal nutrition
    c. Environmental stewardship

# Biochemistry, B.S.

## Degree Offered

- Bachelor of Science

Students earning a B.S. in Biochemistry are not eligible to earn a B.A. or B.S. in Chemistry or Biology, a B.S. in Animal & Nutritional Sciences, or a minor in Biology.

Please go to the B.S. Biochemistry (p. 793) page for specific information regarding the program, including admissions requirements, program requirements and expected learning outcomes.

# Environmental, Energy, and Land Management, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Bachelor of Science in Environmental, Energy, and Land Management is designed to equip students with the skills and knowledge needed to lead in the dynamic fields of land development, environmental stewardship, and energy innovation. This interdisciplinary program explores the intricate connections between business, environmental science, and land management, including nature-based climate initiatives, energy production, and infrastructure development. With national accreditation and insights from our industry advisory board, students receive a high-quality, relevant education that prepares them for diverse career paths in private business, government, consulting, or entrepreneurial ventures in the environmental and energy sectors. The program offers comprehensive training in identifying, leasing, and purchasing lands for development, and navigating the ethical, regulatory, and environmental frameworks crucial to success. Through hands-on learning experiences and projects that mirror real-world challenges, students gain practical expertise and a strong foundation to make a meaningful impact on the world through sustainable and innovative land and energy solutions.

## Admissions for 2026-2027

- First-Time Freshman are admitted directly into the Environmental, Energy, and Land Management major.
- Students transferring from another major within WVU are directly admitted into the Environmental, Energy, and Land Management major if they are in good academic standing (2.00 GPA).
- Students transferring from another institution are directly admitted into the Environmental, Energy, and Land Management major if they are in good academic standing (2.00 GPA).

Major Code: 1705

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 40 |
| Environmental, Energy, and Land Management Major Requirements | | 80 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, 7, and 8 | | 24 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 15 |
| Total Hours | | 40 |

## Environmental, Energy, and Land Management Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Required Courses** | | |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory (GEF 2) | 4 |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| **Second Earth Science** | | **4** |
| Select one of the following (GEF 8): | | |
| SUST 201<br>& 201L | Earth System Science<br>and Earth System Science Laboratory | |
| SUST 207<br>& 207L | Climate System Science<br>and Climate System Science Laboratory | |
| SUST 250<br>& 250L | Digital Earth and GIS<br>and Digital Earth and GIS Laboratory | |
| **Spatial Systems** | | **6** |
| Select two of the following: | | |
| FNRS 326 | Remote Sensing of Environment | |
| RESM 440<br>& 440L | Foundations of Applied Geographic Information Systems<br>and Foundations of Applied Geographic Information Systems Laboratory | |
| RESM 444 | Advanced GIS for Natural Resource Management | |
| **Land Coursework** | | |

| | | |
|---|---|---|
| ENLM 150 | Introduction to Environmental, Energy, and Land Management | 3 |
| or ARE 201 | Principles of Resource and Energy | |
| ENLM 200 | Principles of Environmental, Energy, and Land Management | 3 |
| ENLM 220 | Energy Production & Operations | 3 |
| ENLM 300 | Ethics and Negotiations for Land Managers | 3 |
| ENLM 390 | Land and Lease Analysis | 3 |
| ENLM 400 | Land Management Contracts 1 | 3 |
| ENLM 420 | Land Management Contracts 2 | 3 |
| **Environmental Coursework** | | **21** |
| Select seven of the following: | | |
| ARE 382 | Agricultural and Natural Resources Law | |
| ARE 450 | Agriculture, Environmental and Resource Policy | |
| ENLM 415 | Midstream Energy Planning and Development | |
| FNRS 312 | Projects in Sustainable Land Reclamation Management | |
| FNRS 344 | River Conservation & Management | |
| FNRS 421 | Renewable Resources Policy and Governance | |
| RESM 405L | Drones in Resource Management | |
| RESM 450 | Land Use Planning Law | |
| RESM 460 | Energy Project and Program Management | |
| RESM 475 | Solar PV Technology & Policy Fundamentals | |
| RESM 480 | Environmental Regulation | |
| RESM 545 | GIS for Watershed Analysis | |
| SUST 372 | Sustainable Energy | |
| WMAN 200 | Restoration Ecology | |
| **Professional Development and Capstone** | | |
| ENLM 491 | Professional Field Experience | 3 |
| ENLM 450 | Land Management Strategic Planning | 3 |
| **Business Perspective** | | **15** |
| Select one of the following minors: | | |
| Agribusiness Management | | |
| General Business | | |
| Or select five of the following: | | |
| ECON 200 | Survey of Economics | |
| BCOR 320 | Legal Environment of Business | |
| BCOR 330 | Information Systems and Technology | |
| BCOR 340 | Principles of Finance | |
| BCOR 360 | Supply Chain Management | |
| BCOR 370 | Principles of Management | |
| BCOR 380 | Business Ethics | |
| ARE 110 | Agribusiness Accounting | |
| ARE 482 | Enterprise Operation Law | |
| ARE 204 | Agribusiness Management | |
| ARE 431 | Marketing Agricultural Products | |
| ARE 461 | Agribusiness Finance | |
| Total Hours | | 80 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENLM 150 or ARE 201 | 3 |
| MATH 124 (GEF 3) | 3 | Second Earth Science Choice (GEF 8) | 4 |

| | | | |
|---|---|---|---|
| SUST 101 & 101L (GEF 2) | | 4 GEF 5 | 3 |
| ANRD 191 | | 1 GEF 6 | 3 |
| GEF 8 | | 3 GEF 8 | 3 |
| | | 14 | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | | 3 ENLM 390 | 3 |
| ENLM 200 | | 3 Environmental Course | 3 |
| ENLM 220 | | 3 Business Choice | 3 |
| Business Choice | | 3 GEF 7 | 3 |
| Environmental Course | | 3 General Elective | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENLM 300 | | 3 ENLM 400 | 3 |
| Business Choice | | 3 Business Choice | 3 |
| Environmental Course | | 3 Environmental Course | 3 |
| Spatial Systems Choice | | 3 Environmental Course | 3 |
| GEF 4 | | 3 General Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENLM 420 | | 3 ENLM 450 | 3 |
| ENLM 491 | | 3 Environmental Course | 3 |
| Spatial Systems Choice | | 3 Environmental Course | 3 |
| Business Choice | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Major Learning Outcomes

### ENVIRONMENTAL, ENERGY, AND LAND MANAGEMENT

This B.S. degree program and major will provide undergraduate students a knowledge-based framework that will develop skillsets essential to a successful career in land and resource management. Upon graduation from this degree program and major, students will be able to:

- Design operational plans that integrate industry and public stakeholder goals for sustainable land development
- Evaluate the types of interests in land resource ownership and demonstrate an understanding of the ownership, legal, and business issues related to environmental and energy management
- Explain and negotiate the key elements of energy- and environmental-related leases, contracts, and operating agreements under accepted standards of practice
- Develop budgets and financial projections associated with environmental and energy development and the economics related to multiple energy production systems
- Demonstrate critical thinking skills and problem solving abilities and effectively communicate with stakeholders, peers, and other professionals in both written and oral forms.

# Environmental, Soil and Water Sciences, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

This major prepares students for careers in areas which safeguard the quality of the environment.  The curriculum is built on interdisciplinary training in a broad array of environmental, soil, and water sciences. Recent graduates in this option are employed by municipal, state, and federal governmental agencies; consulting firms, especially those specializing in land reclamation, water quality, or pest management; and companies associated with natural resource industries.

In addition to the required curriculum students can enhance their career qualifications by also completing some or all of the following options:

- A minor in a relevant field (Geology, Resource Economics, Wildlife Conservation, etc.)
- USDA Soil Scientist Certification: thirty hours in biological, physical or earth science, including at least fifteen hours in soils courses such as:

| Code | Title | Hours |
|---|---|---|
| ESWS 410 | Soil Fertility | 3 |
| ESWS 415<br>& 415L | Soil Survey and Land Use<br>and Soil Survey and Land Use Laboratory | 3 |
| ESWS 417<br>& 417L | Soil Genesis and Classification<br>and Soil Genesis and Classification Laboratory | 4 |
| ESWS 425<br>& 425L | Environmental Soil Management<br>and Environmental Soil Management Laboratory | 3 |
| ESWS 430<br>& 430L | and Soil Physics Laboratory | 3 |
| ESWS 455 | Reclamation of Disturbed Soils | 3 |

- USDA Soil Conservationist Certification: thirty hours in natural resources or agricultural disciplines including at least twelve hours from soils, crops, or plant science, with at least three hours in soils and three hours in crop or plant science.
- ENVP 415 Hazardous Waste Training. Equivalent to OSHA 40-hour HAZWOPER course.
- Information on academic requirements for other professional certifications may be obtained at https://www.agronomy.org/certifications (https://www.agronomy.org/certifications/) or http://www.naep.org

## Admissions for 2026-2027

- First-Time Freshman are admitted directly into the Environmental Soil and Water major.
- Students transferring from another major within WVU are directly admitted to the Environmental Soil and Water major if they are in good academic standing (2.0 or higher GPA).
- Students transferring from another institution are directly admitted to the Environmental Soil and Water major if they are in good academic standing (2.0 or higher GPA).

Major Code: 1706

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 38 |
| Environmental, Soil and Water Major Requirements | | 82 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, and 6 | | 15 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 22 |
| Total Hours | | 38 |

## Environmental, Soil and Water Sciences Major Requirements

| Code | Title | Hours |
|---|---|---|
| WRIT 305 | Technical Writing | 3 |
| Select one of the following sequences (GEF 8): | | 8 |
| BIOL 101 | General Biology 1 | |
| & 101L | and General Biology 1 Laboratory | |
| & BIOL 102 | and General Biology 2 | |
| & BIOL 102L | and General Biology 2 Laboratory | |
| BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| & BIOL 117 | and Introductory Physiology | |
| & BIOL 117L | and Introductory Physiology Laboratory | |
| Select one of the following pairs (GEF 2 & 8): | | 8 |
| CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| CHEM 111 | Survey of General, Organic, and Biological Chemistry 1 | |
| & 111L | and Survey of Chemistry 1 Laboratory | |
| & CHEM 112 | and Survey of General Organic Biological Chemistry 2 | |
| & CHEM 112L | and Survey of Chemistry 2 Laboratory | |
| SUST 101 | Sustainable Earth | 4 |
| & 101L | and Sustainable Earth Laboratory | |
| Select one of the following (GEF 3): | | 3 |
| MATH 124 | Algebra with Applications | |
| MATH 150 | Applied Calculus | |
| AEM 341 | General Microbiology | 4 |
| & 341L | and General Microbiology Laboratory | |
| ESWS 202 | Principles of Soil Science | 3 |
| ESWS 202L | Principles of Soil Science Laboratory | 1 |
| ESWS 155 | Elements of Environmental Protection | 3 |
| Plant Science Elective: | | 3 |
| AGRN 451 | Principles of Weed Science | |
| & 451L | and Principles of Weed Science Laboratory | |

| | | |
|---|---|---|
| FNRS 212<br>& 212L | Forest Ecology<br>and Forest Ecology Laboratory | |
| HORT 260L | Woody Plant Materials Laboratory | |
| PLSC 206<br>& 206L | Principles of Plant Science<br>and Principles of Plant Science Laboratory | |
| STAT 211 | Elementary Statistical Inference | 3 |
| WMAN 150 | Principles of Conservation Ecology (GEF 7) | 3 |
| ESWS 425<br>& 425L | Environmental Soil Management<br>and Environmental Soil Management Laboratory (Capstone Experience) | 3 |
| or ESWS 460<br>& 460L | Environmental Impact Assessment<br>and Environmental Impact Assessment Laboratory | |
| **Restricted Electives** | | **21** |
| AEM 401<br>& 401L | Environmental Microbiology<br>and Environmental Microbiology Laboratory | |
| AGEE 110 | Microcomputer Applications in Agricultural Education | |
| or FNRS 240 | Introduction to Computing in Natural Resources | |
| AGEE 220 | Group Organization and Leadership (GEF 4) | |
| ESWS 455 | Reclamation of Disturbed Soils | |
| AEM 420 | Soil Microbiology | |
| AGBI 410 | Introductory Biochemistry | |
| ESWS 125L | Soil Judging Laboratory | |
| ESWS 415<br>& 415L | Soil Survey and Land Use<br>and Soil Survey and Land Use Laboratory | |
| ESWS 430<br>& 430L | Soil Physics<br>and Soil Physics Laboratory | |
| ARE 204 | Agribusiness Management | |
| BIOL 361<br>& 361L | Plant Ecology<br>and Plant Ecology Laboratory | |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | |
| CE 351<br>& 351L | Introductory Soil Mechanics<br>and Introductory Soil Mechanics Laboratory | |
| CHEM 231<br>& 231L | Organic Chemistry: Brief Course<br>and Organic Chemistry: Brief Course Laboratory | |
| ESWS 355 | Environmental Sampling and Analysis | |
| ESWS 460<br>& 460L | Environmental Impact Assessment<br>and Environmental Impact Assessment Laboratory | |
| FNRS 344<br>& ESWS 325 | River Conservation & Management<br>and Principles of Water Resources | |
| GEOL 321 | Geomorphology | |
| GEOL 365 | Environmental Geology | |
| GEOL 462 | Introductory Hydrogeology | |
| GEOL 463 | Physical Hydrogeology | |
| GEOL 488 | Environmental Geochemistry | |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| PLSC 491 | Professional Field Experience | |
| POLS 338 | Environmental Policy | |
| RESM 440<br>& 440L | Foundations of Applied Geographic Information Systems<br>and Foundations of Applied Geographic Information Systems Laboratory | |
| RESM 480 | Environmental Regulation | |
| WMAN 446<br>& 446L | Freshwater Ecology<br>and Freshwater Ecology Laboratory | |

| | |
|---|---|
| **Area of Emphasis** | **12-14** |
| Environmental Assessment and Reclamation (12 Hours) | |
| Environmental Microbiology (14 Hours) | |
| Soil and Water Sciences (14 Hours) | |
| Total Hours | 82 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | ESWS 155 | 3 |
| ENGL 101 (GEF 1) | 3 | BIOL 102 & 102L (GEF 8) | 4 |
| BIOL 101 & 101L (GEF 8) | 4 | WMAN 150 (GEF 7) | 3 |
| Select one of the following (GEF 3): | 3 | General Electives | 6 |
| MATH 124 | | | |
| MATH 126 | | | |
| MATH 150 | | | |
| SUST 101 & 101L | 4 | | |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Select one of the following (GEF 2): | 4 | Plant Science Elective | 3 |
| CHEM 111 & 111L | | Select one of the following (GEF 8): | 4 |
| CHEM 115 & 115L | | CHEM 112 & 112L | |
| ENGL 102 (GEF 1) | 3 | CHEM 116 & 116L | |
| STAT 211 | 3 | GEF 6 | 3 |
| GEF 5 | 3 | ESWS 202 | 3 |
| Restricted Elective | 3 | ESWS 202L | 1 |
| | | General Elective | 1 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AEM 341 & 341L | 4 | Area of Emphasis Required Course | 3 |
| WRIT 305 | 3 | Restricted Electives | 7 |
| Area of Emphasis Required Course | 3 | General Electives | 4 |
| Restricted Elective | 3 | | |
| General Elective | 3 | | |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ESWS 425 & 425L | 3 | Area of Emphasis Required Course | 3 |
| GEF 4 | 3 | Restricted Electives | 8 |
| Area of Emphasis Required Course | 3 | General Electives | 2 |

| | | |
|---|---|---|
| General Electives | 6 | |
| | 15 | 13 |

Total credit hours: 120

## Areas of Emphasis

- Environmental Assessment and Reclamation
- Environmental Microbiology
- Soil and Water Sciences

### ENVIRONMENTAL ASSESSMENT AND RECLAMATION AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| ESWS 255 | Elements of Environmental Management | 3 |
| ESWS 355 | Environmental Sampling and Analysis | 3 |
| ESWS 415 & 415L | Soil Survey and Land Use and Soil Survey and Land Use Laboratory | 3 |
| ESWS 455 | Reclamation of Disturbed Soils | 3 |
| Total Hours | | 12 |

### ENVIRONMENTAL MICROBIOLOGY AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| AEM 470 | Microbes and Global Change | 3 |
| AEM 401 & 401L | Environmental Microbiology and Environmental Microbiology Laboratory | 4 |
| PPTH 401 & 401L | General Plant Pathology and General Plant Pathology Laboratory | 4 |
| PPTH 403 | Mycology | 3 |
| Total Hours | | 14 |

### SOIL AND WATER SCIENCES AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| AEM 470 | Microbes and Global Change | 3 |
| ESWS 125L | Soil Judging Laboratory | 1 |
| ESWS 410 | Soil Fertility | 3 |
| ESWS 415 & 415L | Soil Survey and Land Use and Soil Survey and Land Use Laboratory | 3 |
| ESWS 417 & 417L | Soil Genesis and Classification and Soil Genesis and Classification Laboratory | 4 |
| Total Hours | | 14 |

## Major Learning Outcomes

### ENVIRONMENTAL, SOIL AND WATER SCIENCES

The learning outcomes of the environmental protection major center on developing individuals who are effective stewards of soil and water resources. A thorough science-based curriculum will allow students - after completion of the major - to assess, evaluate, manage, and safeguard soil and water resources and develop plans to use and/or mitigate impacts on these resources. The major emphasizes long term sustainability, conservation, and stewardship balanced with the need to develop soil and water resources for current and future human use.

Soil & Water Sciences Area of Emphasis

- Describe the important roles of soil and water in the environment in agricultural and non-agricultural systems.
- Design and implement sustainable soil and water management practices.
- Evaluate existing soil, water and landscape resources to develop recommendations for sustainable land use practices.

The learning outcomes of the Environmental, Soil and Water Sciences major center on developing individuals who are effective stewards of soil, water, and other environmental resources. A thorough science-based curriculum will allow students - after completion of the major - to assess, evaluate,

manage, and safeguard soil and water resources and develop plans to use and/or mitigate impacts on these resources. The major emphasizes long term sustainability, conservation, and stewardship balanced with the need to develop soil and water resources for current and future human use.

Upon completion of the major the students should be able to:

Demonstrate mastery of major and area of emphasis specific content including the terminology and jargon of the field and the characteristics, processes and management that define environmental sciences and resources

Identify sources of trusted and verifiable information and engage in information gathering that demonstrates a high level of information literacy

Demonstrate critical thinking skills as they pertain to environmental issues and problems and long term sustainability of soil, water, and environmental management and practices

Initiate and plan courses of action to solve environmental, soil and water problems

Communicate professionally (written and oral) and demonstrate mastery of the interpersonal communication skills necessary to lead and engage diverse and interdisciplinary team

# Forest Resources and Conservation, B.S.F.

## Degree Offered

- Bachelor of Science in Forestry

## Nature of the Program

The goal of sustainable forestry is to balance the demand for forest products with the protection of other forest-derived benefits (ecosystem services) like water provisioning and quality, carbon sequestration, soil stability, wildlife habitat, and recreation. The forest resources and conservation curriculum provides scientific background and technical skills needed by professionals who conserve and sustainably manage forests or create innovative wood-based products.

As the third most forested state in the U.S., West Virginia's forests are your outdoor classroom. Ample field experience is provided through outdoor laboratories, a summer field practice, or internships.

In addition to the core curriculum, students are required to select one Area of Emphasis (AoE) to develop competence in a specialized area:

- Environmental Conservation
- Forest Management
- Sustainable Biomaterials

With 5–6 free elective courses as part of the curriculum and, if desired, by adding a minor in Arboriculture, Conservation Ecology, and Sustainable Timber Construction, or a certificate in River Conservation and Management, students can tailor their experience to stand out in the job market.

The Forest Management AoE is accredited by the Society of American Foresters and the Sustainable Biomaterials AoE is accredited by the Society of Wood Science & Technology. This means that there is a nationwide recognition of the quality of the curriculum.

## Special Opportunities

Outside the classroom, students can strengthen their expertise and expand their network through participating in student organizations like the Society of American Foresters, Forestry Club, Ecology Club, Forest Products Society, Tree Climbing Club, and Women in Natural Resources.

Students can also build connections through the Forestry and Natural Resources Alumni Association and tap into its exclusive scholarships totaling $46,000 annually. For students interested in urban tree care, an additional $8,000 in arboriculture scholarships are awarded each year.

## Career Opportunities

Graduates go on to build successful careers across a diverse range of sectors, including private companies, consulting firms, state and federal agencies, and nonprofit organizations. The knowledge and skills students gain in our program are highly sought after, opening doors to a variety of career paths, from forest management and conservation to the forest and wood industries, as well as tree care and utility management.

Students who specialize in Forest Management might manage forest resources for sustainable use, conduct ecological assessments, plan timber harvests, monitor wildlife habitats, and implement fire prevention strategies on public or private land.

In an urban setting, foresters increase urban canopy coverage, promote urban ecosystem services, maintain healthy trees, or minimize the impacts of development. Graduates employed by tree care companies climb and prune trees, plant trees, and care for urban tree health by diagnosing and treating pests and disease.

Students who specialize in Environmental Conservation often work on protecting and restoring forest ecosystems, rivers and watersheds, promoting biodiversity, and addressing issues such as deforestation, climate change, and invasive species. Typical activities include conducting field research, developing conservation plans, managing protected areas, engaging in public education, and supporting sustainable land-use practices to maintain healthy and resilient forests.

For students who specialize in Sustainable Biomaterials, jobs span the spectrum from standing timber through manufacture of products to their marketing, distribution, and end use. Graduates may work in sawmills as production managers or as timber procurement foresters, buying timber and planning harvesting operations in accordance with sound forest management and environmental practices. They may also gain employment as quality assurance managers, production supervisors, and process engineers for companies that manufacture furniture, cabinets, state-of-the-art engineered wood products, renewable construction and bioproducts.

Additionally, many graduates choose to further their education by pursuing a master's degree in forestry, expanding their opportunities for leadership roles in the field or for working at research institutions.

## Admissions for 2025-2026

- First-time freshmen are admitted directly into the forest resources and conservation major.
- Students transferring from another major within WVU are directly admitted to the forest resources and conservation major if they are in good academic standing (2.00 overall GPA).
- Students transferring from another institution are directly admitted to the forest resources and conservation major if they are in good academic standing (2.00 overall GPA).

Major Code: 1709

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 39 |
| Davis College Requirements | | 38 |
| Major Requirements | | 43 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| Outstanding GEF Requirements (1, 4, 5, 6, and 7) | | 18 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 20 |
| Total Hours | | 39 |

## Davis College Requirements

| Code | Title | Hours |
|---|---|---|
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory (GEF 2) | 4 |
| or BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory (GEF 8) | 4 |
| or CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| STAT 211 | Elementary Statistical Inference (GEF 8) | 3 |
| FNRS 140 | West Virginia's Natural Resources (GEF 8; Minimum grade of C-) | 3 |
| FNRS 210 | Sustainable Utilization of Biomaterials (Minimum grade of C-) | 3 |
| FNRS 205<br>& 205L | Dendrology<br>and Dendrology Laboratory (Minimum grade of C-) | 3 |
| FNRS 206L | Winter Dendrology Laboratory (Minimum grade of C-) | 1 |
| FNRS 212<br>& 212L | Forest Ecology<br>and Forest Ecology Laboratory (Minimum grade of C-) | 4 |
| FNRS 222<br>& 222L | Forest Mensuration<br>and Forest Mensuration Laboratory (Minimum grade of C-) | 4 |
| FNRS 223<br>& 223L | Anatomy of Renewable Biomaterials<br>and Wood Anatomy and Structure Laboratory (Minimum grade of C-) | 3 |
| FNRS 240<br>& 240L | Introduction to Computing in Natural Resources<br>and Introduction to Computing in Natural Resources Laboratory (Minimum grade of C-) | 3 |
| or PHYS 105<br>& 105L | Conceptual Physics<br>and Conceptual Physics Laboratory | |
| Total Hours | | 38 |

## Forest Resources and Conservation Major Requirements

| Code | Title | Hours |
|---|---|---|
| FNRS 301L | Forest Resources & Conservation Summer Practicum (Minimum grade of C-) | 3 |
| or FNRS 491 | Professional Field Experience | |
| FNRS 311<br>& 311L | Silvicultural Systems<br>and Silvicultural Systems Laboratory (Minimum grade of C-) | 4 |
| FNRS 326 | Remote Sensing of Environment (Minimum grade of C-) | 3 |
| FNRS 330<br>& 330L | Principles of Forestry Economics<br>and Principles of Forestry Economics Laboratory (Minimum grade of C-) | 4 |
| FNRS 344 | River Conservation & Management (Minimum grade of C-) | 3 |
| FNRS 421 | Renewable Resources Policy and Governance (Minimum grade of C-) | 3 |
| FNRS 438 | Human Dimensions Natural Resource Management (Minimum grade of C-) | 3 |
| FNRS 488 | Forest Strategic Planning (Minimum grade of C-) | 3 |
| **Required Area of Emphasis** | | **17-21** |
| Environmental Conservation (17 Hours) | | |
| Forest Management (17 Hours) | | |

| | |
|---|---|
| Sustainable Biomaterials (21 Hours) | |
| Total Hours | 43 |

## Areas of Emphasis

- Environmental Conservation (p. 101)
- Forest Management (p. 102)
- Sustainable Biomaterials (p. 104)

## Environmental Conservation Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in AOE coursework. | | |
| ESWS 202<br>& 202L | Principles of Soil Science<br>and Principles of Soil Science Laboratory | 4 |
| ENTO 470 | Forest Pest Management | 4 |
| or PPTH 470<br>& 470L | Forest Pest Management<br>and Forest Pest Management Laboratory | |
| FNRS 430 | Forest Environmental Conservation | 3 |
| **Environmental Conservation Electives** | | **6** |
| ESWS 455 | Reclamation of Disturbed Soils | |
| ESWS 325 | Principles of Water Resources | |
| FNRS 335 | Fire Ecology | |
| FNRS 424 | Vegetation of West Virginia | |
| FNRS 491 | Professional Field Experience | |
| FNRS 560 | Tree Ecophysiology | |
| Total Hours | | 17 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| FNRS 140 (GEF 8) | 3 | FNRS 210 | 3 | | |
| ANRD 191 | 1 | FNRS 212<br>& 212L | 4 | | |
| Select one of the following (GEF 2): | 4 | ARE 150 or ECON 201 (Suggested GEF 4) | 3 | | |
| BIOL 101<br>& 101L | | GEF 6 | 3 | | |
| BIOL 115<br>& 115L | | General Elective | 3 | | |
| ENGL 101 (GEF 1) | 3 | | | | |
| MATH 124 (GEF 3) | 3 | | | | |
| | 14 | | 16 | | |

**Second Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| FNRS 205<br>& 205L | 3 | FNRS 222<br>& 222L | 4 | FNRS 301L | 3 |
| Select one of the following (GEF 8): | 4 | ESWS 202<br>& 202L | 4 | | |
| CHEM 111<br>& 111L | | FNRS 240<br>& 240L | 3 | | |
| CHEM 115<br>& 115L | | General Elective | 3 | | |
| STAT 211 (GEF 8) | 3 | | | | |

| | | | | |
|---|---|---|---|---|
| ENGL 102 (GEF 1) | | 3 | | |
| | | 13 | 14 | 3 |

**Third Year**

| Fall | Hours | Spring | Hours | |
|---|---|---|---|---|
| FNRS 311 & 311L | | 4 FNRS 330 & 330L | 4 | |
| FNRS 344 | | 3 FNRS 326 | 3 | |
| FNRS 223 & 223L | | 3 WMAN 150 (Suggested GEF 7) | 3 | |
| COMM 104 (Suggested General Elective) | | 3 GEF 5 | 3 | |
| AOE Elective | | 3 General Electives | 3 | |
| | | 16 | 16 | |

**Fourth Year**

| Fall | Hours | Spring | Hours | |
|---|---|---|---|---|
| FNRS 421 | | 3 FNRS 488 | 3 | |
| FNRS 438 | | 3 FNRS 206L | 1 | |
| FNRS 430 | | 3 ENTO 470 or PPTH 470 ***and*** PPTH 470L | 4 | |
| AOE Elective | | 3 General Electives | 5 | |
| General Elective | | 3 | | |
| | | 15 | 13 | |

Total credit hours: 120

## Forest Management Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in AOE coursework. | | |
| ESWS 202 & 202L | Principles of Soil Science and Principles of Soil Science Laboratory | 4 |
| ENTO 470 | Forest Pest Management | 4 |
| or PPTH 470 & 470L | Forest Pest Management and Forest Pest Management Laboratory | |
| FNRS 422 & 422L | Forest Operations and Harvesting Forest Products Laboratory | 3 |
| FNRS 433 | Forest Management | 3 |
| **Forest Management Electives** | | **3** |
| FNRS 232 & 232L | Wood Grading and Procurement and Wood Grading and Procurement Laboratory | |
| FNRS 251 | Forest Fire Protection | |
| FNRS 335 | Fire Ecology | |
| FNRS 342 | Natural Resource Entrepreneurship | |
| FNRS 355 | Arboriculture-Urban Tree Care | |
| FNRS 411 & 411L | Sugarbush Management and Maple Syrup Production and Sugarbush Management and Maple Syrup Production Laboratory | |
| FNRS 423 | Sustainable Urban Forests | |
| FNRS 425 | Global Forest Resources | |
| FNRS 491 | Professional Field Experience | |
| FNRS 560 | Tree Ecophysiology | |
| Total Hours | | 17 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FNRS 140 (GEF 8) | 3 | FNRS 210 | 3 |
| FNRS 191 | 1 | FNRS 212 & 212L | 4 |
| Select one of the following (GEF 2): | 4 | ARE 150 or ECON 201 (Suggested GEF 4) | 3 |
| BIOL 101 & 101L | | GEF 6 | 3 |
| BIOL 115 & 115L | | General Elective | 3 |
| ENGL 101 (GEF 1) | 3 | | |
| MATH 124 (GEF 3) | 3 | | |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| FNRS 205 & 205L | 3 | FNRS 222 & 222L | 4 | FNRS 301L | 3 |
| Select one of the following (GEF 8): | 4 | ESWS 202 & 202L | 4 | | |
| CHEM 111 & 111L | | FNRS 240 & 240L | 3 | | |
| CHEM 115 & 115L | | General Elective | 3 | | |
| STAT 211 (GEF 8) | 3 | | | | |
| ENGL 102 (GEF 1) | 3 | | | | |
| | 13 | | 14 | | 3 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FNRS 311 & 311L | 4 | FNRS 330 & 330L | 4 |
| FNRS 344 | 3 | FNRS 326 | 3 |
| FNRS 223 & 223L | 3 | WMAN 150 (Suggested GEF 7) | 3 |
| COMM 104 (Suggetsed General Elective) | 3 | GEF 5 | 3 |
| AOE Elective | 3 | General Elective | 3 |
| | 16 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FNRS 421 | 3 | FNRS 488 | 3 |
| FNRS 438 | 3 | FNRS 206L | 1 |
| General Elective | 3 | General Electives | 5 |
| FNRS 433 | 3 | ENTO 470 | 4 |
| FNRS 422 & 422L | 3 | | |
| | 15 | | 13 |

Total credit hours: 120

## Sustainable Biomaterials Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in AOE coursework. | | |
| FNRS 333 | Wood Machining | 3 |
| FNRS 340 | Physical Properties of Wood | 3 |
| FNRS 341 | Wood Mechanics | 3 |
| FNRS 465 | Wood-Based Composite Materials | 3 |
| FNRS 362<br>& 362L | Decision Making and Quality Management<br>and Forest Product Decision-Making Laboratory | 3 |
| **Sustainable Biomaterials Electives** | | **6** |
| FNRS 232<br>& 232L | Wood Grading and Procurement<br>and Wood Grading and Procurement Laboratory | |
| FNRS 245 | Residential Building Materials | |
| FNRS 320 | Sustainable Construction | |
| FNRS 337<br>& 337L | Wood Adhesion and Finishing<br>and Wood Adhesion and Finishing Laboratory | |
| FNRS 351<br>& 351L | Forest Products Protection<br>and Forest Products Protection Laboratory | |
| FNRS 413<br>& 413L | Wood Chemistry<br>and Wood Chemistry Laboratory | |
| FNRS 445 | Bio-based Energy Systems | |
| Total Hours | | 21 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FNRS 140 | 3 | FNRS 210 | 3 |
| ANRD 191 | 1 | FNRS 212<br>& 212L | 4 |
| Select one of the following: | 4 | ARE 150 or ECON 201 | 3 |
| BIOL 101<br>& 101L | | GEF 6 | 3 |
| BIOL 115<br>& 115L | | General Elective | 3 |
| ENGL 101 | 3 | | |
| MATH 124 | 3 | | |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| FNRS 205<br>& 205L | 3 | FNRS 222<br>& 222L | 4 | FNRS 491 | 3 |
| Select one of the following: | 4 | PHYS 105<br>& 105L | 4 | | |
| CHEM 111<br>& 111L | | FNRS 100 | 3 | | |
| CHEM 115<br>& 115L | | General Elective | 3 | | |
| STAT 211 | 3 | | | | |
| ENGL 102 | 3 | | | | |
| | 13 | | 14 | | 3 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FNRS 311 & 311L | 4 | FNRS 330 & 330L | 4 |
| FNRS 344 | 3 | FNRS 326 | 3 |
| FNRS 223 | 3 | Select one of the following: | 3 |
| Select one of the following: | 3 | FNRS 340 | |
| FNRS 362 & 362L | | FNRS 465 | |
| AOE Elective | | AOE Elective | 3 |
| Select one of the following: | 3 | GEF 7 | 3 |
| FNRS 333 | | | |
| FNRS 341 | | | |
| | 16 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FNRS 421 | 3 | FNRS 488 | 3 |
| FNRS 438 | 3 | FNRS 206L | 1 |
| General Elective | 3 | General Electives | 6 |
| Select one of the following: | 3 | Select one of the following: | 3 |
| FNRS 362 & 362L | | FNRS 340 | |
| AOE Elective | | FNRS 465 | |
| Select one of the following: | 3 | | |
| FNRS 333 | | | |
| FNRS 341 | | | |
| | 15 | | 13 |

Total credit hours: 120

## Major Learning Outcomes

### FOREST RESOURCES AND CONSERVATION

Upon completion of the program, students will be able to:

1. Quantify forest resources and ecosystem services.
2. Grow and restore Appalachian hardwood forest to supply quality wood while protecting ecosystem integrity.
3. Create strategic forest or wood utilization plans that are based on environmental, economic, and social sustainability.
4. Critically reflect on knowledge and skills from across the curriculum and effectively communicate it to the public and stakeholders in forestry.

# Horticulture and Plant Sciences, B.S.Agr.

## Degree Offered

- Bachelor of Science in Agriculture

## Nature of the Program

Horticulture and Plant Sciences is the interdisciplinary study of horticultural and field crop production. The major provides students with a strong background in agricultural sciences with the option to select from two areas of emphasis.

In the Horticulture area of emphasis students will learn to propagate, produce, and market greenhouse, nursery, fruit, and vegetable crops. Students study the physiology, culture, harvesting, quality control, sales, and utilization of horticultural crops. Horticulture prepares students for careers as

greenhouse and nursery managers, landscape contractors, supply company representatives, state and federal nursery inspectors, and educators in public gardens, schools and extension.

The Regenerative Agriculture area of emphasis focuses on sustainable and environmentally friendly approaches to agricultural production. This area of emphasis merges concepts of crop production with those of environmental protection to develop a balance between production and environmental issues with a focus on sustainability. Plant Science prepares students for careers such as farm and environmental consulting, organic farm production, and with agricultural supply companies, cooperative extension, and state and federal government support agencies.

## FACULTY

### DIRECTOR

- Christopher Ashwell - Ph.D. (Wake Forest University)
  Functional genomics

### ASSOCIATE PROFESSORS

- Michael Gutensohn - Ph.D. (University of Cologne, Germany)
  Plant biochemistry and genetics, metabolic engineering, plant-insect interactions
- Eugenia Pena-Yewtukhiw - Ph.D. (University of Kentucky)
  Soil Science
- Sven Verlinden - Ph.D. (Purdue University)
  Horticulture, Post Harvest Physiology, Molecular Biology
- Nicole Waterland - Ph.D. (Ohio State University)
  Horticulture, Flower Senescence

### TEACHING ASSOCIATE PROFESSOR

- David Davis - Ph.D. (Virginia Tech)
  Landscape, turf, specialty crops

## Admissions for 2026-2027

- First-Time Freshman are admitted directly into the Horticulture and Plant Sciences major.
- Students transferring from another major within WVU are directly admitted to the Horticulture and Plant Sciences major if they are in good academic standing (2.0 or higher GPA).
- Students transferring from another institution are directly admitted to the Horticulture and Plant Sciences major if they are in good academic standing (2.0 or higher GPA).

Major Code: 1712

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 44 |
| Horticulture and Plant Sciences Program Requirements | | 34 |
| Horticulture and Plant Sciences Major Requirements | | 42 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 28 |
| Total Hours | | 44 |

## Horticulture and Plant Sciences Program Requirements

| Code | Title | Hours |
|---|---|---|
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory (GEF 8) | 4 |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory (GEF 8) | 4 |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory (GEF 2) | 4 |
| CHEM 112<br>& 112L | Survey of General Organic Biological Chemistry 2<br>and Survey of Chemistry 2 Laboratory (GEF 8) | 4 |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| PLSC 206<br>& 206L | Principles of Plant Science<br>and Principles of Plant Science Laboratory | 4 |
| ESWS 202<br>& 202L | Principles of Soil Science<br>and Principles of Soil Science Laboratory | 4 |
| A&VS 251<br>& 251L | Principles of Animal Science<br>and Principles of Animal Science Laboratory | 4 |
| ARE 150 | Introductory Agricultural and Agribusiness Economics (GEF 4) | 3 |
| Total Hours | | 34 |

## Horticulture and Plant Sciences Major Requirements

| Code | Title | Hours |
|---|---|---|
| PLSC 105 | Plants and People: Past and Present | 3 |
| or AGRN 120 | Principles of Agroecology | |
| GEN 101 | Beginner's Guide-Genetics | 3 |
| BIOL 350<br>& 350L | Plant Physiology<br>and Plant Physiology Laboratory | 4 |
| ENTO 404<br>& 404L | Principles of Entomology<br>and Principles of Entomology Laboratory | 4 |
| PPTH 401<br>& 401L | General Plant Pathology<br>and General Plant Pathology Laboratory | 4 |
| Select one of the following (Restricted Elective 1): | | 3-4 |

| | | |
|---|---|---|
| ENTO 412 | Pest Management | |
| ENTO 450 | Insect Ecology | |
| ESWS 410 | Soil Fertility | |
| AGRN 451 & 451L | Principles of Weed Science and Principles of Weed Science Laboratory | |
| Select one of the following (Restricted Elective 2): | | 3 |
| PLSC 491 | Professional Field Experience | |
| PLSC 495 | Independent Study | |
| PLSC 496 | Senior Thesis | |
| PLSC 497 | Research | |
| HORT 480 | Case Studies in Horticulture | 3 |
| **Area of Emphasis** | | **15** |
| Horticulture Production (15 Hours) | | |
| Regenerative Agriculture (16 Hours) | | |
| Total Hours | | 42 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | BIOL 102 & 102L (GEF 8) | 4 |
| BIOL 101 & 101L (GEF 8) | 4 | PLSC 206 & 206L | 4 |
| ENGL 101 (GEF 1) | 3 | MATH 124 (GEF 3) | 3 |
| GEN 101 | 3 | GEF 5 | 3 |
| PLSC 105 or AGRN 120 | 3 | ARE 150 (GEF 4) | 3 |
| | 14 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| A&VS 251 & 251L | 4 | CHEM 112 & 112L (GEF 8) | 4 |
| CHEM 111 & 111L (GEF 2) | 4 | Free Elective | 3 |
| ENGL 102 (GEF 1) | 3 | GEF 7 | 3 |
| Area of Emphasis 1 | 3 | Area of Emphasis 2 | 3 |
| GEF 6 | 3 | | |
| | 17 | | 13 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENTO 404 | 3 | Restricted Elective 1 | 3 |
| ENTO 404L | 1 | Area of Emphasis 4 | 3 |
| ESWS 202 | 3 | Free Elective 3 | 3 |
| ESWS 202L | 1 | Free Elective 4 | 3 |
| Area of Emphasis 3 | 3 | Free Elective 5 | 3 |
| Free Elective 2 | 3 | | |
| | 14 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PPTH 401 | 3 | BIOL 350 & 350L | 4 |
| PPTH 401L | 1 | HORT 480 | 3 |
| Area of Emphasis 5 | 3 | Free Elective 8 | 3 |
| Restricted Elective 2 | 3 | Free Elective 9 | 4 |

| | | |
|---|---|---|
| Free Elective 6 | 3 | |
| Free Elective 7 | 3 | |
| | 16 | 14 |

Total credit hours: 120

## Areas of Emphasis

- Horticulture Production (p. 109)
- Regenerative Agriculture (p. 109)

## Horticulture Production Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| HORT 220<br>& 220L | General Horticulture<br>and General Horticulture Laboratory | 3 |
| HORT 260L | Woody Plant Materials Laboratory | 3 |
| or HORT 262<br>& 262L | Herbaceous Plant Materials<br>and Herbaceous Plant Materials Laboratory | |
| HORT 330<br>& 330L | Plant Propagation<br>and Plant Propagation Laboratory | 3 |
| HORT 444<br>& 444L | Handling and Storage of Horticultural Crops<br>and Handling and Storage of Horticultural Crops Laboratory | 3 |
| or HORT 443<br>& 443L | Fruit & Vegetable Crops<br>and Vegetable Crops Laboratory | |
| HORT 441 | Garden Center Management | 3 |
| or HORT 445<br>& 445L | Greenhouse Management<br>and Greenhouse Management Laboratory | |
| Total Hours | | 15 |

## Regenerative Agriculture Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| AGRN 120 | Principles of Agroecology | 3 |
| ESWS 330 | Soil Health | 3 |
| HORT 443<br>& 443L | Fruit & Vegetable Crops<br>and Vegetable Crops Laboratory | 3 |
| ENTO 412 | Pest Management | 4 |
| ENTO 450 | Insect Ecology | 3 |
| Total Hours | | 16 |

## Major Learning Outcomes

### HORTICULTURE AND PLANT SCIENCES

The learning outcomes of the horticulture and plant science program are centered around mastering skills that will allow students to take on leadership functions and roles in all facets of horticulture and plant sciences. The program trains students to not only manage horticultural and agronomic plant materials but also to lead inter- and multi-disciplinary teams to solve current and future problems in the production, marketing, and use of crops.

Upon completion of the major the students should be able to:

- Demonstrate critical thinking skills and problem-solving abilities in areas such as:
    - Basic business concepts
    - Integrated Pest Management (weed science, entomology, plant pathology)
    - Genetics
    - Plant physiology
    - Soil science

- Develop and implement sustainable and profitable production plans, systems and uses.
- Access, interpret, and synthesize relevant information from reliable sources (organizations, institutions, publications, and models) to address questions concerning improved productivity and efficiency.
- Be aware of and engage in current issues and people in sustainable management of horticulture and crop production, landscaping, public green space, and livable spaces.
- Communicate professionally (written and oral) and demonstrating mastery of interpersonal communication skills necessary to lead and engage diverse and interdisciplinary teams.

# Human Nutrition and Foods, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

### BECOMING A DIETITIAN

The path to become a registered dietitian nutritionist includes a bachelor's and master's degree, completing a dietetic internship from an ACEND-accredited program, and passing the national registration exam. At WVU, students who wish to become a registered dietitian nutritionist must:

1. earn a bachelor’s degree and complete the Didactic Program in Dietetics with a cumulative GPA of 2.75;
2. apply for and complete an ACEND-accredited dietetic internship program or Individual Supervised Practice Pathway;
3. pass the Commission on Dietetic Registration’s dietetic registration exam;
4. gain licensure if required in your state of practice;
5. maintain continuing education. Note that a graduate degree will be required to be eligible to take the Commission on Dietetic Registration exam. In addition to the ACEND-accredited DPD, WVU offers an ACEND-accredited dietetic internship associated with a master’s degree. An undergraduate degree from WVU does not guarantee acceptance into the WVU dietetic internship

This program of study is additionally a good pre-professional option for students who wish to pursue the professional school programs of human medicine and the allied health professions, such as physician assistant school, medical school, or dental school.

Students are required to complete core courses as well as courses in food science, nutrition, food service management, psychology, chemistry, biology, physiology, and microbiology.  Students are encouraged to select electives in areas that support anticipated career preferences, e.g., business, food science, nutritional biochemistry, advertising, writing, and exercise physiology.  There are required electives for the Didactic Program in Dietetics, and students who wish to pursue a registered dietitian nutritionist pathway should declare the Area of Emphasis (AoE) in Dietetics during their sophomore year.

Students must meet cumulative GPA requirements of 2.75 or higher to receive a verification statement.  After completion of the Didactic Program in Dietetics requirements and receiving a verification statement, seniors are eligible to apply for competitive dietetic internships by participating in a national match.  Acceptance into an internship is not guaranteed.  The dietetic internship involves an additional one to two years of education and supervised practice, depending on the site and whether graduate study is included.  Upon completion of the internship (and a graduate degree beginning in 2024), the graduate is eligible to take the examination to become a Registered Dietitian Nutritionist (RDN). Students are also able to receive a verification statement to take the DTR (Diet Tech Registered) exam after graduation from our program with a 2.75 GPA or greater.

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## FACULTY

### DIRECTOR

- Christopher M. Ashwell - Ph.D. (Wake Forest University)
  Functional genomics

### PROFESSORS

- Jacek Jaczynski - Ph.D. (Oregon State University)
  Food science and technology
- Kristen Matak - Ph.D. (Virginia Tech)
  Food science and human nutrition
- Melissa Olfert - Dr.P.H., M.S., R.D. (Loma Linda University)
  Human nutrition and foods
- Cangliang Shen - Ph.D. (Colorado State University)
  Safety of meat and fresh produce

- Janet C. L. Tou - Ph.D. (University of Toronto)
  Nutrition in bone health and chronic diseases

### ASSOCIATE PROFESSOR

- Melissa D. Ventura-Marra - Ph.D., R.D. (Florida International University)
  Diet related health disparities

### TEACHING PROFESSOR

- Nettie Freshour - Ph.D., R.D. (West Virginia University)
  Dietetics (L.D.N.)

### TEACHING ASSISTANT PROFESSOR

- Kelli George - Ph.D., R.D. (Florida State University)
  Dietetics (L.D.N.)

## Admissions for 2026-2027

- First-Time Freshman must meet WVU's first time freshman requirements (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/).
- Students transferring from another major within WVU must have an overall GPA of at least 2.0.
- Students transferring from another institution must meet WVU's transfer admission requirements (https://admissions.wvu.edu/how-to-apply/transfer-students/#anchor-transferreqs).

Major Code: 1704

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 30 |
| Human Nutrition and Food Program Requirements | | 46 |
| Human Nutrition and Food Major Requirements | | 44 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 6, and 7 | | 12 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 30 |

## Human Nutrition and Food Program Requirements

| Code | Title | Hours |
|---|---|---|
| MATH 124 | Algebra with Applications (or higher math placement; minimum grade of C-) | 3 |
| STAT 211 | Elementary Statistical Inference | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| Biology Requirement: | | 4 |
| BIOL 101<br>& 101L<br>& BIOL 102<br>& BIOL 102L | General Biology 1<br>and General Biology 1 Laboratory<br>and General Biology 2<br>and General Biology 2 Laboratory | |
| Or | | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| Select one of the following: | | 4 |
| CHEM 231<br>& 231L | Organic Chemistry: Brief Course<br>and Organic Chemistry: Brief Course Laboratory | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | |
| AGBI 410 | Introductory Biochemistry | 3 |
| or BMM 339 | Introduction to Human Biochemistry | |
| FDST 200 | Food Science and Technology | 3 |
| MICB 200 | Medical Microbiology | 3 |
| or AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory | |
| ANPH 301 | Introduction to Animal Physiology | 3 |
| or PSIO 241 | Elementary Physiology | |
| or PSIO 441 | Mechanisms of Body Function | |
| AGEE 421 | Agricultural and Natural Resource Communications | 3 |
| or COMM 270<br>& 270S | Presentational Speaking<br>and Effective Public Speaking Studio | |
| BCOR 370 | Principles of Management | 3 |
| or ARE 204 | Agribusiness Management | |
| or AGEE 220 | Group Organization and Leadership | |
| PSYC 101 | Introduction to Psychology | 3 |
| PSYC 241 | Introduction to Human Development | 3 |
| or PSYC 251 | Introduction to Social Psychology | |
| Total Hours | | 46 |

## Human Nutrition and Food Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- required for all HN&F and HN&F elective courses. | | |
| HN&F 171 | Introduction to Human Nutrition | 3 |
| HN&F 201 | Professional Development in Dietetics | 3 |
| HN&F 250<br>& 250L | Cross-Cultural Cuisine<br>and Cross-Cultural Cuisine Laboratory | 3 |
| HN&F 271 | Fundamentals of Nutrition | 3 |
| HN&F 348<br>& 348L | Science of Food Preparation<br>and Science of Food Preparation Laboratory | 3 |
| HN&F 355 | Nutritional Assessment | 3 |
| HN&F 364 | Nutrition Education & Counseling | 3 |
| HN&F 401 | Senior Seminar in Nutrition (Capstone) | 2 |
| **Area of Emphasis or HN&F Electives** * | | **21** |
| HN&F 200 | Nutrition/Activity/Health | |
| HN&F 353<br>& 353L | Food Service Systems Management<br>and Food Service Systems Management Laboratory | |
| HN&F 460 | Advanced Nutrition | |
| HN&F 472 | Community Nutrition | |
| HN&F 473 | Medical Nutrition Therapy 1 | |
| HN&F 474 | Medical Nutrition Therapy 2 | |
| HN&F 490 | Teaching Practicum | |
| HN&F 491 | Professional Field Experience | |
| HN&F 495 | Independent Study | |
| HN&F 496 | Senior Thesis | |
| HN&F 497 | Research | |
| HN&F 512 | Maternal and Child Nutrition | |
| FDST 308 | Food Plant Sanitation | |
| FDST 365 | Muscle Foods Technology | |
| FDST 365L | Muscle Foods Technology Laboratory | |
| FDST 445 | Food Microbiology | |
| FDST 445L | Food Microbiology Laboratory | |
| FDST 450 | Food Chemistry | |
| AGBI 512 | Nutritional Biochemistry | |
| ANNU 361 | Applied Nutrition | |
| ANNU 362 | Applied Nutrition 2 | |
| Total Hours | | 44 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | BIOL 102<br>& 102L (GEF 8) | 4 |
| BIOL 101<br>& 101L (GEF 2B) | 4 | PSYC 101 (GEF 4) | 3 |
| HN&F 171 (GEF 8) | 3 | General Elective | 3 |
| MATH 124 (GEF 3) | 3 | General Elective | 3 |
| ENGL 101 (GEF 1) | 3 | General Elective | 2 |
| General Elective | 1 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HN&F 201 | 3 | HN&F 355 | 3 |
| HN&F 271 | 3 | PSYC 241 | 3 |
| ENGL 102 (GEF 1) | 3 | CHEM 116 | 3 |
| FDST 200 | 3 | CHEM 116L | 1 |
| CHEM 115 | 3 | HN&F Elective | 3 |
| CHEM 115L | 1 | General Elective | 1 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HN&F 348 & 348L | 3 | HN&F 250 & 250L (GEF 5) | 3 |
| ANPH 301 | 3 | AGEE 421 | 3 |
| AEM 341 | 3 | GEF 6 | 3 |
| AEM 341L | 1 | HN&F Elective | 3 |
| HN&F 364 | 3 | CHEM 231 | 3 |
| General Elective | 1 | CHEM 231L | 1 |
| | 14 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 370 | 3 | HN&F 401 | 2 |
| AGBI 410 | 3 | STAT 211 | 3 |
| HN&F Elective | 3 | GEF 7 | 3 |
| HN&F Elective | 3 | HN&F Elective | 3 |
| HN&F Elective | 3 | HN&F Elective | 3 |
| | | General Elective | 1 |
| | 15 | | 15 |

Total credit hours: 120

## Area of Emphasis

- Dietetics

## AREA OF EMPHASIS IN DIETETICS

| Code | Title | Hours |
|---|---|---|
| A grade of C- or higher is required in all coursework* | | |
| HN&F 353 & 353L | Food Service Systems Management and Food Service Systems Management Laboratory | 3 |
| HN&F 460 | Advanced Nutrition | 3 |
| HN&F 472 | Community Nutrition | 3 |
| HN&F 473 | Medical Nutrition Therapy 1 | 3 |
| HN&F 474 | Medical Nutrition Therapy 2 | 3 |
| Total Hours | | 15 |

*

Students must have a minimum GPA of 2.75 and have completed HN&F 201, 271 and CHEM 115 and 115L to be eligible for the Area of Emphasis in Dietetics. Students must declare the Area of Emphasis no later than September 1 of the academic year in which they will be requesting a verification statement. To receive a Didactic Program in Dietetics Verification Statement to sit for the Nutrition and Dietetics Technician Registered (NDTR) exam or to apply for dietetic internships students must graduate from the Human Nutrition & Foods major with a minimum GPA of 2.75, complete the Area of Emphasis in Dietetics, and earn a minimum grade of C- in all HN&F courses.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | BIOL 102 & 102L (GEF 8) | 4 |
| BIOL 101 & 101L (GEF 2B) | 4 | General Elective | 3 |
| HN&F 171 (GEF 8) | 3 | General Elective | 2 |
| MATH 124 (GEF 3) | 3 | PSYC 101 (GEF 4) | 3 |
| ENGL 101 (GEF 1) | 3 | General Elective | 3 |
| General Elective | 1 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HN&F 201 | 3 | HN&F 355 | 3 |
| HN&F 271 | 3 | PSYC 241 | 3 |
| ENGL 102 (GEF 1) | 3 | General Elective | 3 |
| FDST 200 | 3 | General Elective | 1 |
| CHEM 115 | 3 | CHEM 116 | 3 |
| CHEM 115L | 1 | CHEM 116L | 1 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HN&F 348 & 348L | 3 | HN&F 353 & 353L | 3 |
| ANPH 301 | 3 | HN&F 250 & 250L (GEF 5) | 3 |
| AEM 341 & 341L | 4 | AGEE 421 | 3 |
| HN&F 364 | 3 | GEF 6 | 3 |
| General Elective | 2 | CHEM 231 & 231L | 4 |
| | 15 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HN&F 473 | 3 | HN&F 474 | 3 |
| HN&F 472 | 3 | HN&F 460 | 3 |
| BCOR 370 | 3 | HN&F 401 | 2 |
| HN&F Elective | 3 | STAT 211 | 3 |
| AGBI 410 | 3 | GEF 7 | 3 |
| | 15 | | 14 |

Total credit hours: 120

# Major Learning Outcomes

## HUMAN NUTRITION AND FOODS

1. Graduates will acquire a high level of competency in the basic sciences required for disciplinary competency.
2. Graduates will integrate basic knowledge and managerial skills related to the nutritional and food science disciplines.
3. Graduates will acquire sufficient written and oral communication skills, problem solving and critical thinking skills to effectively impact lifelong societal and professional developments critical to their respective discipline of interest.
4. Graduates will attain depth of knowledge relative to the scope of subfields of human nutritional sciences.

# Landscape Architecture, B.S.L.A.

## Degree Offered

- Bachelor of Science in Landscape Architecture

## Nature of the Program

Landscape architecture is the art of design, planning, and arranging natural and human-constructed elements on the land. It is a STEM (Science, Technology, Engineering and Mathematics) designated discipline. It applies cultural and scientific knowledge with concern for the conservation and stewardship of natural and aesthetic amenities to create an environment that serves a useful and enjoyable purpose. This involves consideration of the quality of life in urban, rural and natural settings, as well as the interaction of humans with nature. The landscape architecture program at West Virginia University strives to equip students with techniques and skills through problem-solving in design theory, site design and construction, land use planning, and planting design. It emphasizes a philosophy of responsibility and commitment to ethical standards regarding the natural environment, social contexts, and professional practice.

The faculty represents a multi-disciplinary team with practical experience in creative and scientific research, design, consultation, and public service. Two of the faculty are currently licensed landscape architects. This diversity is the nucleus of the program, allowing for a strong undergraduate curriculum supplemented by related courses in the arts, sciences, engineering, and planning, reflecting the needs of the Appalachian region and current trends within the profession.

Graduates of the program can assume traditional landscape architectural roles, e.g., positions with landscape architecture, architecture and engineering firms, design consulting firms, governmental and private planning departments, construction firms, transportation planning agencies, etc. In addition, WVU graduates are prepared for design and planning positions meeting the needs common to West Virginia and other rural areas communities. Demand for professional landscape architects is increasing due to emerging environmental markets and projected shortages of graduates from accredited landscape architecture programs.

The Landscape Architecture Program is accredited by the Landscape Architecture Accreditation Board of the American Society of Landscape Architects. To graduate, students must complete a full four-year course of study following a studio sequence and earn a minimum of 120 total credits. The Landscape Architecture Program is within the School for Community and Economic Development of the Davis College of Agriculture and Natural Resources at West Virginia University. The BSLA focuses on environmental and community design and planning, in addition to providing the primary skills and methods of landscape architecture.

## Program Mission

Landscape architects utilize both art and science in planning and design, creating environments of natural, social, cultural, and aesthetic value.

The Landscape Architecture Program at West Virginia University equips students with critical thinking, design skills, and technical knowledge to engage in successful careers. Our program contributes to quality of life in both urban and rural areas and improves how humans interact with their environments. We promote stewardship and address the rapidly growing environmental, social, and economic challenges of tomorrow.

## Program Goals

- We prepare students for challenging and satisfying careers through a rigorous curriculum, building broad professional skills and technical strengths across the full spectrum of the discipline.
- We ensure students develop practical experience through experiential learning, internships and study abroad. We foster critical thinkers and future leaders for ever-changing environmental, economic, and societal challenges.
- We collaborate across disciplines on campus to enhance course offerings, creative scholarship, and research opportunities. We develop and build teams to address critical regional and global problems.
- We involve students in research, design, and creative inquiry. We innovate and integrate engaged scholarship with research, teaching, and service.
- We instill responsibility and stewardship: we uplift communities to support our land grant mission by engaging with communities in West Virginia and the Appalachian Region. Through service-learning, we share the skills of the faculty and students of the Landscape Architecture Program.
- We provide supportive learning environments and safe spaces. We welcome diverse students and are respectful of all cultural and societal perspectives. We are committed to the success of first-generation and underrepresented students.

## Student Outcomes

The graduation rate, defined as the percentage of freshmen that ultimately graduate from the program, has been 56% (4- and 6-year) for the cohort starting in Fall 2017, 52% (4-year) and 57% (6-year) for the Fall 2018 cohort, and 48% (4- and 6-year) for the 2019 cohort.

The retention rate, defined as the percentage of freshmen that return for their sophomore year, has been 72% for the cohort starting in 2019, 58% for the 2020 cohort, 68% for the 2021 cohort, 60% for the 2022 cohort, and 69% for the 2023 cohort.

From academic year 2019-2020 to academic year 2023-2024, 87 degrees were awarded for an average of 17.4 degrees per year.

The BSLA program regularly surveys graduates in order to get a picture of their employment status post-graduation. From academic year 2019-2020 to academic year 2023-2024, 25 alumni are working in private practice and 1 are employed in landscape horticulture and design-build practice. They correspond to 65.2% and 22.2% of the respondents respectively.

## Estimated Cost of Attendance

Information about fees, tuition and other expenses, as well as scholarships and financial aid can be found at Landscape Architecture, BSLA and atUndergraduate Admissions

The following are dedicated scholarships for Landscape Architecture students.

## Jack Paules Endowed Scholarship

This scholarship is designated for regularly enrolled third and/or fourth year students majoring in Landscape Architecture in the WVU Davis College of Agriculture and Natural Resources.

## The McHale Family Landscape Architecture Scholarship

This annual scholarship is awarded to students in landscape architecture based on financial need and academic performance.

## John R. Tschiderer Landscape Architecture Education Experience Fund

Annual awards to students and faculty for special activities such as travel and continuing education.

Additionally, the program offers a number of positions that allow students to utilize Federal Work-Study financial aid awards to support the teaching, research, and community outreach of the program.

## Program Costs

Upon enrollment, students are required to buy a kit of drafting supplies for a cost of around $300. At the end of the second-year studio sequence, students are required to purchase a computer capable of efficiently running programs with graphic-intensive applications extensively used during the third- and fourth-year studio sequences. It is recommended that these computers are PCs to ensure software compliance. The approximate cost of a computer with this capability is around $2,500.

## Student Opportunities

The program offers a focused study abroad opportunity with the LARC 444 Summer Field Experience: Western European Gardens, Landscapes and Architecture (6 credits). The course qualifies for student financial aid.

For examples of senior student designs projects from LARC 450 & 652 for various years can be found here:2020, 2021, 2022, 2023, and 2024.

In accordance with the Higher Education Act, the program meets the educational requirements for licensure eligibility in each U.S. state.

## Contact:

Peter Butler
Program Coordinator
Professor of Landscape Architecture
(304) 293-5462
4303 Agricultural Sciences Building

## Admissions for 2026-2027

- First-Time Freshman are admitted directly into major.
- Students transferring from another major within WVU must have a 2.0 cumulative GPA or departmental approval.
- Students transferring from another institution must have a 2.0 cumulative GPA or departmental approval.

Major Code: 1713

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 40 |
| Landscape Architecture Major Requirements | | 80 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 7, and 8 | | 24 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 15 |
| Total Hours | | 40 |

## Landscape Architecture Major Requirements

In addition to the following curriculum requirements, students will be required to work at least one summer in an approved landscape architecture office or equivalent.  Student will be required to earn a grade of C- or better in all of their Landscape Architecture/Horticulture Courses.

Timely completion of required MATH courses are critical for advancement in this program of study.

| Code | Title | Hours |
|---|---|---|
| Select one of the following (GEF 2): | | 4 |
| PLSC 206<br>& 206L | Principles of Plant Science<br>and Principles of Plant Science Laboratory | |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | |
| BIOL 105<br>& 105L | Environmental Biology<br>and Environmental Biology Laboratory | |
| Select one of the following or higher (GEF 3): | | 3-8 |
| MATH 124 | Algebra with Applications | |
| MATH 126 | College Algebra | |
| MATH 129 | Pre-Calculus Mathematics | |
| MATH 150 | Applied Calculus | |
| LARC 105 | Introduction to Landscape Architecture, Environmental Design and Planning | 3 |
| LARC 120S | Landscape Architectural Drawing Studio | 3 |
| LARC 121S | Landscape Architectural Graphics Studio | 3 |

| | | |
|---|---|---|
| LARC 212 | History of Landscape Architecture (GEF 6) | 3 |
| LARC 223 | Computer Graphics in Landscape Architecture | 3 |
| LARC 224 | Digital Design Graphics for Landscape Architecture | 2 |
| LARC 231 | Landscape Construction Materials and Methods | 3 |
| LARC 250S | Theory of Landscape Architectural Design Studio | 3 |
| LARC 251 | Landscape Architectural Design | 1 |
| LARC 251S | Landscape Architectural Design Studio | 2 |
| LARC 261 | Planting Design | 1 |
| LARC 261S | Planting Design Studio | 2 |
| LARC 330S | Landscape Architectural Construction 1 Studio | 4 |
| LARC 331 | Advanced Grading & Stormwater | 1 |
| LARC 331S | Advanced Grading & Stormwater Studio | 3 |
| LARC 350 | Landscape Architectural Design 2 | 1 |
| LARC 350S | Landscape Architectural Design 2 Studio | 3 |
| LARC 351 | Landscape Architectural Design 3 | 1 |
| LARC 351S | Landscape Architectural Design 3 Studio | 3 |
| LARC 360 | Natural Systems Design | 1 |
| LARC 360S | Natural Systems Design Studio | 3 |
| LARC 450 | Advanced Landscape Architectural Design 1 | 1 |
| LARC 450S | Advanced Landscape Architectural Design 1 Studio | 4 |
| LARC 451 | Advanced Landscape Architectural Design 2 (Capstone) | 1 |
| LARC 451S | Advanced Landscape Architectural Design 2 Studio | 4 |
| Contemporary Issues in Landscape Architecture | | 2 |
| LARC 452 | Contemporary Issues in Landscape Architecture | |
| LARC 484 | Professional Practice | 3 |
| HORT 260L | Woody Plant Materials Laboratory | 3 |
| RESM 440 & 440L | Foundations of Applied Geographic Information Systems and Foundations of Applied Geographic Information Systems Laboratory | 3 |
| Select one of the following: | | 3 |
| LARC 465 | Regional Design | |
| LARC 466 | Introduction to Urban Design Issues | |
| Total Hours | | 80 |

## +SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| LARC 105 | 3 | ENGL 101 (GEF 1) | 3 |
| LARC 120S | 3 | LARC 121S | 3 |
| LARC 223 | 3 | LARC 224 | 2 |
| ANRD 191 | 1 | GEF 4, 5, 7, or 8 | 6 |
| Select one of the following (GEF 2): | 4 | | |
| BIOL 101 & 101L | | | |
| BIOL 105 & 105L | | | |
| PLSC 206 & 206L | | | |
| Select one of the following or higher (GEF 3): | 3 | | |
| MATH 124 | | | |
| MATH 126 | | | |

| | | | | | |
|---|---|---|---|---|---|
| MATH 129 | | | | | |
| MATH 150 | | | | | |
| | 17 | | | 14 | |
| **Second Year** | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | | |
| ENGL 102 (GEF 1) | 3 | LARC 212 (GEF 6) | 3 | | |
| HORT 260L | 3 | LARC 231 | 3 | | |
| LARC 250S | 3 | LARC 251 | 1 | | |
| GEF 4, 5, 7, or 8 | 6 | LARC 251S | 2 | | |
| | | LARC 261 | 1 | | |
| | | LARC 261S | 2 | | |
| | | RESM 440 & 440L | 3 | | |
| | 15 | | | 15 | |
| **Third Year** | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | **Summer** | **Hours** |
| LARC 330S | 4 | LARC 331 | 1 | Summer Professional Experience | |
| LARC 350 | 1 | LARC 331S | 3 | | |
| LARC 350S | 3 | LARC 351 | 1 | | |
| LARC 360 | 1 | LARC 351S | 3 | | |
| LARC 360S | 3 | LARC 484 | 3 | | |
| GEF 4, 5, 7, or 8 | 3 | GEF 4, 5, 7, or 8 | 3 | | |
| | | Elective | 3 | | |
| | 15 | | 17 | | 0 |
| **Fourth Year** | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | | |
| LARC 450 | 1 | LARC 451 | 1 | | |
| LARC 450S | 4 | LARC 451S | 4 | | |
| LARC 452 | 2 | Elective | 7 | | |
| LARC 465 or 466 | 3 | | | | |
| Elective | 5 | | | | |
| | 15 | | 12 | | |

Total credit hours: 120

# Major Learning Outcomes

## LANDSCAPE ARCHITECTURE

Landscape Architecture is a STEM (Science, Technology, Engineering, and Mathematics) discipline.  Students who complete the Bachelor of Science in Landscape Architecture (BSLA) will:

1.Develop a solid professional educational foundation, building knowledge and skills of: graphics, written and oral communication, site analysis, multi-scaled site design, detailing and construction, plant materials, site grading, and professional practice.

2.Apply critical thinking and theory to address societal, economic, and environmental challenges; understand the breadth of landscape architecture, cultural history, and contemporary issues and the tool of design as an agent of change.

3.Create designs that respond to the needs of the environment and society's health, safety, and welfare, reflecting the standards of the landscape architecture profession and demonstrating innovation.

4.Demonstrate best practices promoting environmental sustainability, justice, and inclusivity for all, addressing the needs of universal access and underrepresented and marginalized communities.

5.Contribute to community development and quality of life through local and regional service-learning projects.  Analyze and apply design skills to solving real-life problems in diverse environments.  Build skills in leadership, client relations, and stakeholder engagement.

6.Apply professional ethical standards and social responsibility to benefit outdoor places, the public, and clients.

# Multidisciplinary Studies, B.MdS.

## Degree Offered

- Bachelor of Multidisciplinary Studies

## Nature of the Program

The Multidisciplinary Studies (MDS) major in the College of Agriculture, Natural Resources, and Design is a flexible degree program which allows students and their advisors to tailor a set of courses which meets the student's interests and career plans. The major was developed in response to increasing demands from employers and students for broad-based educational programs which prepare students for our rapidly changing society and economies. There are an increasing number of students who wish to tailor their education to their career interests without being constrained by traditional academic majors. The Davis College MDS program is distinct from others at WVU and is oriented toward students who want to focus their studies on the academic areas of the College.

## Admissions for 2026-2027

First time freshman, WVU students in other majors and transfer students who meet University admission requirements may be accepted directly into Davis College as Bachelor of Multidisciplinary Studies majors.

Major Code: 1701

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 74 |
| Multidisciplinary Studies Major Requirements | | 46 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 6, 7, and 8 | | 34 |

| | | |
|---|---|---|
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 39 |
| Total Hours | | 74 |

## Multidisciplinary Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| Davis College Minor 1 | | 15 |
| Davis College Minor 2 | | 15 |
| Additional Minor | | 15 |
| Capstone * | | 1 |
| Total Hours | | 46 |

*****

The student is required to complete a capstone course under the direction of his or her advisor.

******

The student, along with their faculty advisor from the Davis College, chooses three minors and a program of elective courses, which fits the student's focus and career objectives. Students are not limited to courses in a particular area, but will have the opportunity to develop expertise in several areas with a multidisciplinary focus.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | GEF 3 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 5 | 3 |
| GEF 2B | 4 | GEF 6 | 3 |
| GEF 4 | 3 | Minor 1 Course | 3 |
| Elective | 3 | Minor 3 Course | 3 |
| Elective | 1 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | Minor 1 Course | 3 |
| GEF 7 | 3 | Minor 2 Course | 3 |
| Minor 1 Course | 3 | Minor 3 Course | 3 |
| Minor 2 Course | 3 | Elective | 3 |
| Minor 3 Course | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 8 | 3 | GEF 8 | 3 |
| Minor 1 Course | 3 | Minor 1 Course | 3 |
| Minor 2 Course | 3 | Minor 2 Course | 3 |
| Minor 3 Coures | 3 | Minor 3 Course | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Capstone Course | 1 | Elective | 3 |
| GEF 8 | 3 | Elective | 3 |
| Minor 2 Course | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |

| | | |
|---|---|---|
| Elective | 2 | |
| | 15 | 15 |

Total credit hours: 120

## Major Learning Outcomes

### MULTIDISCIPLINARY STUDIES

Upon graduation, students will have attained the following knowledge bases and career competency skills:

- Knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas
- The ability to write and present information
- The ability to analyze problems from different perspectives, recognize uncertainties, propose options, construct predictions, and make sound decisions using appropriate information resources and analytical tools

# Sustainable Design and Development, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Sustainable Design and Development educates a new generation of problem-solvers to approach the most difficult issues of today including sustainability related to the environment, food and agriculture, water, planning and development, forestry, energy and community capacity. The major is focused on creating healthy and prosperous communities while balancing decision-making with the triple bottom line: ecological, social and economic impacts (planet, people, profit). Through critical, analytic, and design thinking problem-solving skill development, graduates will have the ability to work on multidisciplinary projects through community engaged processes with the goal of creating a more sustainable world.

## Admissions for 2026-2027

- First-Time Freshman are admitted directly into the Sustainable Design and Development major.
- Students transferring from another major within WVU are directly admitted into the Sustainable Design and Development major if they are in good academic standing (2.0 or higher GPA)
- Students transferring from another institution are directly admitted to the Sustainable Design and Development major if they are in good academic standing (2.0 or higher GPA)

Major Code: 1707

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 30 |
| Sustainable Design and Development Program Requirements | | 37 |
| Sustainable Design and Development Major Requirements | | 53 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1 and 3 | | 9 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 20 |
| Total Hours | | 30 |

## Sustainable Design and Development Program Requirements

| Code | Title | Hours |
|---|---|---|
| Select one of the following (GEF 2): | | 4 |
| BIOL 105<br>& 105L | Environmental Biology<br>and Environmental Biology Laboratory | |
| GEOG 150<br>& 150L | Digital Earth<br>and Digital Earth Laboratory | |
| AGEE 101 | Global Food and Agricultural Industry (GEF 7) | 3 |
| ANTH 105 | Introduction to Anthropology (GEF 8) | 3 |
| ARE 220 | Introductory Environmental and Resource Economics | 3 |
| DSGN 140 | Sustainable Living | 3 |
| DSGN 220 | Design Thinking | 3 |
| DSGN 280 | Sustainable Design and Development (GEF 4) | 3 |
| FNRS 100 | Forest Resources in United States History (GEF 5) | 3 |
| FNRS 140 | West Virginia's Natural Resources (GEF 8) | 3 |
| LARC 105 | Introduction to Landscape Architecture, Environmental Design and Planning | 3 |
| LARC 212 | History of Landscape Architecture (GEF 6) | 3 |
| SOC 101 | Introduction to Sociology (GEF 8) | 3 |
| Total Hours | | 37 |

## Sustainable Design and Development Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- and minimum GPA of 2.25 is required in all Sustainable Design and Development Major Requirements. | | |
| DSGN 320 | Design Ethics and Social Responsibility | 3 |
| DSGN 340 | Design for Energy Efficiency | 3 |
| DSGN 470 | Leadership in Energy and Environmental Design Green Building Systems | 3 |
| DSGN 480 | Designing Innovative Futures | 3 |
| DSGN 491 | Professional Field Experience: Capstone | 6 |
| ENCP 460 | Sustainable Cities: Best Practices | 3 |
| LARC 570 | Meanings of Place | 3 |
| LARC 448 | Design Analysis | 2 |
| LARC 452 | Contemporary Issues in Landscape Architecture | 3 |
| LARC 465 | Regional Design | 3 |
| LARC 466 | Introduction to Urban Design Issues | 3 |

| | | |
|---|---|---|
| PLSC 105 | Plants and People: Past and Present | 3 |
| RESM 440 & 440L | Foundations of Applied Geographic Information Systems and Foundations of Applied Geographic Information Systems Laboratory | 3 |
| RESM 444 | Advanced GIS for Natural Resource Management | 3 |
| RESM 450 | Land Use Planning Law | 3 |
| RESM 455 | Practice of Land Use Planning | 3 |
| WMAN 150 | Principles of Conservation Ecology | 3 |
| Total Hours | | 53 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | ANTH 105 (GEF 8) | 3 |
| ENGL 101 (GEF 1) | 3 | ARE 220 | 3 |
| DSGN 140 | 3 | DSGN 220 | 3 |
| LARC 105 | 3 | PLSC 105 | 3 |
| LARC 212 (GEF 6) | 3 | GEF 3 | 3 |
| SOC 101 (GEF 8) | 3 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | AGEE 101 (GEF 7) | 3 |
| DSGN 280 (GEF 4) | 3 | FNRS 140 (GEF 8) | 3 |
| DSGN 320 | 3 | WMAN 150 | 3 |
| DSGN 340 | 3 | General Electives | 6 |
| FNRS 100 (GEF 5) | 3 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| Select one of the following pairs: (GEF 2) | 4 | LARC 465 | 3 | DSGN 491 | 6 |
| BIOL 105 & 105L | | LARC 570 | 3 | | |
| GEOG 150 & 150L | | RESM 440 & 440L | 3 | | |
| ENCP 460 | 3 | General Elective | 3 | | |
| LARC 452 | 3 | | | | |
| General Elective | 2 | | | | |
| | 12 | | 12 | | 6 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DSGN 480 | 3 | DSGN 470 | 3 |
| LARC 466 | 3 | LARC 448 | 2 |
| RESM 444 | 3 | RESM 450 | 3 |
| RESM 455 | 3 | General Electives | 6 |
| General Elective | 3 | | |
| | 15 | | 14 |

Total credit hours: 120

## Major Learning Outcomes

### SUSTAINABLE DESIGN AND DEVELOPMENT

1. Define sustainability as it relates to global, regional and local resource planning and development;
2. Analyze the impacts of decision-making in resource management and development in terms of ecology, society and economy;
3. Apply critical, analytic, and design thinking to problem-solving at a variety of scales and within a variety of contexts;
4. Develop and apply an understanding of social, environmental, economic and political systems;
5. Model multidisciplinary approaches to address issues of sustainability;
6. Develop and execute trans-disciplinary and multi-disciplinary projects
7. Develop and apply skills in community engagement in project-based learning

# Wildlife and Fisheries Resources, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The wildlife and fisheries resources curriculum prepares students for professional positions as wildlife and fish biologists, natural resources conservation officers, wildlife and fisheries managers and planners, wildlife or fisheries communication specialists, wildlife and fisheries toxicologists, and environmental consultants. The program is unique in the region as our graduates are fully trained in both the wildlife and fisheries fields. The curriculum provides a solid basic background in biology, ecology, and natural resource management. Students fulfilling this program will select a concentration in wildlife or fisheries (or both) to meet the requirements for professional certification as either a wildlife biologist (certified through The Wildlife Society) or fisheries biologist (certified through The American Fisheries Society). A careful selection of restricted electives enables students to specialize in related natural resource areas and to have the opportunity for widening employment in other environmental fields. Other options can be tailored to your objectives. Students will be able to consult with their advisor in the selection of courses from a group of restricted electives to develop their area of emphasis.

Our major has two summer requirements:

1. Summer Camp (3 credits)
2. Summer Internship (3 credits taken the following fall semester)

Students are expected to take Summer Camp after their first year in the program. Summer Camp lasts for one week and occurs right after the spring semester ends. Students also have the option to do an Education Abroad experience focused on international conservation over spring break for their summer camp requirement. Students can do their internship for credit during any summer.

## Special Opportunities

Students will have special opportunities to enhance their education in the WVU Wildlife and Fisheries Resources Program. The Program has student chapters of The American Fisheries Society and The Wildlife Society. Student participation in these organizations leads to opportunities for further field experience with state and federal agency biologists, graduate students, and faculty. A USGS Fish and Wildlife Cooperative Research Unit is also housed within our program. This unit provides three additional faculty members conducting extensive research programs all around the country. In addition, the WVDNR provides a liaison biologist to the Unit that is a direct link from students to the state's natural resources agency. Undergraduates benefit from the personnel at the Unit in several ways: the Unit and liaison provide federal and state contacts for employment opportunities; the Unit research programs may provide summer employment on fish and wildlife projects; and faculty in the Unit also teach in our program.

All of our faculty are involved with graduate training. This active research program provides invaluable classroom experiences as faculty remain up-to-date with all the latest studies and methods in the field. Students also benefit through volunteer experiences and summer employment opportunities for students working on research projects.

In the Wildlife and Fisheries Resources Program, you will be mentored by caring faculty members who understand what it will take to be successful in this field. All students are required to take a Professional Experience course (internship) as part of the curriculum, but we encourage students to get as much additional experience working with professionals throughout their time in the program. The curriculum also includes a capstone class that allows students to showcase their learning through management plans and research projects.

Career opportunities in wildlife and fisheries are expanding. Even so, we encourage our students to consider going for advanced degrees when they finish here. Such qualified seniors find that assistantships are readily available due to the solid course background, training, and experience they received while here at WVU.

## Admissions for 2026-2027

- First-Time Freshman are admitted directly into wildlife and fisheries resources major.
- Students transferring from another major within WVU are directly admitted to the wildlife and fisheries resources major if they are in good academic standing (2.00 overall GPA).
- Students transferring from another institution are directly admitted to the wildlife and fisheries resources major if they are in good academic standing (2.00 overall GPA).

Major Code: 1708

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 10 |
| Wildlife and Fisheries Resources Program Requirements | | 44 |
| Wildlife and Fisheries Resources Major Requirements | | 68 |
| Total Hours | | 122 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1 and 6 | | 9 |
| ANRD 191 | First-Year Seminar | 1 |
| Total Hours | | 10 |

## Wildlife and Fisheries Resources Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum of C- in 100- and 200-level courses must be obtained in all Wildlife and Fisheries Resources Program Requirements. | | |
| **Select one of the following sets:** | | **8** |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | |

| | | |
|---|---|---|
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory | |
| OR | | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| **Physical Science Requirement** | | **12** |
| Select 12 credits from the following: | | |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| ESWS 202<br>& 202L | Principles of Soil Science<br>and Principles of Soil Science Laboratory | |
| GEOL 101<br>& 101L | Planet Earth<br>and Planet Earth Laboratory | |
| GEOL 203 | Physical Oceanography | |
| GEOL 321 | Geomorphology | |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| STAT 211 | Elementary Statistical Inference (GEF 8) | 3 |
| COMM 270<br>& 270S | Presentational Speaking<br>and Effective Public Speaking Studio (GEF 4) | 3 |
| FNRS 205<br>& 205L | Dendrology<br>and Dendrology Laboratory | 3 |
| FNRS 421 | Renewable Resources Policy and Governance | 3 |
| **Quantitative Requirement** | | **3** |
| Select one of the following: | | |
| MATH 150 | Applied Calculus | |
| STAT 312 | Intermediate Statistical Methods | |
| WMAN 411 | Introduction to Quantitative Ecology | |
| RESM 440<br>& 440L | Foundations of Applied Geographic Information Systems<br>and Foundations of Applied Geographic Information Systems Laboratory | 3 |
| **Policy & Administration Requirement** | | **3** |
| Select one of the following: | | |
| ARE 382 | Agricultural and Natural Resources Law | |
| ESWS 460 | Environmental Impact Assessment | |
| FNRS 438 | Human Dimensions Natural Resource Management | |
| RESM 450 | Land Use Planning Law | |
| RESM 480 | Environmental Regulation | |
| Total Hours | | 44 |

## Wildlife and Fisheries Resources Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum of C- must be obtained in all 100- and 200 level courses fulfilling Wildlife and Fisheries Resources Major Requirements. | | |
| WMAN 100 | The Tradition of Hunting | 3 |
| WMAN 150 | Principles of Conservation Ecology | 3 |
| WMAN 175<br>& 175L | Introduction to Wildlife and Fisheries<br>and Introduction to Wildlife and Fisheries Laboratory (GEF 8) | 3 |
| WMAN 205 | Wildlife Summer Field Camp | 3 |
| or WMAN 206 | Fisheries Summer Field Camp | |
| or WMAN 207 | International Conservation | |

| | | |
|---|---|---|
| WMAN 224<br>& 224L | Vertebrate Natural History<br>and Vertebrate Natural History Laboratory | 3 |
| WMAN 300<br>& 300L | Wildlife and Fisheries Techniques<br>and Wildlife and Fisheries Techniques Laboratory | 4 |
| WMAN 313<br>& 313L | Wildlife Ecosystem Ecology<br>and Wildlife Ecosystem Ecology Laboratory | 4 |
| WMAN 330 | Conservation Genetics | 3 |
| Select one of the following: | | 3 |
| WMAN 425 | Mammalogy | |
| WMAN 426<br>& 426L | Ornithology<br>and Ornithology Laboratory | |
| WMAN 427 | Herpetology | |
| WMAN 445<br>& 445L | Fisheries Management<br>and Introduction to Fisheries Management Laboratory | 4 |
| WMAN 450<br>& 450L | Advanced Wildlife and Fisheries Management<br>and Advanced Wildlife and Fisheries Management Laboratory (Capstone) | 4 |
| WMAN 491 | Professional Field Experience | 3 |
| **Area of Emphasis** | | **16-18** |
| Fisheries Sciences (16-18 Total Hours) | | |
| Wildlife Sciences (16-17 Total Hours) | | |
| **Restricted Electives or a 2nd AOE** * | | **12** |
| Any 100-400 level course in Biology (BIOL), Forestry (FNRS), Geology (GEOL), Resource Management (RESM), Recreation Parks & Tourism (RPTR), or Wildlife and Fisheries (WMAN) agreed upon between the student and the advisor. | | |
| Total Hours | | 68 |

*

A minimum of three credits must be at the upper-division (300- or 400-level).

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| ANRD 191 | 1 | WMAN 150 (GEF 7) | 3 | WMAN 205 or 206 | 3 |
| ENGL 101 (GEF 1) | 3 | Select one of the following (GEF 8): | 4 | | |
| WMAN 100 (GEF 5) | 3 | BIOL 102<br>& 102L | | | |
| WMAN 175<br>& 175L (GEF 8) | 3 | BIOL 117<br>& 117L | | | |
| Select one of the following (GEF 2): | 4 | MATH 124 (GEF 3) | 3 | | |
| BIOL 101<br>& 101L | | GEF 6 | 3 | | |
| BIOL 115<br>& 115L | | | | | |
| | 14 | | 13 | | 3 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Physical Science | 4 | ENGL 102 (GEF 1) | 3 |
| FNRS 205<br>& 205L | 3 | RESM 440<br>& 440L | 3 |
| STAT 211 (GEF 8) | 3 | WMAN 313<br>& 313L | 4 |
| WMAN 224<br>& 224L | 3 | Physical Science | 4 |

| | | | |
|---|---|---|---|
| COMM 270 & 270S (GEF 4) | 3 | | |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WMAN 300 & 300L | 4 | Select one of the following: | 3 |
| WMAN 330 | 3 | WMAN 425 | |
| Quantitative Course | 3 | WMAN 426 & 426L | |
| Policy Course | 3 | WMAN 427 | |
| Area of Emphasis or Restricted Elective | 3 | Physical Science | 4 |
| | | Area of Emphasis | 4 |
| | | Area of Emphasis or Restricted Elective | 3 |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WMAN 445 & 445L | 4 | WMAN 450 & 450L | 4 |
| FNRS 421 | 3 | Area of Emphasis or Restricted Elective | 3 |
| WMAN 491 | 3 | Area of Emphasis or Restricted Elective | 3 |
| Area of Emphasis or Restricted Elective | 3 | Area of Emphasis or Restricted Elective | 3 |
| Area of Emphasis or Restricted Elective | 3 | Area of Emphasis or Restricted Elective | 3 |
| | 16 | | 16 |

Total credit hours: 122

## Areas of Emphasis

- Fisheries Sciences
- Wildlife Sciences

## FISHERIES SCIENCES AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| A grade of C- or better must be obtained in all 100- and 200-level courses for the area of emphasis. | | |
| WMAN 446 & 446L | Freshwater Ecology and Freshwater Ecology Laboratory | 4 |
| **Physical Science Requirement** | | **3-4** |
| Select one of the following: | | |
| CHEM 111 & 111L | Survey of General, Organic, and Biological Chemistry 1 and Survey of Chemistry 1 Laboratory | |
| or CHEM 115 & 115L | Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 112 & 112L | Survey of General Organic Biological Chemistry 2 and Survey of Chemistry 2 Laboratory | |
| or CHEM 116 & 116L | Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory | |
| CHEM 231 & 231L | Organic Chemistry: Brief Course and Organic Chemistry: Brief Course Laboratory | |

| | |
|---|---|
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory |
| GEOL 101<br>& 101L | Planet Earth<br>and Planet Earth Laboratory |
| GEOL 203 | Physical Oceanography |
| GEOL 321 | Geomorphology |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory |
| ESWS 202<br>& 202L | Principles of Soil Science<br>and Principles of Soil Science Laboratory |
| ESWS 410 | Soil Fertility |
| ESWS 415<br>& 415L | Soil Survey and Land Use<br>and Soil Survey and Land Use Laboratory |
| ESWS 417<br>& 417L | Soil Genesis and Classification<br>and Soil Genesis and Classification Laboratory |
| ESWS 425 | Environmental Soil Management |
| ESWS 455 | Reclamation of Disturbed Soils |
| **Fisheries Requirement** | **3-4** |
| Select one of the following: | |
| BIOL 341<br>& 341L | Ichthyology<br>and Ichthyology Laboratory |
| WMAN 314 | Marine Ecology |
| **Restricted Electives** | **6** |
| Any 300- or 400-level courses in Biology (BIOL), Forestry (FNRS), Geology (GEOL), Resource Management (RESM), Recreation Parks & Tourism (RPTR) or Wildlife & Fisheries (WMAN) | |
| Total Hours | 16-18 |

## WILDLIFE SCIENCES AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| A grade of C- or better must be obtained in all 100- and 200-level courses for the area of emphasis. | | |
| WMAN 311 | Silvicultural Applications for Wildlife | 4 |
| **Botany Requirement** | | **3-4** |
| Select one of the following: | | |
| BIOL 350<br>& 350L | Plant Physiology<br>and Plant Physiology Laboratory | |
| BIOL 353L | Flora of West Virginia Laboratory | |
| BIOL 361<br>& 361L | Plant Ecology<br>and Plant Ecology Laboratory | |
| BIOL 363 | Plant Geography | |
| BIOL 450<br>& 450L | Plant Systematics<br>and Plant Systematics Laboratory | |
| FNRS 150 | Edible and Medicinal Plants of Appalachian Folk Medicine | |
| FNRS 424<br>& 424L | Vegetation of West Virginia<br>and Vegetation of West Virginia Laboratory | |
| PLSC 206<br>& 206L | Principles of Plant Science<br>and Principles of Plant Science Laboratory | |
| **Wildlife Biology Requirement** | | **3** |
| Select one of the following: | | |
| WMAN 425 | Mammalogy | |
| WMAN 426<br>& 426L | Ornithology<br>and Ornithology Laboratory | |
| WMAN 427 | Herpetology | |
| **Humanities Requirement:** | | **6** |

| | |
|---|---|
| Select six credits of ECON, ENGL, HIST, PSYC, or SOCA [*] | |
| Total Hours | 16-17 |

*

Three credits must be at the 300- or 400-level. Excludes ENGL 101 and ENGL 102.

# Major Learning Outcomes

## WILDLIFE AND FISHERIES RESOURCES

Upon the successful completion of a Wildlife and Fisheries Resources degree, students will be able to:

- Explain the historical importance of wildlife and fisheries policy and management.
- Describe the taxonomy and natural history of regional flora and fauna.
- Apply effective management principles, methods, and techniques.
- Demonstrate proficiency in scientific methodology, including the application of appropriate laboratory, computer, and quantitative skills.
- Communicate effectively with peer scientists and professionals in both written and oral forms.
- Synthesize knowledge and skills from across the curriculum in evaluating the efficacy in approaches to solve research and management questions.

# College of Applied Human Sciences

The College of Applied Human Sciences provides a holistic education that is designed to enrich the whole person – physically, emotionally and intellectually. Graduates are prepared to positively affect the quality of life in the communities in which they live and serve.

The College of Applied Human Sciences has an enrollment of over 2,000 students. It is comprised of three schools: the School of Counseling and Well-Being, the School of Education and the School of Sport Sciences, with a selection of undergraduate and graduate degrees offered within each school.

The School of Counseling and Well-Being offers diverse and customizable coursework and expansive partnerships that provide hands-on experience with health-related organizations. The School of Education prepares future through engaging instruction, research endeavors and real-world experiences. The School of Sport Sciences has a selection of programs devoted to human performance and the sports industry. Each school is committed to academic excellence, a supportive environment focused on student success and pioneering research. The schools combine to create academic programs that are highly relevant in today's environment that emphasizes personal quality of life.

## Degrees Offered

- Bachelor of Arts
  - Elementary Education
  - Esports Business and Entertainment
  - Health and Well-being
  - Mental Health and Addiction Studies
  - Sport Leadership
- Bachelor of Science
  - Child Development and Family Studies
  - Child Development and Family Studies Pathway (online)
  - Coaching and Performance Science
  - Health and Well-being
  - Physical Education and Kinesiology
  - Secondary Mathematics Education
  - Secondary Science Education
  - Sport, Exercise, and Performance Psychology
  - Sport Management
- Bachelor of Multidisciplinary Studies

## Facilities

The facilities of the College of Applied Human Services include Allen Hall and the Health and Education Building, both on the Evansdale campus, and the WVU Child Development Laboratory/Nursery School. Allen Hall and the Health and Education building have several technology-based classrooms, conference rooms, an active learning center, a teacher behavior laboratory, a sport psychology consulting laboratory, a fitness room, a computer lab, research space, the Office of Student Success, and faculty and staff offices. It also houses the Collaborative Assistive Technology Education Laboratory, the Teaching and Learning Technologies Center, and five Centers - WVU Center for the Future of Land-Grant Education, Center for Applied Coaching and Sport Sciences, Center for Active West Virginia, the Russell "Bud" Bolton Center for Sport Ethics, and the Global Sport and Performance Center. Courses are also taught at the indoor track and sports area in the Shell Building and WVU Recreation Center, outdoor areas including tennis courts, grass and turf fields, and the outdoor track.

Note: The School of Counseling and Well-being and School of Education will be merging into one unified school beginning academic year 2025-2026 and will be reflected in the 2026-2027 catalog. For more information, please visit the Academics page of the WVU College of Applied Human Sciences website (https://appliedhumansciences.wvu.edu/academics/).

## ADMINISTRATION

### DEAN

- Nathan Sorber - Ph.D. (Pennsylvania State University)
  Interim Dean

### ASSOCIATE DEANS

- Jessica Trolia - Ph.D. (University of Missouri)
  Research, Engagement, and Faculty Affairs

- Valerie Wayda - Ed.D. (West Virginia University)
  Student Success and Academic Affairs

### SCHOOL DIRECTORS

- Matthew P Campbell - Ph.D. (Oregon State University)
  Interim Director, Education, and Counseling and Well-being
- Dana Voelker - Ph.D. (Michigan State University)
  Director, Sport Sciences

## Minors Available

- Addiction Studies (http://catalog.wvu.edu/undergraduate/minors/addiction_studies/)
- Child Development and Family Studies (http://catalog.wvu.edu/undergraduate/minors/child_development__family_studies/)
- Development Through Sport and Physical Activity (http://catalog.wvu.edu/undergraduate/minors/diversity_in_phys_sport/)
- Esports Management (http://catalog.wvu.edu/undergraduate/minors/esports_management/)
- Exercise Psychology (http://catalog.wvu.edu/undergraduate/minors/exercise_psychology/)
- Health Coaching (http://catalog.wvu.edu/undergraduate/minors/health_coaching/)
- Human Services (http://catalog.wvu.edu/undergraduate/minors/human_services/)
- Personal Training and Group Fitness (http://catalog.wvu.edu/undergraduate/minors/personal_training/)
- Physical Training and Performance (http://catalog.wvu.edu/undergraduate/minors/strength__conditioning/)
- Sport Coaching (http://catalog.wvu.edu/undergraduate/minors/athletic_coaching/)
- Secondary STEM Education (http://catalog.wvu.edu/undergraduate/minors/secondary_stem_ed/)
- Special Education (http://catalog.wvu.edu/undergraduate/minors/specialeducationminor/)
- Sport and Performance Psychology (http://catalog.wvu.edu/undergraduate/minors/sport__exercise_psychology/)
- Sport Communication (http://catalog.wvu.edu/undergraduate/minors/sports_communication/)
- Sports Innovation and Global Industry Trends (http://catalog.wvu.edu/undergraduate/minors/sports_innovation/)

## Accreditation

**The following programs have specialized accreditation through the National Council for Accreditation of Teacher Education and is a Council for the Accreditation of Educator Preparation eligible provider.**

- Elementary Education
- Physical Education
- Secondary Mathematics Educaton
- Secondary Science Education

**General Requirements for Professional Teacher Certification**

Individual candidates must be recommended to the State of West Virginia Department of Education for professional certification by the Certification Officer. To be eligible to receive a professional license in West Virginia, or to be recommended for an equivalent license in another state, the student must have met the University and College program degree requirements, the State requirements, complied with the West Virginia Board of Education regulations for teacher certification, and be recommended by the Certification Officer in the School of Education/College of Applied Human Sciences. At the time of this publication, WVDE has reciprocal agreements with most other states for teacher certification. Inquiries about reciprocity should be directed to the Certification Officer or the state in which a student is interested in obtaining certification. Students interested in licensure in another state are required to meet all degree and program certification requirements at WVU and for the state of West Virginia.

Students are responsible for ensuring that they are properly informed of the degree requirements and/or the certification standards of the degrees being sought. Since certification requirements are changed periodically by the WVDE, the fulfillment of certification requirements as presented in this catalog cannot guarantee compliance with the most recent requirements. Students are, therefore, encouraged to seek the counsel of members of the faculty, their advisors, and the college Certification Officer on matters pertaining to degree and certification requirements.

**The following program has earned accreditation by the Council on Accreditation of Strength and Conditioning Programs (CASCE) through the National Strength and Conditioning Association.**

- Coaching and Performance Science - Strength and Conditioning

CASCE accreditation ensures that strength and conditioning programs meet the highest industry standards. Beginning 2030, only students in a CASCE-accredited program qualify to take the Certified Strength and Conditioning Specialist® (CSCS) exam. In addition to successfully completing the coursework, students complete a 300-hour in-person internship and must pass both a written and practical exam.

# School of Counseling and Well-being

## Degrees Offered

- Bachelor of Arts in Mental Health and Addiction Studies
- Bachelor of Science in Child Development and Family Studies

The School of Counseling and Well-Being is dedicated to the preparation of students and research in areas related to the promotion of well-being, positive development, and healthy relationships in a variety of contexts, including family, school, and workplace. We offer diverse programs that encompass health promotion, human services, and human sciences. There is a focus on global awareness, and graduates are culturally competent and develop ethical foundations to maintain integrity in their academics and professions and to simultaneously inspire others.

Note: The School of Counseling and Well-being and School of Education will be merging into one unified school beginning academic year 2025-2026 and will be reflected in the 2026-2027 catalog. For more information, please visit the Academics page of the WVU College of Applied Human Sciences website. (https://appliedhumansciences.wvu.edu/academics/)

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## FACULTY

### PROFESSORS

- Jeffrey Daniels - Ph.D. (University of Nebraska - Lincoln)
  Counseling
- Kimberly Floyd - Ph.D. (Old Dominion University)
  Child Development and Family Studies; Youth and Family Sciences
- Margaret Glenn - Ed.D. (The George Washington University)
  Counseling
- Amy Kennedy - Ph.D. (University of Maryland, College Park)
  Child Development and Family Studies; Youth and Family Sciences

### ASSOCIATE PROFESSORS

- George Mamboleo - Ph.D. (University of Arizona)
  Counseling
- Lisa Platt - Ph.D. (The Pennsylvania State University)
  Counseling
- Jessica Troilo - Ph.D. (University of Missouri)
  Child Development and Family Studies; Youth and Family Sciences

### ASSISTANT PROFESSORS

- Brenda Everett - Ph.D. (Duquesne University)
  Counseling
- E. Joy Hutchinson - Ph.D. (University of Memphis)
  Counseling
- Kristine Ramsay-Seaner - Ph.D. (Auburn University)
  Counseling

### TEACHING ASSISTANT PROFESSOR

- Regina Burgess - MS (West Virginia University)
  Counseling; Mental Health and Addiction Studies
- Myia Makupson - M.ED. (Cleveland State University)
  Counseling
- Lacey Sawyers - MS (West Virginia University)
  Mental Health and Addiction Studies
- Anna Simmons - MA (West Virginia University)
  Counseling
- Evy Wright - MA (West Virginia University)
  Child Development and Family Studies; Youth and Family Sciences

# Child Development and Family Studies, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The undergraduate program in Child Development and Family Studies (CDFS) offers an online Bachelor of Science degree option.

Child Development and Family Studies (CDFS) program focuses on development from birth through age eight, focusing on typical and atypical development, with an emphasis on preparing students to work with young children and families. Students will also complete field experiences and internships in settings that serve children and families. The Bachelor of Science in CDFS is best suited for students interested in working with young children and their families, including careers as a family/parent educator, Head Start teacher, nursery school teacher, and family support worker.

## Admissions for 2026-2027

### INCOMING FRESHMEN

- All First-Time Freshmen who meet the University requirements are directly admitted into the Child Development and Family Studies program

### INTERNAL AND EXTERNAL TRANSFER STUDENTS

- At least a 2.0 cumulative university GPA is required for admission to the program

Major Code: 5506

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 69 |
| Child Development and Family Studies Major Requirements | | 51 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, and 7 | | 24 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 43 |
| Total Hours | | 69 |

## Child Development and Family Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Child Development and Family Studies Major Coursework. | | |
| CDFS 110 | Families Across the Life Span (GEF 4) | 3 |
| CDFS 112 | Introduction to Family Processes and Dynamics | 3 |
| CDFS 210 | Introduction to Parenting | 3 |
| CDFS 211 | Infant Development | 3 |
| or CDFS 212 | Development in Early and Middle Childhood | |
| CDFS 250 | Research Methods | 3 |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| ECSE 311 | Developmental Assessment for Young Children with Special Needs | 3 |
| or ECSE 315 | Home-Based Programs for Early Intervention | |
| CDFS 413 | Stress in Families | 3 |
| or CDFS 415 | Family Interaction and Communication | |
| CDFS 416 | Trauma, Resiliency, and Children | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |

| | | |
|---|---|---|
| CDFS 417 | Families and Health | 3 |
| Upper Level Developmental Specialization | | 3 |
| Select one of the following: | | |
| CDFS 410 | The Science of Positive Youth Development | |
| CDFS 412 | Adolescent Development | |
| CDFS 432 | Early Socio-Emotional Development | |
| Required Minor | | 15 |
| Total Hours | | 51 |

Note: Students must earn grades of C- or better in all courses with the CDFS course designator required in the major. If a student's overall GPA drops below 2.0, they may be subject to academic probation and potentially dismissal from the program.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF 1) | 3 |
| CDFS 110 (GEF 4) | 3 | CDFS 210 | 3 |
| CDFS 112 | 3 | CDFS 211 | 3 |
| CAHS 191 | 2 | or CDFS 212 in offered in fall | |
| GEF 3 | 3 | GEF 2 | 3 |
| | | GEF 5 | 3 |
| | | General Elective | 1 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECSE 315 | 3 | CAHS 300 | 3 |
| or ECSE 311 offered in spring | | CDFS 250 | 3 |
| GEF 2 | 3 | GEF 7 | 3 |
| GEF 6 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CDFS 412 or 432 | 3 | CDFS 413 | 3 |
| or CDFS 410 offered in spring | | or CDFS 415 offered in fall | |
| General Electives | 12 | CDFS 416 | 3 |
| | | General Electives | 9 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CDFS 417 | 3 | CAHS 489 | 3 |
| General Electives or Minor | 12 | General Electives or Minor | 12 |
| | 15 | | 15 |

Total credit hours: 120

# Major Learning Outcomes

## CHILD DEVELOPMENT AND FAMILY STUDIES

- Describe and apply knowledge in human growth and development, family issues and interaction, youth concerns and issues, cultural and societal contexts, and related topics.
- Explain, interpret, and appraise the various social contextual influences on development and family functioning and the interactive relationships between families and other societal institutions.

- Identify, describe, design, and appraise strategies for working with children, adolescents, and families in various social service and community-based context.

# Mental Health and Addiction Studies, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Mental Health and Addiction Studies Program is designed for students with a broad-based interest in the human condition and serving their communities. Graduates are qualified for entry-level occupations in addiction, mental health and family support services, and are also prepared for graduate studies in counseling, occupational therapy, public health or other health-related disciplines.

The core coursework explores the history, theories and concepts of mental health and mental illness, as well as investigation of the structures and service delivery mechanisms for prevention, intervention, and treatment of mental disorders, with a concentrated focus on addiction and recovery. Through selection of certain elective groups, students also have the opportunity to build deeper knowledge in disabilities, aging, wellness, and/or diversity.

The program culminates with a capstone course designed to help students integrate and synthesize their MHAS coursework through a field experience and population research.

## Admissions for 2026-2027

- First-time students who meet university requirements are directly admitted to the Mental Health and Addiction Studies major
- Students transferring into the major from another institution must have a minimum cumulative college GPA of 2.0
- Students seeking admission from other majors within WVU must have a minimum cumulative college GPA of 2.0

Major Code: 5003

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 60 |
| Mental Health and Addiction Studies Major Requirements | | 60 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, and 8 | | 24 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 34 |
| Total Hours | | 60 |

## Mental Health and Addiction Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all CDFS and COUN courses. | | |
| PSYC 101 | Introduction to Psychology (GEF 8) | 3 |
| SOC 101 | Introduction to Sociology (GEF 8) | 3 |
| CDFS 110 | Families Across the Life Span (GEF 4) | 3 |
| PSYC 281 | Introduction to Psychological Disorders (GEF 7) | 3 |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| COUN 201 | Foundations of Mental Health Intervention | 3 |
| COUN 240 | Introduction to Addiction Studies | 3 |
| COUN 301 | Interpersonal Communication Skills | 3 |
| COUN 303 | Introduction to Helping Professions | 3 |
| COUN 320 | Prevention in Mental Health | 3 |
| COUN 330 | Addiction Screening & Assessment | 3 |
| COUN 340 | Counseling Techniques | 3 |
| COUN 350 | Families & Addiction | 3 |
| COUN 400 | Diversity and Human Relations | 3 |
| CDFS 416 | Trauma, Resiliency, and Children | 3 |
| COUN 485 | Capstone in Mental Health and Addiction Studies | 3 |
| Select any combination of four of the following courses: | | 12 |
| Disability-Related Courses: | | |
| DISB 304 | Special Education in Contemporary Society | |
| DISB 380 | Disability and the Family | |
| DISB 381 | Lifespan Disability Policy | |
| DISB 385 | Disability and Society | |
| Aging-Related Courses: | | |
| GERO 212 | Introduction to Gerontology | |
| GERO 410 | Rural Gerontology | |
| GERO 412 | Public Policy of Aging | |
| GERO 418 | Aging, Women and Culture | |
| COMM 317 | Communication and Aging | |
| SOC 312 | Death and Dying | |
| Wellness-Related Courses: | | |
| SOWK 370 | Wellness and Resilience for the Helping Professions and Beyond | |
| HWB 224 | Enhancing Health and Well-being | |
| HWB 359 | Mindfulness for Health and Well-being | |
| HN&F 200 | Nutrition/Activity/Health | |

| | |
|---|---|
| SEP 283 | Introduction to Exercise Psychology |
| Diversity-Related Courses: | |
| ASP 220 | Introduction to Africana Studies |
| ENGL 254 | African American Literature |
| ENGL 154 | African American Literature |
| NAS 200 | Introduction: Native American Studies |
| SOC 235 | Race and Ethnic Relations |
| WGST 170 | Introduction to Women's and Gender Studies |
| WGST 225 | Women in Appalachia |
| WGST 260 | Perspectives on Lesbian, Gay, Bisexual, Transgender, and Queer Studies |
| Total Hours | 60 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | SOC 101 (GEF 8) | 3 |
| ENGL 101 (GEF 1) | 3 | CDFS 110 (GEF 4) | 3 |
| PSYC 101 (GEF 8) | 3 | ENGL 102 (GEF 1) | 3 |
| GEF 2 | 6 | GEF 8 | 3 |
| General Elective | 3 | GEF 3 | 3 |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COUN 201 | 3 | PSYC 281 (GEF 7) | 3 |
| GEF 5 | 3 | COUN 240 | 3 |
| GEF 6 | 3 | COUN 301 | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COUN 303 | 3 | COUN 340 | 3 |
| COUN 330 | 3 | COUN 350 | 3 |
| Major Elective 1 | 3 | CAHS 300 | 3 |
| General Elective | 3 | Major Elective 2 | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COUN 400 | 3 | CDFS 416 | 3 |
| COUN 320 | 3 | COUN 485 | 3 |
| Major Elective 3 | 3 | Major Elective 4 | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 2 | General Elective | 2 |
| | 14 | | 14 |

Total credit hours: 120

## Major Learning Outcomes

### MENTAL HEALTH AND ADDICTION STUDIES

At the completion of this program, students will be able to:

1. Describe the impact of mental health, mental disorders and recovery on individuals, families, and communities.
2. Describe the vulnerabilities, resiliencies, protective factors, and prevention strategies for mental health across the lifespan.
3. Describe the foundations of the services and structures of the modern behavioral health system.
4. Explain the impact of trauma on development and integrate trauma-informed theory and concepts when addressing issues of mental health.
5. Demonstrate appropriate interpersonal skills for engaging those with mental disorders.
6. Identify challenges for individuals from diverse cultures, backgrounds, and communities, and describe the unique needs and barriers to care for these individuals.
7. Apply ethical principles and ethical decision-making models in mental health settings.

# School of Education

## Degrees Offered

- Bachelor of Arts in Elementary Education
- Bachelor of Science in Secondary Mathematics Education
- Bachelor of Science in Secondary Science Education

The School of Education offers opportunities for undergraduate study, leading to degrees in Elementary Education, Secondary Mathematics Education, and Secondary Science Education. Each program is designed for aspiring educators and supports teacher candidates as they build knowledge, practice skills, conduct classroom research, and develop professional competencies for teacher certification, in their grade levels and content areas. These programs are aligned to national and state standards for the preparation of educators and are focused on ensuring student success on licensure and certification requirements. The experiences available through these programs involve extensive, supportive practice in local classrooms and exploration of relevant professional topics and skill development, facilitated by faculty who are leaders in research, teaching, and service.

Note: The School of Counseling and Well-being and School of Education will be merging into one unified school beginning academic year 2025-2026 and will be reflected in the 2026-2027 catalog. For more information, please visit the Academics page of the WVU College of Applied Human Sciences website. (https://appliedhumansciences.wvu.edu/academics/)

## ADMINISTRATION

### DIRECTOR

- Matthew P. Campbell - Ph.D. (Oregon State University)

### ASSOCIATE DIRECTOR

- Johnna J. Bolyard - Ph.D. (George Mason University)

## FACULTY

### PROFESSORS

- Autumn Cyprès - Ed.D. (Arizona State University)
  Leadership Studies in Education
- Allison Swan Dagen - Ph.D. (University of Pittsburgh)
  Literacy Education
- Aimee L. Morewood - Ph.D. (University of Pittsburgh)
  Literacy Education
- Melissa Sherfinski - Ph.D. (University of Wisconsin, Madison)
  Elementary Education; Educational Theory and Practice

### ASSOCIATE PROFESSORS

- Johnna J. Bolyard - Ph.D. (George Mason University)
  Elementary Education; Educational Theory and Practice
- Carla Brigandi - Ph.D. (University of Connecticut)
  Special Education
- Matthew P. Campbell - Ph.D. (Oregon State University)
  Secondary Mathematics Education; Elementary Education; Educational Theory and Practice
- Jeffrey Carver - Ed.D. (Illinois State University)
  Secondary Science Education; Elementary Education; Educational Theory and Practice
- Sharon Hayes - Ph.D. (University of Florida)

Elementary Education; Educational Theory and Practice

- Melissa Luna - Ph.D. (Northwestern University)
  Elementary Education; Educational Theory and Practice
- Erin McHenry-Sorber - Ph.D. (Pennsylvania State University)
  Higher Education; Leadership Studies in Education; Educational Theory and Practice
- Ann M. Richards - Ph.D. (University of Arizona)
  Special Education
- Sarah Selmer - Ed.D. (West Virginia University)
  Elementary Education
- Nathan M. Sorber - Ph.D. (Pennsylvania State University)
  Higher Education; Educational Theory and Practice

### ASSISTANT PROFESSORS

- Jake Follmer - Ph.D. (Pennsylvania State University)
  Educational Theory and Practice
- Courtney Shimek - Ph.D. (University of Georgia)
  Literacy Education
- Yuanhua Wang - Ph.D. (Texas Tech University)
  Elementary Education; Secondary Science Education

### SERVICE ASSISTANT PROFESSOR

- Elizabeth Osborne - Ph.D. (West Virginia University)
  Social Studies Education

# Elementary Education, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The BA in Elementary Education program is an innovative, 4-year on-campus program at West Virginia University that prepares students to earn a West Virginia teaching certification in multi-subject grades K-6 upon graduation. As part of the program, students complete work in local, public school placements during their junior year, both fall and spring. Then, students are placed in a year-long residency their senior year, working in their schools 250 hours in the fall semester and full-time in the spring semester. The BA in Elementary Education program values the learning that happens not only in the WVU classrooms, but also in the application of these lessons in the field, as students graduate with over 900 hours of practice and experience teaching in local schools.

In addition to an emphasis on experience in local schools, the Elementary Education program is committed to high academic standards at the state and national levels. Program faculty work with national accreditation standards and contribute to the profession at university, state, and national levels. This work involves exploration of technology, diversity, global initiatives, and culturally responsive teaching, facilitated by faculty who are leaders in research, teaching, and service.

The Elementary Education program also allows the space for students to find their individual areas of interest, for which many pursue a minor and/or Master's degree. Students in the program can begin working as a classroom teacher after graduation and go on to earn graduate degrees.

## Admissions for 2026-2027

### FIRST-TIME FRESHMEN

Admission to the BA Elementary Education program is consistent with admission requirements for First-Time Freshmen applying to WVU. You can find more information at:

Admission Requirements for First-Time Freshmen - Undergraduate Admissions at WVU (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/)

### CURRENT WVU STUDENTS

Students admitted from other majors within WVU must have a 2.5 minimum cumulative GPA.

## TRANSFER STUDENTS

Students transferring from another institution must have a 2.5 minimum cumulative GPA.

Major Code: 5501

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.5 is required for graduation. | | |
| University Requirements | | 53 |
| Elementary Education Major Requirements | | 67 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements (GEF 1, 2, 5, 6, 7, 8) | | 28 |
| General Electives | | 23 |
| CAHS 191 | First-Year Seminar | 2 |
| Total Hours | | 53 |

## Elementary Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.5 is required in all Elementary Education Major Requirements. | | |
| **CERTIFICATION REQUIREMENTS** | | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| **PROFESSIONAL EDUCATION REQUIREMENTS** | | |
| A minimum grade of C- is required in all Professional Education courses. | | |
| EDUC 330 | Mathematics for Elementary Teachers 1 | 3 |
| EDUC 331 | Mathematics for Elementary Teachers 2 | 3 |
| EDUC 340 | Science for Elementary Educators | 3 |
| EDUC 430 | Mathematics Methods for Elementary Teachers | 3 |
| EDUC 350 | Social Studies Content for Elementary Teachers | 3 |
| EDUC 440 | Science Methods for Elementary Teachers | 3 |
| EDUC 450 | Social Studies Methods for Elementary Teachers | 3 |
| EDUC 460 | Literacy 1: Exploring & Developing Literacy Foundations | 3 |
| EDUC 461 | Literacy 2: Reading Assessment & Instruction | 3 |
| EDUC 462 | Literacy 3: Composing Texts | 3 |
| EDUC 304 | Place-based and Emotionally Responsive Teaching | 3 |
| SPED 404 | Special Education in Contemporary Society (GEF 4) | 3 |
| SPED 460 | Differentiation of Instruction | 3 |
| EDUC 408 | Art Integration in the Elementary Classroom | 3 |
| EDUC 311 | Field Experience & Technology Applications in Elementary Schools 1 | 2 |
| EDUC 312 | Field Experience & Technology Applications in Elementary Schools 2 | 3 |
| EDUC 410 | Clinical Experience in Elementary Schools/Residency 1 | 5 |
| EDUC 411 | Clinical Experience in Elementary Schools/Residency 2 | 10 |
| EDUC 484 | Residency/Technology Capstone in Elementary Education | 2 |
| Total Hours | | 67 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | GEF 5 | 3 |
| CAHS 191 | 2 | GEF 6 | 3 |
| MATH 124 (GEF 3) | 3 | GEF 7 | 3 |
| GEF 2 | 4 | GEF 8 | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 1 | General Elective | 1 |
| | 16 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | EDUC 331 | 3 |
| EDUC 330 | 3 | SPED 404 (GEF 4) | 3 |
| GEF 8 | 3 | General Elective | 3 |
| GEF 8 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 311 | 2 | EDUC 312 | 3 |
| EDUC 460 | 3 | EDUC 430 | 3 |
| EDUC 340 | 3 | EDUC 440 | 3 |
| EDUC 350 | 3 | EDUC 450 | 3 |
| EDUC 408 | 3 | EDUC 461 | 3 |
| General Elective | 3 | | |
| | 17 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 410 | 5 | EDUC 411 | 10 |
| EDUC 462 | 3 | EDUC 484 | 2 |
| SPED 460 | 3 | | |
| EDUC 304 | 3 | | |
| | 14 | | 12 |

Total credit hours: 120

## SUGGESTED PLAN OF STUDY FOR TRANSFER STUDENTS

**Third Year**

| Hours | | Spring | Hours |
|---|---|---|---|
| EDUC 330 | 3 | EDUC 331 | 3 |
| EDUC 311 | 2 | EDUC 312 | 3 |
| EDUC 460 | 3 | EDUC 461 | 3 |
| EDUC 340 | 3 | EDUC 440 | 3 |
| EDUC 350 | 3 | EDUC 450 | 3 |
| EDUC 408 | 3 | EDUC 430 | 3 |
| | 17 | 18 | |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 410 | 5 | EDUC 411 | 10 |
| SPED 404 (GEF 4) | 3 | EDUC 484 | 2 |
| SPED 460 | 3 | | |

| | |
|---|---|
| EDUC 462 | 3 |
| EDUC 304 | 3 |
| 17 | 12 |

Total credit hours: 64

# Major Learning Outcomes

## BA ELEMENTARY EDUCATION

1. Teacher candidates will execute the instructional cycle of planning, instructing, assessing, and adjusting based on data, the learner, and the learning environment.

2. Teacher candidates will demonstrate positive, solution-based, professional verbal and written communication with sensitivity to context and audience.

3. Teacher candidates will conduct themselves in a manner that aligns with the professional dispositions for teaching, regardless of the context.

4. Teacher candidates will create and sustain a learning environment that supports the success of all learners and their adults, including developmental, linguistic, cultural, racial, ethnic, and gender diversity.

5. Teacher candidates will work collaboratively with colleagues and adults significant to students on activities that connect schools, families, and the larger community.1. Teacher candidates will develop knowledge of content, students, and pedagogy needed to effectively support the learning of all students in elementary classrooms.

2. Teacher candidates will develop understanding of and execute the instructional cycle of planning, instructing, assessing, and adjusting based on data, the learner, and the learning environment.

3. Teacher candidates will demonstrate positive, solution-based, professional verbal and written communication with sensitivity to context and audience.

4. Teacher candidates will develop and demonstrate the professional dispositions for teaching, regardless of the context.

5. Teacher candidates will create and sustain a learning environment that supports the success of all learners and their adults, including developmental, linguistic, cultural, racial, ethnic, and gender diversity.

6. Teacher candidates will work collaboratively with colleagues and adults significant to students on activities that connect schools, families, and the larger community.

# Policies

## MATRICULATION POLICIES

- Students must earn at least a grade of “C-” in all professional education courses to remain in the BA Elementary Education program. Earning a grade less than a “C-” may result in the student being removed from the program. In this event, the student must contact an advisor immediately.
- Students who arrange to receive a grade of “I” (incomplete) must complete all requirements to change the incomplete to a grade prior to the beginning of the next semester. If the student does NOT get the grade of “I” changed to a passing grade, the student will NOT be able to matriculate to the next semester of courses. In this event, the student must contact an advisor immediately.
- Students must maintain at least a 2.5 grade point average in order to remain in the BA Elementary Education program. If the GPA falls below 2.75, the student will be permitted to continue on a probationary status for ONE semester. At the end of that semester of probation, the student’s overall GPA must be at least a 2.75 in order to be eligible to continue in the program. A student is permitted only one probationary semester in the program. Should the student’s GPA fall below a 2.75 a second time, that student will not be eligible to matriculate. In this event, the student must contact an advisor immediately.

## TESTING BENCHMARKS

### WV STATE CERTIFICATION REQUIREMENTS

- Praxis II/Elementary Education test [NOTE: Successful completion of this assessment is required prior to the final semester / full-time student teaching; scores must be received prior to the first day of the final / full-time placement.]
- edTPA, Teacher Performance Assessment: Required as part of the Student Teaching semester. [NOTE: Successful completion of this assessment is required prior to applying for a WV teaching license and for WVU program completion.]

**Disclaimer:** State Board of Education requirements may change testing and program requirements.

# Secondary Mathematics Education, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Bachelor of Science in Secondary Mathematics Education program in WVU's School of Education prepares students to meet the content, pedagogical, and professional demands of teaching mathematics in middle and high school settings. Graduates are eligible for certification to teach Mathematics (grades 5–Adult) upon completion of the program.

Students complete more than 900 hours of field and clinical experiences in a variety of public school classrooms. This includes over 125 hours of field observation prior to a year-long residency during the final year of the program. The residency consists of a half-time placement in the first semester and a full-time placement in the second semester. These experiences are grounded in strong partnerships with local schools, offering rich opportunities to work closely with experienced teachers and diverse student populations.

Program coursework is designed with a strong commitment to academic excellence, informed by state and national standards and certification requirements. Courses focus on the specialized work of teaching mathematics, including understanding students and how they learn, curriculum design, instructional strategies, and school contexts. Faculty members are active in their fields as educators and as scholars, bringing relevant and robust expertise to our teacher education programs.

The program also prepares students for key certification milestones, including the Praxis II content exam and the edTPA performance assessment. In addition, students receive ongoing support from academic advisors and career development specialists through the Office of Student Success in the College of Applied Human Sciences.

Designed with flexibility in mind, the program allows students to apply transfer credits, pursue general education electives, or add a minor or second major, particularly in mathematics or related fields. Students may also have the option to complete their final-year residency in their home communities or at a distance, depending on placement availability and program approval.

Graduates of the B.S. in Secondary Mathematics Education program emerge as well-prepared, reflective educators equipped to meet the challenges and opportunities of today's middle and high school classrooms.

## Admissions for 2026-2027

### FIRST-TIME FRESHMEN

Admission to the B.S. in Secondary Mathematics Education program is consistent with admission requirements for First-Time Freshmen applying to WVU. You can find more information at:

Admission Requirements for First-Time Freshmen - Undergraduate Admissions at WVU (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/)

### CURRENT WVU STUDENTS

Students admitted from other majors within WVU must have a 2.5 minimum cumulative GPA.

### TRANSFER STUDENTS

Students transferring from another institution must have a 2.5 minimum cumulative GPA

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |

| | |
|---|---|
| F3 - Math & Quantitative Reasoning | 3-4 |
| F4 - Society & Connections | 3 |
| F5 - Human Inquiry & the Past | 3 |
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.5 is required for graduation. | | |
| University Requirements | | 41 |
| Secondary Mathematics Education Major Requirements | | 79 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements (GEF 1, 2, 5, 6, 7) | | 19 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 20 |
| Total Hours | | 41 |

## Secondary Mathematics Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.5 is required in all Secondary Mathematics Education Major Requirements | | |
| **SECONDARY EDUCATION CORE COURSEWORK** | | |
| EDUC 205 | Introduction to Teaching and Learning in Secondary Schools | 3 |
| EDUC 304 | Place-based and Emotionally Responsive Teaching | 3 |
| RDNG 422 | Reading in the Content Areas | 3 |
| SPED 404 | Special Education in Contemporary Society (GEF 4) | 3 |
| SPED 460 | Differentiation of Instruction | 3 |
| **MATHEMATICS METHODS/PEDAGOGY COURSEWORK** | | |
| EDUC 332 | Teaching and Learning Mathematics in Secondary Schools 1 | 3 |
| or EDUC 339 | Mathematics & Science Methods for Secondary Teachers 1 | |
| EDUC 432 | Teaching and Learning Mathematics in Secondary Schools 2 | 3 |
| or EDUC 439 | Mathematics & Science Methods for Secondary Teachers 2 | |
| **MATHEMATICS CONTENT COURSEWORK** | | |
| MATH 126<br>& MATH 128 | College Algebra<br>and Plane Trigonometry (GEF 3) | 3-6 |
| or MATH 129 | Pre-Calculus Mathematics | |
| MATH 155 | Calculus 1 (GEF 8) | 4 |
| MATH 156 | Calculus 2 | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| Select one of the following: | | 4 |
| MATH 261 | Elementary Differential Equations | |
| MATH 300- or 400-level * | | |
| STAT 215 | Introduction to Probability and Statistics (GEF 8) | 3 |
| or EDUC 232 | Data Literacy: Strategies and Applications | |

| | | |
|---|---|---|
| MATH 218 | History of Mathematics | 3 |
| MATH 338 | Geometry for Teachers | 3 |
| or EDUC 437 | Standards & Curriculum in Secondary Mathematics: Geometric Thinking | |
| MATH 376 | Foundations, Functions and Regression Models | 3 |
| EDUC 436 | Standards & Curriculum in Secondary Mathematics: Ratios & Proportional Reasoning | 3 |
| **PROFESSIONAL FIELD AND CLINICAL EXPERIENCE COURSEWORK** | | |
| EDUC 313 | Field Experience & Technology Applications in Secondary Schools 1 | 2 |
| EDUC 314 | Field Experience & Technology Applications in Secondary Schools 2 | 2 |
| EDUC 412 | Clinical Experience in Secondary Schools/Residency 1 | 5 |
| EDUC 413 | Clinical Experience in Secondary Schools/Residency 2 | 9 |
| EDUC 485 | Residency/Technology Capstone in Secondary Education | 3 |
| Total Hours | | 79 |

*

Except MATH 490, MATH 495 and MATH 497.

## WV Certification Requirements

To be able to be recommended for teacher certification in the area of Mathematics (5-Adult) as a certification program completer, students will also need to meet the following requirements, in addition to completing the major coursework requirements:

- Documentation of Pre-Professional Skills requirement in Reading, Writing, and Mathematics, using one of the following allowable evidence indicated in the West Virginia Licensure Testing Directory.
- Receive a passing score on the Praxis II licensure content exam, #5165: Mathematics Content Knowledge, prior to the clinical/Residency experience.
- Complete, submit, and pass the edTPA professional education assessment during the clinical/Residency experience.
- Maintain at least a cumulative GPA of 2.5.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | ENGL 102 (GEF 1) | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 128 (GEF 8) | 3 |
| MATH 126 (GEF 3) | 3 | General Elective | 3 |
| GEF 2B | 4 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 205 | 3 | MATH 156 | 4 |
| MATH 155 (GEF 8) | 4 | GEF 6 | 3 |
| STAT 215 or EDUC 232 (GEF 8) | 3 | GEF 7 | 3 |
| GEF 5 | 3 | General Elective | 3 |
| General Elective | 2 | General Elective | 3 |
| | 15 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 313 | 2 | EDUC 314 | 2 |
| EDUC 304 | 3 | EDUC 332 | 3 |
| SPED 404 (GEF 4) | 3 | RDNG 422 | 3 |
| MATH 251 | 4 | SPED 460 | 3 |
| MATH 338 or EDUC 437 | 3 | MATH 261 | 4 |

| | | | |
|---|---|---|---|
| | | MATH 218 | 3 |
| | 15 | | 18 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 412 | 5 | EDUC 413 | 9 |
| EDUC 432 | 3 | EDUC 485 | 3 |
| EDUC 436 | 3 | | |
| MATH 376 | 3 | | |
| | 14 | | 12 |

Total credit hours: 120

## Suggested Plan of Study for Transfer Students

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 205 | 3 | EDUC 314 | 2 |
| EDUC 313 | 2 | EDUC 332 | 3 |
| EDUC 304 | 3 | RDNG 422 | 3 |
| SPED 404 | 3 | SPED 460 | 3 |
| MATH 251 | 4 | MATH 261 | 4 |
| MATH 338 or EDUC 437 | 3 | MATH 218 | 3 |
| | 18 | | 18 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 412 | 5 | EDUC 413 | 9 |
| EDUC 432 | 3 | EDUC 485 | 3 |
| EDUC 436 | 3 | | |
| MATH 376 | 3 | | |
| | 14 | | 12 |

Total credit hours: 62

## Major Learning Outcomes

### SECONDARY MATHEMATICS EDUCATION

1. **Content Knowledge for Teaching** - Teacher candidates will demonstrate and use a deep and specialized knowledge of mathematics content, including how mathematical ideas develop and are connected in and out of the curriculum, to inform their work supporting meaningful learning of mathematics.
2. **Learners and Learning -** Teacher candidates will use awareness of how learners grow and develop and an understanding of differences across individual learners to design and implement developmentally appropriate learning experiences to engage all students in the learning process.
3. **Learning Environments -** Teacher candidates will collaborate with others to create academically safe classroom environments that foster positive and active engagement in learning for all learners.
4. **Planning for Instruction -** Teacher candidates will develop content goals for student learning that align with state standards and will design plans for instruction that engage students in meaningful learning experiences toward those goals.
5. **Pedagogy and Instructional Strategies -** Teacher candidates will facilitate learning experiences using a variety of instructional strategies, including the use of appropriate technology tools, to motivate and engage students in discussion and learning.
6. **Assessment of Student Learning -** Teacher candidates will design and implement both formative and summative assessments of student progress and learning as part of reflecting on and continuously improving instruction and to provide feedback to students about their own development.
7. **Professional Dispositions and Behaviors -** Teacher candidates will model the ethical standards expected for the teaching profession in the classroom, school, and the community, by engaging in ongoing professional learning and productively collaborating with colleagues, administrators, families, and community members.

# Secondary Science Education, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Bachelor of Science in Secondary Science Education program in WVU's School of Education prepares students to meet the content, pedagogical, and professional demands of teaching science in middle and high school settings. Students will choose from among the following content and certification specializations:

- General Science (5-Adult)
- Biology (9-Adult)
- Chemistry (9-Adult)
- Physics (9-Adult)

Graduates are eligible for certification to teach in their specialization area upon completion of the program.

Students complete more than 900 hours of field and clinical experiences in a variety of public school classrooms. This includes over 125 hours of field observation prior to a year-long residency during the final year of the program. The residency consists of a half-time placement in the first semester and a full-time placement in the second semester. These experiences are grounded in strong partnerships with local schools, offering rich opportunities to work closely with experienced teachers and diverse student populations.

Program coursework is designed with a strong commitment to academic excellence, informed by state and national standards and certification requirements. Courses focus on the specialized work of teaching science, including understanding students and how they learn, curriculum design, instructional strategies, and school contexts. Faculty members are active in their fields as educators and as scholars, bringing relevant and robust expertise to our teacher education programs.

The program also prepares students for key certification milestones, including the Praxis II content exam and the edTPA performance assessment. In addition, students receive ongoing support from academic advisors and career development specialists through the Office of Student Success in the College of Applied Human Sciences.

Designed with flexibility in mind, the program allows students to apply transfer credits, pursue general education electives, or add a minor or second major, particularly in their science field of interest. Students may also have the option to complete their final-year residency in their home communities or at a distance, depending on placement availability and program approval.

Graduates of the B.S. in Secondary Science Education program emerge as well-prepared, reflective educators equipped to meet the challenges and opportunities of today's middle and high school classrooms.

## Admissions for 2026-2027

### FIRST-TIME FRESHMEN

Admission to the B.S. in Secondary Science Education program is consistent with admission requirements for First-Time Freshmen applying to WVU. You can find more information at:

Admission Requirements for First-Time Freshmen - Undergraduate Admissions at WVU (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/)

### CURRENT WVU STUDENTS

Students admitted from other majors within WVU must have a 2.5 minimum cumulative GPA.

### TRANSFER STUDENTS

Students transferring from another institution must have a 2.5 minimum cumulative GPA.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.5 is required for graduation. | | |
| University Requirements | | 39 |
| Secondary Science Education Major Requirements | | 81 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements (GEF 1, 5, 6, 7) | | 15 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 22 |
| Number of available credits for general electives may vary based on selected science certification endorsement area | | |
| Total Hours | | 39 |

## Secondary Science Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.5 is required in all Secondary Science Education Major requirements | | |
| **SECONDARY EDUCATION CORE COURSEWORK** | | |
| EDUC 205 | Introduction to Teaching and Learning in Secondary Schools (New course added to CIM; showing as inactive) | 3 |
| EDUC 304 | Place-based and Emotionally Responsive Teaching | 3 |
| RDNG 422 | Reading in the Content Areas | 3 |
| SPED 404 | Special Education in Contemporary Society (GEF 4) | 3 |
| SPED 460 | Differentiation of Instruction | 3 |
| **SCIENCE METHODS/PEDAGOGY COURSEWORK** | | |
| EDUC 342 | Teaching & Learning Science in Secondary Schools 1 | 3 |
| or EDUC 339 | Mathematics & Science Methods for Secondary Teachers 1 | |
| EDUC 442 | Teaching & Learning Science in Secondary Schools 2 | 3 |
| or EDUC 439 | Mathematics & Science Methods for Secondary Teachers 2 | |
| **SCIENCE CONTENT COURSEWORK** | | |
| EDUC 445 | Practical Applications in Science and Science Teaching | 3 |
| EDUC 449 | History & Philosophy of Science | 3 |

| | | |
|---|---|---|
| Certification Endorsement Content Coursework | | 33-39 |
| Biology (33 hours) | | |
| Chemistry (35 hours) | | |
| General Science (39 hours) | | |
| Physics (35 hours) | | |
| **PROFESSIONAL FIELD AND CLINICAL EXPERIENCE COURSEWORK** | | |
| EDUC 313 | Field Experience & Technology Applications in Secondary Schools 1 | 2 |
| EDUC 314 | Field Experience & Technology Applications in Secondary Schools 2 | 2 |
| EDUC 412 | Clinical Experience in Secondary Schools/Residency 1 | 5 |
| EDUC 413 | Clinical Experience in Secondary Schools/Residency 2 | 9 |
| EDUC 485 | Residency/Technology Capstone in Secondary Education | 3 |
| Total Hours | | 81-87 |

## Content Coursework for Biology (9-Adult) Certification Endorsement (Teacher Certification Code T127)

| Code | Title | Hours |
|---|---|---|
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | 4 |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | 4 |
| BIOL 219<br>& 219L | Cellular and Molecular Biology<br>and Cellular & Molecular Biology Laboratory | 4 |
| BIOL 221 | Ecology and Evolution | 3 |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| MATH 150 | Applied Calculus | 3 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| PHYS 105<br>& 105L | Conceptual Physics<br>and Conceptual Physics Laboratory | 4 |
| ASTR 106 | Descriptive Astronomy | 3 |
| Total Hours | | 33 |

## Content Coursework for Chemistry (9-Adult) Certification Endorsement (Teacher Certification Code T128)

| Code | Title | Hours |
|---|---|---|
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory | 4 |
| CHEM 231<br>& 231L | Organic Chemistry: Brief Course<br>and Organic Chemistry: Brief Course Laboratory | 4 |
| PHYS 105<br>& 105L | Conceptual Physics<br>and Conceptual Physics Laboratory | 4 |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| MATH 155 | Calculus 1 | 4 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | 4 |
| ASTR 106 | Descriptive Astronomy | 3 |
| Total Hours | | 35 |

## Content Coursework for General Science (5-Adult) Certification Endorsement (Teacher Certification Code T133)

| Code | Title | Hours |
|---|---|---|
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| SUST 102 | Global Sustainability | 3 |
| SUST 201<br>& 201L | Earth System Science<br>and Earth System Science Laboratory | 4 |
| GEOL 321 | Geomorphology | 3 |
| GEOL 365 | Environmental Geology | 3 |
| ASTR 106 | Descriptive Astronomy | 3 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | 4 |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| PHYS 105<br>& 105L | Conceptual Physics<br>and Conceptual Physics Laboratory | 4 |
| MATH 150 | Applied Calculus | 3 |
| Total Hours | | 39 |

## Content Coursework for Physics (9-Adult) Certification Endorsement (Teacher Certification Code T140)

| Code | Title | Hours |
|---|---|---|
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | 4 |
| PHYS 314 | Introductory Modern Physics | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | 4 |
| MATH 155 | Calculus 1 | 4 |
| MATH 156 | Calculus 2 | 4 |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| ASTR 106 | Descriptive Astronomy | 3 |
| Total Hours | | 35 |

## WV Certification Requirements

To be able to be recommended for teacher certification in the area of Biology (9-Adult), Chemistry (9-Adult), General Science (5-Adult), or Physics (9-Adult) as a certification program completer, students will also need to meet the following requirements, in addition to completing the major coursework requirements:

- Documentation of Pre-Professional Skills requirement in Reading, Writing, and Mathematics, using one of the following allowable evidence indicated in the West Virginia Licensure Testing Directory.
- Receive a passing score on the appropriate Praxis II licensure content exam in the endorsement area, prior to the clinical/Residency experience:
  - #5236: Biology Content Knowledge
  - #5246: Chemistry

- #5436: General Science
- #5266: Physics

- Complete, submit, and pass the edTPA professional education assessment during the clinical/Residency experience.
- Maintain at least a cumulative GPA of 2.5.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | ENGL 102 (GEF 1) | 3 |
| ENGL 101 (GEF 1) | 3 | Science Certification Endorsement Content Course (GEF 8) | 4 |
| Science Certification Endorsement Content Course (GEF 2B) | 4 | Science Certification Endorsement Content Course (GEF 8) | 3 |
| Science Certification Endorsement Content Course (GEF 8) | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 205 | 3 | Science Certification Endorsement Content Course | 4 |
| Science Certification Endorsement Content Course | 4 | Science Certification Endorsement Content Course | 3 |
| Science Certification Endorsement Content Course | 4 | GEF 6 | 3 |
| GEF 5 | 3 | GEF 7 | 3 |
| General Elective | 1 | General Elective | 3 |
| | 15 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 313 | 2 | EDUC 314 | 2 |
| SPED 404 (GEF 4) | 3 | EDUC 342 or 339 | 3 |
| EDUC 445 | 3 | RDNG 422 | 3 |
| Science Certification Endorsement Content Course | 4 | SPED 460 | 3 |
| General Elective | 3 | General Elective | 3 |
| | | General Elective | 3 |
| | 15 | | 17 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 412 | 5 | EDUC 413 | 9 |
| EDUC 442 or 439 | 3 | EDUC 485 | 3 |
| EDUC 449 | 3 | | |
| EDUC 304 | 3 | | |
| | 14 | | 12 |

Total credit hours: 120

## Suggested Plan of Study for Transfer Students

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 205 | 3 | EDUC 314 | 2 |
| EDUC 313 | 2 | EDUC 342 or 339 | 3 |
| SPED 404 (GEF 4) | 3 | RDNG 422 | 3 |
| EDUC 445 | 3 | SPED 460 | 3 |
| Science Certification Endorsement Content Course | 4 | General Elective or Science Certification Endorsement Content Course | 4 |

| | | | |
|---|---|---|---|
| General Elective or Science Certification Endorsement Content Course | 3 | General Elective or Science Certification Endorsement Content Course | 3 |
| | 18 | | 18 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EDUC 412 | 5 | EDUC 413 | 9 |
| EDUC 442 or 439 | 3 | EDUC 485 | 3 |
| EDUC 449 | 3 | | |
| EDUC 304 | 3 | | |
| | 14 | | 12 |

Total credit hours: 62

## Major Learning Outcomes

### SECONDARY SCIENCE EDUCATION

1. **Content Knowledge for Teaching -** Teacher candidates will demonstrate and use a deep and specialized knowledge of science content, including how scientific ideas develop and are connected in and out of the curriculum, to inform their work supporting meaningful learning of science.
2. **Learners and Learning -** Teacher candidates will use awareness of how learners grow and develop and an understanding of differences across individual learners to design and implement developmentally appropriate learning experiences to engage all students in the learning process.
3. **Learning Environments** - Teacher candidates will collaborate with others to create academically safe classroom environments that foster positive and active engagement in learning for all learners.
4. **Planning for Instruction** - Teacher candidates will develop content goals for student learning that align with state standards and will design plans for instruction that engage students in meaningful learning experiences toward those goals.
5. **Pedagogy and Instructional Strategies -** Teacher candidates will facilitate learning experiences using a variety of instructional strategies, including the use of appropriate technology tools, to motivate and engage students in discussion and learning.
6. **Assessment of Student Learning -** Teacher candidates will design and implement both formative and summative assessments of student progress and learning as part of reflecting on and continuously improving instruction and to provide feedback to students about their own development.
7. **Professional Dispositions and Behaviors** - Teacher candidates will model the ethical standards expected for the teaching profession in the classroom, school, and the community, by engaging in ongoing professional learning and productively collaborating with colleagues, administrators, families, and community members.

# School of Sport Sciences

## Degrees Offered

- Bachelor of Arts
- Bachelor of Science

The School of Sport Sciences is dedicated to enhancing the quality of sport and physical activity by mitigating risks, amplifying benefits, and promoting lifelong participation and well-being. Through classroom, experiential, and active learning, we strive to prepare students to make a meaningful impact in their communities and beyond.

Students in our majors – coaching and performance science, esports business and entertainment, health and well-being, physical education and kinesiology, sport, exercise, and performance psychology, sport leadership, sport management – explore physiological, biomechanical, sociological, psychological, historical, and philosophical foundations of movement.

Careers can include, but are not limited to, sport coaching, strength and conditioning, and athlete development; physical education, sport instruction, and adapted physical activity; mental performance enhancement for athletes, military personnel, and performing artists; sport and esports facilities operations, management, marketing, and event coordination; athletic administration at the high school, collegiate, and professional levels; health and wellness coaching and more. Many advance to graduate studies.

Whether developing athletes, enhancing mental performance, advancing health and well-being, shaping the future of esports, or innovating in the management of sports, our graduates have opportunities to gain knowledge, skills, and experiences to make a meaningful impact across the diverse fields of human movement, performance, and wellness.

### BASIC INSTRUCTION PROGRAM

Courses offered in our basic instruction program are designed to engage students in sport and physical activity and are open to all students at the University.  A wide variety of team, individual, and leisure sports and recreational activities are offered both in person and online. The aims of the

program are to support: (1) an appreciation of the body and its capacity to move; (2) movement skills of games and sport; and (3) an appreciation of the value of continued activity over the lifespan.

# ADMINISTRATION

## SCHOOL DIRECTOR

- Dana Voelker - Ph.D. (Michigan State University)

## ASSOCIATE DIRECTOR

- James Wyant - Ph.D. (West Virginia University)

# FACULTY

## PROFESSORS

- Gonzalo Bravo - Ph.D. (The Ohio State University)
  Sport Management
- Sean Bulger - Ed.D. (West Virginia University)
  Physical Education and Kinesiology
- Damien Clement - Ph.D. (West Virginia University)
  Sport, Exercise, and Performance Psychology
- Kristen Dieffenbach - Ph.D. (University of North Carolina - Greensboro)
  Coaching and Performance Science
- Peter Giacobbi - Ph.D. (University of Tennessee)
  Sport, Exercise, and Performance Psychology
- Valerie Wayda - Ed.D. (West Virginia University)
  Coaching and Performance Science
- Sam Zizzi - Ed.D. (West Virginia University)
  Sport, Exercise, and Performance Psychology

## ASSOCIATE PROFESSORS

- Jeanette Garcia - Ph.D. (University of Virginia)
  Sport, Exercise, and Performance Psychology
- Cindy Lee - Ph.D. (The Ohio State University)
  Sport Management
- Emily Murphy - Ph.D. (West Virginia University)
  Health and Well-being
- Emi Tsuda - Ph.D. (The Ohio State University)
  Physical Education and Kinesiology
- Dana Voelker - Ph.D. (Michigan State University)
  Sport, Exercise, and Performance Psychology
- James Wyant - Ph.D. (Ph.D. (West Virginia University)
  Physical Education and Kinesiology

## ASSISTANT PROFESSORS

- Ashley Coker-Cranney - Ph.D. (West Virginia University)
  Sport, Exercise, and Performance Psychology
- Thadeu Gasparetto - Ph.D. (University of Vigo)
  Sport Management
- William (Guy) Hornsby III - Ph.D. (East Tennessee State University)
  Coaching and Performance Science
- Zachary P. Pedersen - Ph.D. (Indiana University)
  Sport Management
- Xiaoxia Zhang - Ph.D. (University of Texas - Arlington)
  Physical Education and Kinesiology
- Xiaoxia Zhang - Ph.D. (University of Texas - Arlington)
  Physical Education and Kinesiology

### SERVICE PROFESSOR

- Eloise Elliott - Ph.D. (Virginia Polytechnic Institute and State University)
  Physical Education and Kinesiology

### TEACHING ASSOCIATE PROFESSOR

- Gary Lhotsky - Ed.D. (Florida State University)
  Sport Management
- Justin Wartella - Ph.D. (University of Nevada - Las Vegas)
  Sport Management

### TEACHING ASSISTANT PROFESSORS

- Laura Adams - Ed.D. (West Virginia University)
  Health and Well-being
- Patrick Hairston - Ed.D. (Delaware State University)
  Sport Management
- Zenzi Huysmans - Ph.D. (West Virginia University)
  Sport, Exercise and Performance Psychology
- Peter McGahey - Ed.D. (Minnesota State University - Mankato)
  Coaching and Performance Science
- David Rice - Ph.D. (University of Pittsburgh)
  Coaching and Performance Science
- Michael Ryan - Ph.D. (West Virginia University)
  Coaching and Performance Science
- Ryan Wamsley - MS (West Virginia University)
  Physical Education and Kinesiology

### PROFESSORS EMERITI

- William Alsop
- Dana Brooks
- J. William Douglas
- Edward Etzel, Jr.
- Andrew Hawkins
- Lynn Housner
- Andrew Ostrow
- Robert Wiegand

### ASSOCIATE PROFESSORS EMERITI

- Dallas Branch
- Linda Carson
- Bruce Wilmoth
- Daniel Ziatz

# Coaching and Performance Science, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

This major prepares you to work with high-performance athletes in the athletic or tactical contexts, or with recreational participants in community or club leagues. As a profession, coaching has evolved well beyond merely teaching skills and strategy to athletes. Today, coaches need to evaluate and monitor athlete performance from the perspective of both a sport scientist and a sport pedagogist. The Coaching and Performance Science major is designed to provide a pedagogical foundation whether coaching “on-field” or “off-field” coaching (e.g., strength and conditioning, athlete performance and recovery). Students will complete an area of emphasis in one of the following areas: Coaching and Leadership or Strength and Conditioning. The Strength and Conditioning AoE is a CASCE-accredited program which ensures students can take the Certified Strength and Conditioning Specialist® (CSCS) exam.

The Coaching and Leadership area focuses on the development of domain-specific and underlying scientific content knowledge as well as the essential interpersonal and intrapersonal skills necessary for quality teaching and leadership within the sport context. The program challenges students to focus on their personal and professional foundation and ongoing development through the integration of applied sport science and hands-on application in coaching.

The Strength and Conditioning area of emphasis concentrates on the science of training, designing training prescriptions, athlete monitoring and performance assessment, and better overall steering of the training/recovery process. Students complete a 300-hour in-person internship with high school and collegiate athletic teams as part of the capstone experience.

## Admissions for 2026-2027

First-Time Freshmen who meet the University requirements are directly admitted into the Coaching and Performance Science program.

Students admitted from other majors within WVU must be in good academic standing (2.0 GPA).

Students transferring from another institution must be in good academic standing (2.0 GPA).

Major Code: 5510

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 65 |
| Career and Professional Development Sequence | | 0 |
| Coaching and Performance Science Major Requirements | | 55 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, and 8 | | 30 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 33 |
| Total Hours | | 65 |

## Professional and Career Development Sequence

| Code | Title | Hours |
|---|---|---|
| **Course Sequence** | | |
| CAHS 191 | First-Year Seminar | |
| CAHS 300 | Career Exploration in Applied Human Sciences | |
| Select one of the following: | | |
| ACE 475 | Capstone Strength and Conditioning | |
| CAHS 489 | Capstone Experience in AHS | |
| Total Hours | | 0 |

## Coaching and Performance Science Major Requirements

| Code | Title | Hours |
|---|---|---|
| ACE 149 | Introduction to Applied Anatomy | 3 |
| PET 175 | Motor Development | 2 |
| PET 215 | Adapted Sports and Physical Activity for All Learners (GEF 7) | 3 |
| PET 244 | Motor Learning and Performance | 2 |
| ACE 256 | Foundations of Coaching | 3 |
| SEP 272 | Introduction to Sport and Performance Psychology (GEF 4) | 3 |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| ACE 307 | Applied Sport Physiology | 3 |
| ACE 310 | Coaching Pedagogy | 3 |

| | | |
|---|---|---|
| ACE 327 | Applied Biomechanics | 3 |
| ACE 369 | Foundations of Strength and Conditioning | 3 |
| ACE 410 | Training Theories for Coaches | 3 |
| ACE 430 | Coaching Program Administration | 3 |
| PET 477 | Adapted Sports and Physical Activity Practicum | 3 |
| **Complete one of the following Areas of Emphasis (AoE)** | | **15** |
| Coaching & Leadership | | |
| Strength and Conditioning | | |
| Total Hours | | 55 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | GEF 3 | 3 |
| SEP 272 (GEF 4) | 3 | ACE 149 | 3 |
| GEF 2 | 3 | PET 244 | 2 |
| GEF 5 | 3 | ACE 256 | 3 |
| PET 175 | 2 | ENGL 102 | 3 |
| CAHS 191 | 2 | | |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 215 (GEF 7) | 3 | GEF 2 | 3 |
| ACE 307 | 3 | ACE 327 | 3 |
| ACE 310 | 3 | ACE 369 | 3 |
| CAHS 300 | 3 | Complete one of the following AoE courses: | 3 |
| Elective | 3 | ACE 265 | |
| | | ACE 257 | |
| | | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 8 | 3 | ACE 410 | 3 |
| Complete one of the following AoE courses: | 3 | PET 477 | 3 |
| CDFS 412 or 410 | | Complete one of the following AoE courses: | 3 |
| ACE 371 | | SEP 385 | |
| Complete one of the following AoE courses: | 3 | HN&F 200 | |
| SEP 350 | | General Electives | 6 |
| ACE 387 | | | |
| General Electives | 6 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 6 | 3 | GEF 8 | 3 |
| GEF 8 | 3 | General Electives | 12 |
| ACE 430 | 3 | | |
| Complete one of the following: | 3 | | |
| CAHS 489 | | | |
| ACE 475 | | | |

| | | |
|---|---|---|
| General Electives | 3 | |
| | 15 | 15 |

Total credit hours: 120

## Areas of Emphasis Offered:

- Coaching and Leadership (p. 160)
- Strength and Conditioning (p. 160)

## Coaching and Leadership Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| ACE 265 | Sport is Life | 3 |
| SEP 350 | Leadership Theory and Application in Sport | 3 |
| SEP 385 | Performance Psychology of Teams and Groups | 3 |
| CDFS 412 | Adolescent Development | 3 |
| or CDFS 410 | The Science of Positive Youth Development | |
| CAHS 489 | Capstone Experience in AHS | 3 |
| Total Hours | | 15 |

## Strength and Conditioning Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| HN&F 200 | Nutrition/Activity/Health | 3 |
| ACE 257 | Assessment and Monitoring in Strength and Conditioning | 3 |
| ACE 371 | Coaching and Cueing in Strength and Conditioning | 3 |
| ACE 387 | Periodization and Programming in Strength and Conditioning | 3 |
| ACE 475 | Capstone Strength and Conditioning | 3 |
| Total Hours | | 15 |

## Major Learning Outcomes

### COACHING AND PERFORMANCE SCIENCE

The goal of the program is for students to graduate with the essential skills and knowledge to work with athletes in a variety of contexts across their lifetime.

By the completion of the program, graduates:

1. will integrate disciplinary knowledge, skills, and dispositions and apply them to professional issues in coaching and performance science.
2. will reflect on their professional readiness and think critically about the continued refinement of the disciplinary knowledge, skills, and dispositions learned across the curriculum in coaching and performance science.
3. will model professional and ethical behaviors that are consistent with industry standards and the related recommendations for best practice learned across coaching and performance science.
4. will demonstrate the ability to evaluate and integrate best practices for assessing athlete needs and designing, implementing, and evaluating practice plans.

# Esports Business and Entertainment, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Esports Business and Entertainment major is a collaborative program housed in the College of Applied Human Sciences. In addition to the esports courses delivered by the College of Intercollegiate Programs, courses focused on sport management are delivered by the College of Applied Human Sciences, courses focused on business are delivered by the Chambers College of Business and Economics, and courses focused on entertainment are delivered by the College of Creative Arts and Media. Courses expose students to esports in contemporary society, in health and wellness, business,

governance, marketing, and event management.  The programs' skills-based courses allow students to gain hands-on experience in various areas the field.

## Admissions for 2026-2027

To be admitted to WVU's Esports Business and Entertainment major, first-time freshman must meet WVU's first-time freshman admission requirements (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/) for the 2024-25 academic year. Interested in Transferring? Review the transfer admission requirements (https://admissions.wvu.edu/how-to-apply/transfer-students/#anchor-transferreqs).

Major Code: 1205

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 56-59 |
| Esports Business and Entertainment Major Requirements | | 61-64 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 4, 5, 6 and 7 | | 24 |
| WVUE 191 | First Year Seminar | 2 |
| General Electives | | 30-33 |
| Total Hours | | 56-59 |

## Esports Business and Entertainment Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Esports Core Requirements** | | |
| A minimum grade of C- is required in all Esports Core Requirements. | | |
| ESPT 101 | Introduction to Esports | 3 |
| ESPT 199 | Esports Career Exploration | 1 |

| | | |
|---|---|---|
| ESPT 201 | Esports in Contemporary Society | 3 |
| ESPT 290 | Esports Health and Wellness | 3 |
| ESPT 420 | Esports Event Management | 3 |
| ESPT 480 | Esports Senior Capstone: Career Preparation and Readiness | 3 |
| ESPT 491 | Professional Field Experience | 6 |
| SM 310 | Esports Business | 3 |
| SM 321 | Esports Governance | 3 |
| SM 322 | Esports Marketing | 3 |
| or BCOR 350 | Principles of Marketing | |
| STAT 111 | Understanding Statistics (GEF 3) | 3 |
| **Required Area of Emphasis** | | **12-15** |
| Select one of the following: | | |
| Esports Business Development (15 Total Hours) * | | |
| Esports Marketing (12 Total Hours) | | |
| **Required Minor** | | **15** |
| Total Hours | | 61-64 |

*

Students pursuing the Esports Business Development area of emphasis will not be eligible to pursue the Entrepreneurship minor.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ESPT 201 | 3 |
| ESPT 101 | 3 | GEF 2 | 3 |
| ESPT 199 | 1 | GEF 4 | 3 |
| WVUE 191 | 2 | General Elective | 3 |
| GEF 5 | 3 | General Elective | 3 |
| GEF 2 | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | SM 310 | 3 |
| ESPT 290 | 3 | Minor Course | 3 |
| STAT 111 (GEF 3) | 3 | Minor Course | 3 |
| Minor Course | 3 | GEF 7 | 3 |
| GEF 6 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SM 321 | 3 | SM 322 | 3 |
| Area of Emphasis Course | 3 | Area of Emphasis Course | 3 |
| Minor Course | 3 | Area of Emphasis Course | 3 |
| General Elective | 3 | Minor Course | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ESPT 420 | 3 | ESPT 491 | 6 |
| ESPT 480 | 3 | General Elective | 3 |
| Area of Emphasis Course | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |

| | | |
|---|---|---|
| General Elective | 3 | |
| | 15 | 15 |

Total credit hours: 120

## Areas of Emphasis

Students must select and complete one of the following Areas of Emphasis as part of the Esports Business and Entertainment program.

- Esports Business Development (http://catalog.wvu.edu/undergraduate/intercollegiate/esports/#development)
- Esports Marketing (http://catalog.wvu.edu/undergraduate/intercollegiate/esports/#marketing)
- Health and Peak Performance in Gaming (p. 163)

## Esports Business Development Area of Emphasis

The Area of Emphasis in Esports Business Development will provide expertise to students in the Esports Business and Entertainment major in order to become successful entrepreneurs and business owners and/or operators.

**Course Requirements:** In order to satisfy the requirements of this AOE, students must successfully complete all of the required courses.

| Code | Title | Hours |
|---|---|---|
| ENTR 440 | Small Business Consulting | 3 |
| ENTR 460 | Entrepreneurship Practicum | 3 |
| BCOR 370 | Principles of Management | 3 |
| MKTG 350 | Product and Brand Management | 3 |
| ENTR 400 | Advanced Concepts in Entrepreneurship | 3 |
| Total Hours | | 15 |

## Esports Marketing Area of Emphasis

The Area of Emphasis in Esports Marketing will provide expertise to students in the Esports Business and Entertainment major in order to increase their ability to market their personal brand, events, reach different target markets, and utilize different media platforms.

**Course Requirements:** In order to satisfy the requirements of this AOE, students must successfully complete all of the required courses.

| Code | Title | Hours |
|---|---|---|
| MKTG 315 | Buyer Behavior | 3 |
| MKTG 325 | Marketing Research | 3 |
| MKTG 475 | Social Media and Marketing | 3 |
| MKTG 485 | Global Marketing | 3 |
| Total Hours | | 12 |

## Health and Peak Performance in Gaming Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| SEP 272 | Introduction to Sport and Performance Psychology | 3 |
| SEP 350 | Leadership Theory and Application in Sport | 3 |
| SEP 385 | Performance Psychology of Teams and Groups | 3 |
| SEP 420 | Sport and Performance Enhancement | 3 |
| Total Hours | | 12 |

## Degree Progress

- Students must complete each class in the Esports Core with a grade of C- or higher. If a student does not receive a C- in an Esports Core course, they will need to repeat the course to earn a higher grade. The Esports Core does not include minors or AOEs.
- By the end of a student's first year in the major, they must complete ESPT 101 to continue in the major.
- Prior to enrolling in ESPT 290, learners must have successfully completed (received a C- or higher) ESPT 101, ESPT 199 and ESPT 201.
- Students will complete a section of ESPT 491, professional field experience, in the Spring term of their last year.
- Students who do not meet these benchmarks may be removed from the major.

## Major Learning Outcomes

### ESPORTS BUSINESS AND ENTERTAINMENT

Students will be able to:

- Outline the concepts and skills necessary to be an accomplished leader in the esports and entertainment industries
- Understand current developing sectors and areas of growth within the esports industry and how they affect business decisions
- Demonstrate the ability to engage in civil discourse with peers, colleagues, and key stakeholders in order to successfully complete a task or common goal
- Deconstruct esports positions and careers to determine the necessary skills to successfully complete the roles and responsibilities
- Critically evaluate the operations, procedures, and best practices within the esports and entertainment industries
- Collaborate with peers to create meaningful policies, organize events, and leverage digital media to initiate positive change within esports

# Health and Well-being

## Degree Offered

- Bachelor of Arts
- Bachelor of Science

## Nature of the Program

The degrees offered in the Health and Well-Being program offer options for students who wish to pursue either a professional degree in health science or an alternative career pathway for those interested in community health and well-being. Students can choose to complete either a Bachelor of Arts or a Bachelors of Science in Health and Well-being.

The **B.S. Health and Well-being** is designed for students who aspire to be an effective part of a health care team. The major allows students to take the pre-requisite courses necessary to gain admission into these graduate level professional programs such as nursing, athletic training, physical and occupational therapy, chiropractic, or other allied health related professions. This is a great degree program for the person who wants to understand the underlying cause of disease, analyze human behavior, and identify and/or implement change.

The **B.A. Health and Well-being** prepares students for careers in community health promotion and comprehensive individual lifestyle management. Through a combination of coursework and experiential learning, students will develop the essential knowledge and skills to provide leadership and problem-solving abilities to interact with individuals and communities to promote and maintain healthy lifestyles. The focus of this degree program is to student health and well-being from different perspectives including physical health/well-being, emotional and mental health/well-being, and a healthy environment/health policy.

## Admissions for 2026-2027

- Incoming First-Time Freshmen and First-Time Transfer students are admitted directly to the Health and Well-being major.
- Students admitted from other majors within WVU must be in good academic standing (2.0 GPA).
- Students transferring from another institution must be in good academic standing (2.0 GPA).

BA Major Code: 5502
BS Major Code: 5509

**For specific information on the following programs please see the links to the right:**

- **Health and Well-Being, B.A.**
- **Health and Well-Being, B.S.**

# Health and Well-being, B.A.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 66 |
| Health and Well-Being Major Requirements | | 54 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, 7 & 8 | | 30 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 34 |
| Total Hours | | 66 |

## Health and Well-Being Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Components of Well-being** | | |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| ACE 149 | Introduction to Applied Anatomy | 3 |
| HN&F 171 | Introduction to Human Nutrition (GEF 2) | 3 |
| COUN 400 | Diversity and Human Relations | 3 |
| CDFS 417 | Families and Health | 3 |
| **Health and Well-being** | | |
| HWB 224 | Enhancing Health and Well-being | 3 |
| SEP 283 | Introduction to Exercise Psychology | 3 |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| COUN 303 | Introduction to Helping Professions | 3 |
| ACE 307 | Applied Sport Physiology | 3 |
| HWB 359 | Mindfulness for Health and Well-being | 3 |
| HWB 375 | Methods of Health Coaching | 3 |
| PET 401 | Foundations of Health Education | 3 |
| PET 402 | Core Concepts in Health Education | 3 |
| PET 403 | Program Design, Implementation, and Evaluation for Health Educators | 3 |
| HWB 404 | Enhancing Community Well-being | 3 |

| | | |
|---|---|---|
| SEP 415 | Physical Activity Promotion in Diverse Settings | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |
| Total Hours | | 54 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ACE 149 | 3 |
| PSYC 101 (GEF 4) | 3 | HN&F 171 (GEF 2) | 3 |
| CAHS 191 | 2 | HWB 224 | 3 |
| GEF 6 | 3 | GEF 2 | 3 |
| GEF 3 | 3 | Elective | 3 |
| Elective | 1 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | COUN 303 | 3 |
| SEP 283 | 3 | HWB 359 | 3 |
| HWB 375 | 3 | GEF 7 | 3 |
| GEF 5 | 3 | GEF 8 | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 300 | 3 | COUN 400 | 3 |
| ACE 307 | 3 | PET 402 | 3 |
| PET 401 | 3 | SEP 415 | 3 |
| GEF 8 | 3 | Electives | 6 |
| Elective | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 403 | 3 | HWB 404 | 3 |
| CDFS 417 | 3 | CAHS 489 | 3 |
| GEF 8 | 3 | Electives | 9 |
| Elective | 6 | | |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis

- Fitness (p. 166)
- Recreational Sport (p. 167)

## Fitness Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in AoE coursework. | | |
| HWB 373 | Fitness Management | 3 |
| HWB 374 | Fitness Field Testing | 3 |
| HWB 470 | Methods of Group Fitness | 3 |

| | | |
|---|---|---|
| HWB 472 | Methods of Personal Training | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | PSYC 101 (GEF 4) | 3 |
| PET 124 | 2 | PET 125 | 2 |
| PASS 191 | 2 | HN&F 171 (GEF 2) | 3 |
| GEF 6 | 3 | GEF 2 | 3 |
| HWB 224 | 3 | Dimension Hlth/WB Elective | 3 |
| Elective | 2 | Elective | 1 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | PET 244 | 2 |
| MATH 121 (GEF 3) | 3 | Complete one of the following | 3 |
| PET 175 | 2 | COUN 303 | |
| GEF 5 | 3 | HWB 359 | |
| Dimension Hlt/WB Elective | 3 | GEF 7 | 3 |
| Elective | 2 | GEF 8 | 3 |
| | | Elective | 3 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 300 | 3 | Complete one of the following | 3 |
| HWB 373 | 3 | COMM 304 | |
| HWB 375 | 3 | COMM 306 | |
| SEP 283 | 3 | COMM 308 | |
| Dimension Hlth/WB Elective | 3 | COMM 317 | |
| | | COMM 342 | |
| | | COMM 404 | |
| | | EXPH 365 | 3 |
| | | HWB 374 | 3 |
| | | PET 401 | 3 |
| | | Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 402 | 3 | PET 403 | 3 |
| HWB 404 | 3 | HWB 470 | 3 |
| HWB 472 | 3 | CAHS 489 | 3 |
| SEP 415 | 3 | GEF 8 | 3 |
| GEF 8 | 3 | Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Recreational Sport Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| **A minimum grade of C- is required in AOE coursework.** | | |
| ACE 256 | Foundations of Coaching | 3 |

| | | |
|---|---|---|
| ACE 310 | Coaching Pedagogy | 3 |
| ACE 430 | Coaching Program Administration | 3 |
| SM 426 | Liability in Sport | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | PSYC 101 (GEF 4) | 3 |
| PET 124 | 2 | PET 125 | 2 |
| PASS 191 | 2 | HN&F 171 (GEF 2) | 3 |
| HWB 224 | 3 | GEF 2 | 3 |
| GEF 6 | 3 | Dimension Hlt/WB Elective | 3 |
| Elective | 2 | Elective | 1 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | PET 244 | 2 |
| MATH 121 (GEF 3) | 3 | Complete one of the following | 3 |
| PET 175 | 2 | COUN 303 | |
| GEF 5 | 3 | HWB 359 | |
| ACE 256 | 3 | GEF 7 | 3 |
| Elective | 2 | GEF 8 | 3 |
| | | Dimension Hlth/WB Elective | 3 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 300 | 3 | Complete one of the following | 3 |
| HWB 375 | 3 | COMM 304 | |
| SEP 283 | 3 | COMM 306 | |
| Dimension Hlth/WB Elective | 3 | COMM 308 | |
| ACE 310 | 3 | COMM 317 | |
| | | COMM 342 | |
| | | COMM 404 | |
| | | EXPH 365 | 3 |
| | | PET 401 | 3 |
| | | ACE 430 | 3 |
| | | Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 402 | 3 | PET 403 | 3 |
| HWB 404 | 3 | Capstone | 3 |
| SEP 415 | 3 | CAHS 489 | |
| GEF 8 | 3 | GEF 8 | 3 |
| Electives | 3 | Elective | 3 |
| | | SM 426 | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Program Learning Outcomes

1. Program graduates will integrate disciplinary knowledge, skills, and dispositions and apply them to complex professional issues for employment in health and wellness settings, including the pursuit of advanced degrees in health-related disciplines.
2. Program graduates will reflect on their professional readiness and think critically about the continued refinement of the disciplinary knowledge, skills, and dispositions learned across the curriculum for employment in health and wellness settings, including the pursuit of advanced degrees in health-related disciplines
3. Program graduates will model professional and ethical behaviors that are consistent with industry standards and the related recommendations for best practice learned across the curriculum for employment in health and wellness settings, including the pursuit of advanced degrees in health-related disciplines
4. Program graduates will demonstrate the ability to identify, locate, evaluate and effectively share health and wellness related information via written and oral communication

# Health and Well-being, B.S.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 40 |
| Health and Well-Being Major Requirements | | 80 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 23 |
| Total Hours | | 40 |

## Health and Well-Being Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Pre-Health Professions** | | |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory (GEF 2) | 4 |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory (GEF 8) | 4 |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| Select one of the following: | | 4-6 |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory | |
| CHEM 110<br>& CHEM 115<br>& CHEM 115L | Preparatory Chemistry<br>and Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory * | |
| OR | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| PALM 200 | Medical Terminology | 3 |
| PSYC 241 | Introduction to Human Development (GEF 8) | 3 |
| Complete one of the following | | 4 |
| PSIO 241 | Elementary Physiology | |
| OR | | |
| PSIO 441 | Mechanisms of Body Function | |
| OR | | |
| BIOL 235 | Human Physiology | |
| BIOL 236 | Human Physiology: Quantitative Laboratory | |
| PALM 205 | Introduction to Human Anatomy | 3 |
| PALM 206 | Human Anatomy Laboratory | 1 |
| PALM 300 | Introduction to Pathology | 3 |
| ACE 327 | Applied Biomechanics | 3 |
| HWB 339 | Professional Immersion in Health and Well-being | 3 |
| **Health and Well-being** | | |
| HWB 224 | Enhancing Health and Well-being | 3 |
| SEP 283 | Introduction to Exercise Psychology | 3 |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| COUN 303 | Introduction to Helping Professions | 3 |
| ACE 307 | Applied Sport Physiology | 3 |
| HWB 359 | Mindfulness for Health and Well-being | 3 |
| HWB 375 | Methods of Health Coaching | 3 |
| PET 401 | Foundations of Health Education | 3 |
| PET 402 | Core Concepts in Health Education | 3 |
| PET 403 | Program Design, Implementation, and Evaluation for Health Educators | 3 |
| HWB 404 | Enhancing Community Well-being | 3 |
| SEP 415 | Physical Activity Promotion in Diverse Settings | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |
| Total Hours | | 80 |

*

Students who do not directly place into CHEM 111 and CHEM 111L must complete CHEM 110.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | BIOL 101 & 101L (GEF 2) | 4 |
| PSYC 101 (GEF 4) | 3 | MATH 124 (GEF 3) | 3 |
| BIOL 102 & 102L (GEF 8) | 4 | HWB 224 | 3 |
| CAHS 191 | 2 | SEP 283 | 3 |
| Electives | 3 | Electives | 2 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | PALM 200 | 3 |
| CHEM 115 & 115L (GEF 8) | 4 | PSIO 241 | 4 |
| HWB 375 | 3 | PSYC 241 (GEF 8) | 3 |
| GEF 5 | 3 | CAHS 300 | 3 |
| Elective | 2 | HWB 359 | 3 |
| | 15 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COUN 303 | 3 | PALM 205 | 3 |
| ACE 307 | 3 | PALM 206 | 1 |
| HWB 339 | 3 | ACE 327 | 3 |
| PET 401 | 3 | PET 402 | 3 |
| SEP 415 | 3 | Elective | 4 |
| | 15 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PALM 300 | 3 | PET 403 | 3 |
| HWB 404 | 3 | CAHS 489 | 3 |
| GEF 6 | 3 | GEF 7 | 3 |
| Electives | 6 | Electives | 6 |
| | 15 | | 15 |

Total credit hours: 120

## Area of Emphasis

- Therapeutic Exercise and Rehabilitation

## Therapeutic Exercise and Rehabilitation Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in AoE coursework. | | |
| HWB 321 | Therapeutic Modalities | 3 |
| ACE 469 | Basic Strength and Conditioning for Coaches | 3 |
| ACE 371 | Coaching and Cueing in Strength and Conditioning | 3 |
| SEP 425 | Psychology of Injury and Rehabilitation | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | BIOL 101 & 101L (GEF 2) | 4 |
| PSYC 101 (GEF 4) | 3 | MATH 124 (GEF 3) | 3 |
| BIOL 102 & 102L (GEF 8) | 4 | HWB 224 | 3 |
| CAHS 191 | 2 | SEP 283 | 3 |
| Electives | 3 | Electives | 2 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | PALM 200 | 3 |
| CHEM 115 & 115L (GEF 8) | 4 | PSIO 241 | 4 |
| HWB 375 | 3 | PSYC 241 (GEF 8) | 3 |
| GEF 5 | 3 | CAHS 300 | 3 |
| Elective | 1 | HWB 359 | 3 |
| | 14 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COUN 303 | 3 | PALM 205 | 3 |
| ACE 307 | 3 | PALM 206 | 1 |
| HWB 339 | 3 | ACE 327 | 3 |
| PET 401 | 3 | PET 402 | 3 |
| SEP 415 | 3 | Elective | 5 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PALM 300 | 3 | PET 403 | 3 |
| HWB 321 (AoE) | 3 | SEP 425 (AoE) | 3 |
| HWB 404 | 3 | ACE 371 (AoE) | 3 |
| ACE 469 (AoE) | 3 | CAHS 489 | 3 |
| GEF 6 | 3 | GEF 7 | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### HEALTH AND WELL-BEING

1. Program graduates will integrate disciplinary knowledge, skills, and dispositions and apply them to complex professional issues for employment in health and wellness settings, including the pursuit of advanced degrees in health-related disciplines.
2. Program graduates will reflect on their professional readiness and think critically about the continued refinement of the disciplinary knowledge, skills, and dispositions learned across the curriculum for employment in health and wellness settings, including the pursuit of advanced degrees in health-related disciplines
3. Program graduates will model professional and ethical behaviors that are consistent with industry standards and the related recommendations for best practice learned across the curriculum for employment in health and wellness settings, including the pursuit of advanced degrees in health-related disciplines
4. Program graduates will demonstrate the ability to identify, locate, evaluate and effectively share health and wellness related information via written and oral communication

# Physical Education and Kinesiology, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Physical Education and Kinesiology (PEK) program prepares students to teach, motivate, and shape the lives of Pre-K through adult learners in physical education, movement, wellness, and sport-based environments. The primary goal is to ensure our students understand the importance of and have the pedagogical skills to teach individuals to be physically literate or develop the ability to move with competence and confidence in a variety of different environments. Students can focus on physical education teaching certification where they will teach school physical education to individuals from preK-12$^{th}$ grades or students can focus on sport pedagogy and provide physical activity instruction to individuals across the developmental spectrum in commercial settings (i.e., YMCA, indoor and outdoor recreation centers/camps/resorts, fitness centers, campus recreation centers, aquatic centers, etc.). Students graduating in PEK are well prepared to deliver physical education and physical activity to individuals in school and community settings.

Program graduates are physical activity and wellness leaders in their school, communities, and states who promote healthy, active lifestyles for children and adults alike. The undergraduate PEK program is nationally accredited by the Council for the Accreditation of Educator Preparation (CAEP).

## Admissions for 2026-2027

First-Time Freshmen who meet the university requirements are directly admitted into the Physical Education and Kinesiology major.

Across the first 4 semesters, students must complete a series of tasks to meet Benchmark 1. Specifically, students must:

- Earn a grade of C- or higher in PET 101, ACE 149, PET 175, PET 215, PET 244;
- Achieve an overall GPA of 2.5 or higher;
- Earn ratings of "Acceptable" or better on the program's professionalism assessment;
- Satisfy all other requirements related to school access and safety (e.g., background checks, minors on campus training).

Students must meet the requirements in Benchmark 2 by October 15th preceding the start of Residency 2 in January. Students who meet the Benchmark 2 requirements will be in the **Physical Education Teaching Licensure Area of Emphasis.** Students not meeting the Benchmark 2 requirements will be in the **Sport Pedagogy Area of Emphasis**.

Benchmark 2 requirements must be met by October 15th of Residency 1 coursework in order to be eligible for the Physical Education Teaching Licensure Area of Emphasis. Benchmark 2 requirements are:

- Meet the WVDE Pre-Professional Skills Requirement.
- Pass the Physical Education (5091) PRAXIS II exam and submit scores.
- Meet WVDE requirements for the Residency 1 and 2 clinical experience permit.

Students in the Physical Education Teaching Licensure AoE are required to complete, submit, and pass the edTPA assessment to complete their degree and to be recommended to the state of West Virginia for licensure. To earn the Physical Education Teaching Licensure AoE students must:

- Earn a grade of C- or higher in all PET courses.
- Achieve an overall GPA of a 2.5 or higher.
- Earn ratings of "Acceptable" or better on the program professionalism assessment across all PET courses.
- Meet WVDE requirements for Residency 2 clinical experiences permit.

## ACCELERATED B.S./M.S. PHYSICAL EDUCATION TEACHER EDUCATION

Students must complete an internal application for admission to the accelerated B.S./M.S. (ABM) program. Students may apply for regular admission to the ABM in PETE in the fall semester following the completion of 60 credits. Only enrolled WVU PEK majors may be considered for regular admission to the program. Transfer students must complete at least 24 credit hours as degree-seeking students at WVU before applying. The minimum GPA requirement for regular admission is GPA of 3.0, with no provisional admissions allowed. Additional criteria include acceptable performance on the program's Professionalism Assessment used to monitor undergraduate student dispositions each semester. Regular admission will not be offered to students with less than 2 semesters to complete the bachelor’s degree. The ABM in PETE is not available to students seeking a second (or subsequent) bachelor’s degree. Internal application is due by October 1 with program admissions decisions communicated by December 15. Applications will be reviewed by a three member work group (2 PETE faculty and 1 academic adviser) and presented to the program faculty for a final admissions decision.

Major Code: 5508

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 50 |
| Physical Education and Kinesiology Major Requirements | | 70 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 6, and 8 | | 28 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 20 |
| Total Hours | | 50 |

## Physical Education and Kinesiology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Foundations** | | |
| A minimum grade of C- is required in all Foundations coursework. | | |
| PET 101 | Games in American Culture (Foundations) | 3 |
| ACE 149 | Introduction to Applied Anatomy | 3 |
| PET 175 | Motor Development | 2 |
| PET 215 | Adapted Sports and Physical Activity for All Learners (GEF 7) | 3 |
| PET 244 | Motor Learning and Performance | 2 |
| ACE 307 | Applied Sport Physiology | 3 |
| **PEK BLOCK OF COURSES** * | | |
| All students must earn a minimum grade of C- in all required PET courses. | | |
| And all students must maintain a minimum GPA of 2.5 or higher each semester. | | |
| PET 228 | Instructional Models and Curriculum in Physical Education (Fulfills Writing and Communication Skills Requirement) | 3 |

| | | |
|---|---|---|
| PET 233 | Pedagogy Theory and Application | 3 |
| PET 233L | Pre-Residency Laboratory 1 | 1 |
| PET 346 | Teaching of Invasion Games | 3 |
| PET 347 | Teaching of Net and Wall Games | 3 |
| PET 369 | Residency 1 Teaching Elementary Physical Education | 3 |
| PET 369L | Residency 1 Teaching Elementary Physical Education Laboratory | 1 |
| PET 441 | Technology in Physical Education | 3 |
| PET 441L | Pre-Residency Lab 2 | 1 |
| PET 445 | Standards-Based Assessment in Physical Education | 3 |
| PET 449 | Teaching of Lifetime, Fitness, and Rhythmic Activities | 3 |
| PET 477 | Adapted Sports and Physical Activity Practicum | 3 |
| RDNG 422 | Reading in the Content Areas | 3 |
| PET 401 | Foundations of Health Education | 3 |
| PET 402 | Core Concepts in Health Education | 3 |
| PET 403 | Program Design, Implementation, and Evaluation for Health Educators | 3 |
| **Areas of Emphasis** | | **12** |
| Students complete one of the following required Areas of Emphasis: | | |
| Physical Education Teaching Licensure ** | | |
| Sport Pedagogy | | |
| Total Hours | | 70 |

*****

Must meet Benchmark 1 to take PEK Block of Courses:

1. Earn a grade of C- or higher in the required PET courses.
2. Achieve an overall GPA of 2.5 or higher.
3. Earn ratings of "Acceptable" or better on the program professionalism assessment in PET 215.
4. Satisfy all other requirements related to school access and safety (e.g., background checks, minors on campus training).

******

Must meet Benchmark 2 by October 15th of Residency 1 coursework in order to be eligible for the Physical Education Teaching Licensure Area of Emphasis:

1. Meet the WVDE Pre-Professional Skills Requirement.
2. Pass the Praxis II (5091) exam and submit passing scores.
3. Meet WVDE requirements for the Residency 1 and 2 clinical experience permit.

Students in the Physical Education Teaching Licensure AoE are required to complete, submit, and pass the edTPA assessment to complete their degree and to be recommended to the state of West Virginia for licensure.

*******

Must meet Benchmark 3 prior to enrolling in the Physical Education Teaching Licensure Area of Emphasis, students must:

1. Earn a grade of C- or higher in all PET courses.
2. Achieve an overall GPA of 2.5 or higher.
3. Earn ratings of "Acceptable" or better on the program professionalism assessment across all PET courses.
4. Satisfy all other requirements related to school access and safety (e.g., background checks, minors on campus training).

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | ACE 149 | 3 |
| PET 101 (GEF 5) | 3 | ENGL 102 (GEF 1) | 3 |
| PET 175 | 2 | GEF 3 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 8 | 3 |
| General Elective | 5 | GEF 8 | 3 |
| | | General Elective | 1 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 244 | 2 | ACE 307 | 3 |
| PET 401 | 3 | RDNG 422 | 3 |
| PET 215 (GEF 7) | 3 | PET 402 | 3 |
| GEF 2B | 4 | GEF 4 | 3 |
| GEF 6 | 3 | GEF 8 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 228 | 3 | PET 347 | 3 |
| PET 233 | 3 | PET 441 | 3 |
| PET 233L | 1 | PET 441L | 1 |
| PET 403 | 3 | PET 477 | 3 |
| PET 449 | 3 | General Elective | 6 |
| General Elective | 2 | | |
| | 15 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 346 | 3 | Area of Emphasis | 12 |
| PET 369 | 3 | | |
| PET 369L | 1 | | |
| PET 445 | 3 | | |
| General Elective | 6 | | |
| | 16 | | 12 |

Total credit hours: 120

## RECOMMENDATION FOR TEACHER CERTIFICATION

Students in the Physical Education Teaching Licensure area of emphasis must satisfy the following WV certification requirements for Physical Education, preK-adult.

1. Students must meet the Pre-Professional Skills requirement and pass PRAXIS II (5091 exam) in physical education prior to Residency 2 - Student Teaching in Physical Education.

2. Students are required to complete, submit, and pass the edTPA assessment to complete their teacher education program, and to be recommended to the state of West Virginia for certification.

Note. Students interested in teaching in another state will need to meet the certification requirements of that state. The inclusion of School Health is designed to prepare students for certification in Health following receipt of their initial certification in Physical Education.

# Areas of Emphasis

- Physical Education Teacher Licensure (p. 176)
- Sport Pedagogy (p. 176)

# Physical Education Teaching Licensure Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| PET 488 | Residency 2 in Physical Education | 10 |
| PET 489 | Residency 2 Seminar | 2 |
| Total Hours | | 12 |

# Sport Pedagogy Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| ACE 256 | Foundations of Coaching | 3 |
| ACE 310 | Coaching Pedagogy | 3 |

| | | |
|---|---|---|
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |
| Total Hours | | 12 |

## Accelerated Program

- B.S. Physical Education and Kinesiology and M.S. Physical Education Teacher Education (p. 177)

## Accelerated B.S./M.S. Physical Education Teacher Education Program

Students in this accelerated bachelor's to masters (ABM) program have the opportunity to concurrently complete their undergraduate degree in Physical Education and Kinesiology and their master's degree in Physical Education Teacher Education via an accelerated pathway. Students may apply for admission to this ABM in the fall semester following completion of a minimum 60 credits and/or at least three semesters of full-time coursework. Only enrolled WVU Physical Education and Kinesiology majors may be considered for admission to the program. Transfer students must complete at least 24 credit hours as degree-seeking students at WVU before applying. The minimum standard for admission is a cumulative undergraduate GPA of 3.0, with no provisional admissions allowed. Additional criteria include acceptable performance on the program's Professionalism Assessment used to monitor undergraduate student dispositions each semester and passing scores on the PRAXIS Core Exam. Regular admission will not be offered to students with less than two semesters to complete the bachelor's degree. Students may apply using a Qualtrics application form that requires a resume and personal statement. Applications are due by October 15th with program admission decisions communicated by the end of the fall semester. Applications will be reviewed by an established ABM admissions work group.

Students in this ABM program must maintain a minimum cumulative GPA of 3.0 throughout their enrollment in both the undergraduate and graduate programs. Students in this ABM will complete all 30 credits of master's degree courses, 12 credits of which will count toward elective credit at the undergraduate level. Grades from selected courses (i.e., 12 credits) will be counted toward the students' GPA at both the bachelor's and master's degree levels for the purposes of determining satisfactory performance. Unless given specific permission by the Dean's Office, students admitted to this ABM program must maintain full-time continuous enrollment during fall and spring terms. Enrollment requirements in the summer term include the completion of 6 credits at the graduate level across consecutive years. Students' eligibility to remain in this ABM program will be evaluated at the end of each semester. Students failing to meet program or University standards will be placed on program probation for no more than one semester, after which they will be terminated from the ABM program. Terminated students as well as students who choose not to continue the ABM program will be eligible to receive their bachelor's degree after completing the traditional bachelor's degree requirements.

## Accelerated B.S./M.S. Degree Requirements

Students must fulfill all degree requirements for the B.S. in Physical Education and Kinesiology, including earning a minimum grade of C- in all PET CORE Block courses and maintaining a 2.5 GPA. In addition to all the requirements of the M.S. in Physical Education Teacher Education degree requirements, students must also meet all the requirements of the ABM.

### ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Physical Education and Kinesiology Major Requirements | | 108 |
| Shared Bachelor's/Master's Curriculum Requirements | | 12 |
| M.S. Physical Education Teacher Education Degree Requirements | | 18 |
| Total Hours | | 138 |

## Shared Bachelor's/Master's Coursework Requirements

| Code | Title | Hours |
|---|---|---|
| **Select four of the following courses:** | | **12** |
| PET 573 | Instructional Technology in Physical Education | |
| PET 575 | Principles of Effective Teaching in Physical Education-Advanced Laboratory | |
| PET 576 | Adapted Physical Education-Advanced Laboratory | |
| PET 577 | School Physical Activity Programs-Advanced Laboratory | |
| PET 580 | School Physical Activity Programs | |
| PET 581 | Adapted Physical Education | |
| PET 583 | Principles of Effective Teaching in Physical Education | |
| PET 585 | Physical Education Supervision and Advocacy-Advanced Laboratory | |
| **Choose ONE Area of Emphasis** | | |
| Curriculum and Instruction | | |
| C&I 602 | Curriculum and Teaching Principles | |

| | | |
|---|---|---|
| C&I 688 | Classroom Organization and Management | |
| OR | | |
| Interscholastic Sport Administration | | |
| SM 571 | Interscholastic Sport Organization and Administration | |
| SM 578 | Leadership in Interscholastic Athletic Administration | |
| OR | | |
| Models-based Physical Education | | |
| PET 565 | Models-based Physical Education | |
| PET 574 | Models-based Physical Education-Advanced Laboratory | |
| Total Hours | | 12 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | ACE 149 | 3 |
| PET 101 (GEF 5) | 3 | ENGL 102 (GEF 1) | 3 |
| PET 175 | 2 | GEF 3 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 8 | 3 |
| General Electives | 5 | GEF 8 | 3 |
| | | General Elective | 1 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PET 244 | 2 | ACE 307 | 3 |
| PET 215 (GEF 7) | 3 | RDNG 422 | 3 |
| PET 401 | 3 | PET 402 | 3 |
| GEF 2B | 4 | GEF 4 | 3 |
| GEF 6 | 3 | GEF 8 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| PET 228 | 3 | PET 347 | 3 | ABM | 3 |
| PET 233 | 3 | PET 441 | 3 | ABM | 3 |
| PET 233L | 1 | PET 441L | 1 | | |
| PET 403 | 3 | PET 477 (ABM) | 3 | | |
| PET 449 | 3 | ABM | 3 | | |
| General Elective | 2 | ABM | 3 | | |
| | 15 | | 16 | | 6 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| PET 346 | 3 | Area of Emphasis | 12 | ABM | 3 |
| PET 369 | 3 | ABM | 3 | ABM | 3 |
| PET 369L | 1 | ABM | 3 | | |
| PET 445 (ABM) | 3 | | | | |
| ABM | 3 | | | | |
| ABM | 3 | | | | |
| | 16 | | 18 | | 6 |

Total credit hours: 138

## Major Learning Outcomes

### PHYSICAL EDUCATION AND KINESIOLOGY

The goal of the program is for students to possess the skills to teach, motivate, and shape the lives of preK to adult learners in physical education, movement, wellness, and sport-based environments.

**Standard 1: Content and Foundational Knowledge** Physical education candidates demonstrate an understanding of common and specialized content, and scientific and theoretical foundations for the delivery of an effective preK-12 physical education program.

**Standard 2: Skillfulness and Health-Related Fitness** Physical education candidates are physically literate individuals who can demonstrate skillful performance in physical education content areas and health-enhancing levels of fitness.

**Standard 3: Planning and Implementation** Physical education candidates apply content and foundational knowledge to plan and implement developmentally appropriate learning experiences aligned with local, state and/or SHAPE America's National Standards and Grade-Level Outcomes for K-12 Physical Education through the effective use of resources, accommodations and/or modifications, technology and metacognitive strategies to address the diverse needs of all students.

**Standard 4: Instructional Delivery and Management** Physical education candidates engage students in meaningful learning experiences through effective use of pedagogical skills. They use communication, feedback, technology, and instructional and managerial skills to enhance student learning.

**Standard 5: Assessment of Student Learning** Physical education candidates select and implement appropriate assessments to monitor students' progress and guide decision making related to instruction and learning.

**Standard 6: Professional Responsibility** Physical education candidates demonstrate behaviors essential to becoming effective professionals. They exhibit professional ethics and culturally competent practices; seek opportunities for continued professional development; and demonstrate knowledge of promotion/advocacy strategies for physical education and expanded physical activity opportunities that support the development of physically literate individuals.

# Sport, Exercise, and Performance Psychology B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The undergraduate degree in sport, exercise, and performance psychology is the only major of its kind in the state of West Virginia and one of the few undergraduate programs in the nation that allows students to specialize in this knowledge area. Students explore the psychological and social factors influencing performance in sport and a range of additional performance domains, including business, military, and performing arts. Students also explore the psychological and social factors influencing exercise and physical activity behavior toward health and wellness. In spanning sport, exercise, and other performance contexts, students are prepared with knowledge and skills applicable to a range of careers and graduate programs in and around the sport industry.

Graduates of this program have pursued careers and advanced degrees in sport, exercise, and performance psychology, counseling, physical therapy, occupational therapy, public health, public administration, exercise science, business, law, and many other disciplines. Students opting to pursue an accelerated pathway can pursue a bachelor's in sport, exercise, and performance psychology and online master's in sport management in less time. Students wishing to pursue a career directly in the sport, exercise, and performance psychology field (e.g., as a Certified Mental Performance Consultant or licensed sport psychologist) are prepared to pursue the graduate degree or degrees required for those paths.  Through a capstone experience, all students in the major apply their knowledge and skills in an experiential learning setting (e.g., internship or graduate school preparatory course in research) to prepare them for a career of their choice.

## Admissions for 2026-2027

First time students who meet the University admission requirements are directly admitted into the SEPP program.

Students admitted from other majors within WVU must be in good academic standing (2.0 GPA).

Students transferring from another institution must be in good academic standing (2.0 GPA).

Major Code: 5546

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 66 |
| Professional and Career Development Sequence* | | |
| Sport, Exercise, and Performance Psychology Major Requirements | | 54 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6 and 7 | | 22 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 42 |
| Total Hours | | 66 |

## Professional and Career Development Sequence

| Code | Title | Hours |
|---|---|---|
| **Sequence** * | | |
| CAHS 191 | First-Year Seminar | |
| CAHS 300 | Career Exploration in Applied Human Sciences | |
| Select one of the following: | | |
| CAHS 489 | Capstone Experience in AHS | |
| or SEP 474 | Sport Studies Research Methods | |

## Sport, Exercise, and Performance Psychology Major Requirements

| Code | Title | Hours |
|---|---|---|
| SOC 101 | Introduction to Sociology (GEF 8) | 3 |
| PSYC 101 | Introduction to Psychology (GEF 8) | 3 |
| PSYC 241 | Introduction to Human Development (GEF 8) | 3 |
| PSYC 251 | Introduction to Social Psychology | 3 |
| PSYC 281 | Introduction to Psychological Disorders | 3 |
| COUN 303 | Introduction to Helping Professions | 3 |

| | | |
|---|---|---|
| ACE 149 | Introduction to Applied Anatomy | 3 |
| ACE 307 | Applied Sport Physiology | 3 |
| ACE 327 | Applied Biomechanics | 3 |
| A grade of C- or higher must be earned in all the following courses. | | |
| SEP 272 | Introduction to Sport and Performance Psychology (GEF 4) | 3 |
| SEP 283 | Introduction to Exercise Psychology | 3 |
| SEP 371 | Sport in American Society | 3 |
| SEP 385 | Performance Psychology of Teams and Groups | 3 |
| SEP 415 | Physical Activity Promotion in Diverse Settings | 3 |
| SEP 420 | Sport and Performance Enhancement | 3 |
| SEP 425 | Psychology of Injury and Rehabilitation | 3 |
| or HWB 359 | Mindfulness for Health and Well-being | |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |
| Total Hours | | 54 |

*

CAHS 191 is accounted for in the University Requirements, CAHS 300 and CAHS 489/SEP 474 as part of the Major Requirements.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | SEP 283 | 3 |
| SEP 272 (GEF 4) | 3 | ACE 149 | 3 |
| PSYC 101 (GEF 8) | 3 | SOC 101 (GEF 8) | 3 |
| ENGL 101 or 103 (GEF 1) | 3 | GEF 3 | 3 |
| GEF 2 | 4 | GEF 5 | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 241 | 3 | SEP 385 | 3 |
| ENGL 102 or 103 (GEF 1) | 3 | PSYC 251 | 3 |
| GEF 6 | 3 | PSYC 281 | 3 |
| GEF 7 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 300 | 3 | SEP 371 | 3 |
| ACE 307 | 3 | ACE 327 | 3 |
| COUN 303 | 3 | SEP 425 or HWB 359 | 3 |
| Elective or Professional Minor Course 1 | 3 | Elective or Professional Minor Course 2 | 3 |
| Elective | 3 | Elective or Professional Minor Course 3 | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SEP 415 | 3 | CAHS 489 | 3 |
| SEP 420 | 3 | Elective or Professional Minor Course 5 | 3 |
| Elective or Professional Minor Course 4 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |

| | | |
|---|---|---|
| Elective | 3 Elective | 3 |
| | 15 | 15 |

Total credit hours: 120

## Accelerated Program

- B.S. Sport, Exercise, and Performance Psychology and M.S. Executive Sport Management (p. 182)

## Accelerated B.S. Sport and Exercise Psychology/M.S. Executive Sport Management Program

Students in this accelerated bachelor's to masters (ABM) program have the opportunity to concurrently complete their undergraduate degree in Sport and Exercise Psychology and their master's degree in Sport Management via an accelerated pathway. Students may apply for admission to this ABM in the fall semester following completion of a minimum 60 credits and/or at least three semesters of full-time coursework. Only enrolled WVU Sport and Exercise Psychology majors may be considered for admission to the program. Transfer students must complete at least 24 credit hours as degree-seeking students at WVU before applying. The minimum standard for admission is a cumulative undergraduate GPA of 3.0, with no provisional admissions allowed. Regular admission will not be offered to students with less than two semesters to complete the bachelor's degree. Students may apply using a Qualtrics application form that requires a resume and personal statement. Applications are due by October 15th with program admission decisions communicated by the end of the fall semester. Applications will be reviewed by an established ABM admissions work group.

Students in this ABM program must maintain a minimum cumulative GPA of 3.0 throughout their enrollment in both the undergraduate and graduate programs. Students in this ABM will complete all 30 credits of master's degree courses, 12 credits of which will count toward elective credit at the undergraduate level. Grades from selected courses (i.e., 12 credits) will be counted toward the students' GPA at both the bachelor's and master's degree levels for the purposes of determining satisfactory performance. Unless given specific permission by the Dean's Office, students admitted to this ABM program must maintain full-time continuous enrollment during fall and spring terms. Enrollment requirements in the summer term include the completion of 6 credits at the graduate level across consecutive years. Students' eligibility to remain in this ABM program will be evaluated at the end of each semester. Students failing to meet program or University standards will be placed on program probation for no more than one semester, after which they will be terminated from the ABM program. Terminated students as well as students who choose not to continue the ABM program will be eligible to receive their bachelor's degree after completing the traditional bachelor's degree requirements.

## Accelerated Bachelors/Masters Degree Requirements

Students must fulfill all degree requirements for the B.S. in Sport, Exercise and Performance Psychology and the M.S. in Executive Sport Management. Students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| Sport, Exercise, and Performance Psychology Major Requirements | | 108 |
| Shared Bachelor's/Master's Curriculum Requirements | | 12 |
| Master of Science Executive Sport Management Requirements | | 18 |
| Total Hours | | 138 |

## Shared Bachelor's/Master's Coursework Requirements

| Code | Title | Hours |
|---|---|---|
| **Select four of the followng courses:** | | **12** |
| SM 527 | Navigating Legal Issues in Sport Management | |
| SM 535 | Management of Human Resources in Sport Organizations | |
| SM 540 | Sport Policy and Governance | |
| SM 546 | Sport Consumer Behavior and Marketing | |
| SM 570 | Financial Decision-Making in Sport | |
| SM 575 | Sport Development and Fundraising | |
| SM 580 | Social and Ethical Responsibility in Sport | |
| SM 586 | Sport Facility Operations | |
| Choose ONE Area of Emphasis | | |
| Sport Industry Management Area of Emphasis | | |
| SM 516 | Applied Research in Sport Management | |
| SM 545 | Current Issues & Applications in Sport Management | |

| | | |
|---|---|---|
| OR | | |
| Interscholastic Athletic Administration Area of Emphasis | | |
| SM 571 | Interscholastic Sport Organization and Administration | |
| SM 578 | Leadership in Interscholastic Athletic Administration | |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | SEP 283 | 3 |
| SEP 272 | 3 | ACE 149 | 3 |
| PSYC 101 | 3 | SOC 101 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 3 | 3 |
| GEF 2 | 4 | GEF 5 | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 241 | 3 | SEP 385 | 3 |
| ENGL 102 (GEF 1) | 3 | PSYC 251 | 3 |
| GEF 6 | 3 | PSYC 281 | 3 |
| GEF 7 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| CAHS 300 | 3 | SEP 371 | 3 | ABM | 3 |
| ACE 307 | 3 | ACE 327 | 3 | ABM | 3 |
| COUN 303 | 3 | SEP 425 or HWB 359 | 3 | | |
| Elective or Professional Minor Course 1 | 3 | ABM | 3 | | |
| Elective | 3 | ABM | 3 | | |
| | 15 | | 15 | | 6 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| SEP 415 | 3 | CAHS 489 or SEP 474 | 3 | ABM | 3 |
| SEP 420 | 3 | Elective or Professional Minor Course 4 | 3 | ABM | 3 |
| Elective or Professional Minor Course 2 | 3 | Elective or Professional Minor Course 5 | 3 | | |
| Elective or Professional Minor Course 3 | 3 | Elective | 3 | | |
| ABM | 3 | ABM | 3 | | |
| ABM | 3 | ABM | 3 | | |
| | 18 | | 18 | | 6 |

Total credit hours: 138

## Major Learning Outcomes

### SPORT, EXERCISE, AND PERFORMANCE PSYCHOLOGY

The goal of this program is to prepare students with essential knowledge and skills to successfully pursue graduate programs and careers within sport, exercise, and performance psychology and related industries of their choice.

- **Content Knowledge:** Students will integrate knowledge, skills, and dispositions and apply them to professional issues in sport, exercise, and performance psychology.
- **Reflection and Professional Readiness:** Students will reflect on their professional readiness and think critically about the continued refinement of the disciplinary knowledge, skills, and dispositions learned across the sport, exercise, and performance psychology curriculum.
- **Professionalism and Ethics:** Students will model professional and ethical behaviors that are consistent with the industry standards and the related recommendations for best practice learned across the sport, exercise, and performance psychology curriculum.

# Sport Leadership, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The online undergraduate sport leadership degree program prepares students with the leadership knowledge and skills to effectively traverse, integrate, and collaborate across varied sport-related fields using a customizable approach tailored to students' educational and career needs. Students are provided opportunity to coalesce multiple pathways in the sport sciences in a flexible, customizable, online format with curricular stranding and programmatic assessment related to leadership theory and research in sport and their application in diverse sport contexts. This degree program is a viable option for first-time freshmen, transfer students, or degree-seeking industry professionals desiring the flexibility of an entirely online education with a customizable curriculum in the sport sciences.

In addition to the institution's general education requirements, students will complete courses in career and professional development, diversity, as well as leadership theory and application in sport. Students will also select from four bundles of courses aligned with the major dimensions of sport sciences – administrative, pedagogical, psychological, and social. Students will explore electives outside the sport sciences to maximally tailor their degree program to their academic needs and career interests. The online BA in Sport Leadership is a customizable degree, the purpose of which is to provide students a well-balanced education along with the competencies needed to pursue a career in a sport-related industry of their choice.

## Admissions for 2026-2027

All students are directly admitted into the Sport Leadership program who meet the University requirements.

Students admitted from other majors within WVU must be in good academic standing (2.0 GPA).

Students transferring from another institution must be in good academic standing (2.0 GPA).

In-Person Major Code: 5542
Online Major Code: 5545

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 75 |
| Sport Leadership Major Requirements | | 45 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) | 1, 2, 3, 4, 5, 6, 7, and 8 | 31-37 |
| CAHS 191 | First-Year Seminar | 2 |
| General Electives | | 42-36 |
| Total Hours | | 75 |

## Sport Leadership Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Sport Leadership Core** | | |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |
| SEP 350 | Leadership Theory and Application in Sport | 3 |
| SEP 371 | Sport in American Society | 3 |
| SM 485 | Management of Sport Organizations | 3 |
| **Integrated Dimensions of Sport (at least 12 credits must be at the 300-400 level)** | | **30** |
| Administrative Dimensions of Sport | | |
| SM 125 | Sport Facility Management | |
| SM 137 | Sport Event Management | |
| SM 240 | Sport Governance | |
| SM 321 | Esports Governance | |
| SM 322 | Esports Marketing | |
| SM 375 | Sport in the Global Market | |
| SM 426 | Liability in Sport | |
| SM 486 | Sport Marketing & Sales | |
| Pedagogical Dimensions of Sport | | |
| PET 215 | Adapted Sports and Physical Activity for All Learners | |
| ACE 256 | Foundations of Coaching | |
| ACE 310 | Coaching Pedagogy | |
| Psychological Dimensions of Sport | | |
| SEP 272 | Introduction to Sport and Performance Psychology | |
| SEP 283 | Introduction to Exercise Psychology | |
| SEP 385 | Performance Psychology of Teams and Groups | |
| SEP 420 | Sport and Performance Enhancement | |
| SEP 425 | Psychology of Injury and Rehabilitation | |
| CDFS 212 | Development in Early and Middle Childhood | |
| CDFS 412 | Adolescent Development | |
| CDFS 416 | Trauma, Resiliency, and Children | |
| COUN 405 | Career and Lifespan Development | |
| Social Dimensions of Sport | | |
| ACE 265 | Sport is Life | |
| PET 101 | Games in American Culture | |
| SEP 373 | African Americans in Sports | |

| | |
|---|---|
| SM 275 | The Olympic Games |
| CDFS 110 | Families Across the Life Span |
| CDFS 210 | Introduction to Parenting |
| CDFS 415 | Family Interaction and Communication |
| COUN 303 | Introduction to Helping Professions |
| COUN 400 | Diversity and Human Relations |
| Total Hours | 45 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | Dimension of Sport 2 | 3 |
| Dimension of Sport 1 | 3 | GEF 6 | 3 |
| GEF 1 | 3 | GEF 7 | 3 |
| GEF 2 | 4 | GEF 8 | 3 |
| GEF 5 | 3 | Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Dimension of Sport 3 | 3 | SEP 350 | 3 |
| GEF 3 | 3 | Dimension of Sport 4 | 3 |
| GEF 4 | 3 | Dimension of Sport 5 | 3 |
| GEF 8 | 3 | GEF 1 | 3 |
| GEF 8 | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Dimension of Sport 6 | 3 | CAHS 300 | 3 |
| Elective | 3 | SEP 371 | 3 |
| Elective | 3 | Dimension of Sport 7 | 3 |
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SM 485 | 3 | CAHS 489 | 3 |
| Dimension of Sport 8 | 3 | Dimension of Sport 10 | 3 |
| Dimension of Sport 9 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### SPORT LEADERSHIP

***Program Learning Outcome #1 ---*** Program graduates will apply interdisciplinary knowledge, skills, and dispositions to complex professional issues in their field of study (i.e., use leadership theory and research to critically examine, and solve, real world case scenarios in sport settings; develop a leadership philosophy and portfolio illustrating their competencies and experiences in various sport settings).

***Program Learning Outcome #2 ---*** Program graduates will reflect on their professional readiness and think critically about the continued refinement of the interdisciplinary knowledge, skills, and dispositions learned across the curriculum (i.e., reflect upon professional goals, values, and skills and how those have changed over time; engage in experiential learning to identify professional challenges and development opportunities).

***Program Learning Outcome #3 ---*** Program graduates will model professional and ethical behaviors that are consistent with the industry standards and the related recommendations for best practice learned across the curriculum (i.e., display professionalism and ownership of professional growth; apply ethical principles to decision-making in a professional setting).

# Sport Management, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Since its inception in 1981, the WVU Sport Management undergraduate program has prepared students to work across all levels of sport as the team behind the team.  The curriculum has received national and international recognition as one of the best of its kind. Students are required to complete a minimum of three credit hours of internship. This “hands-on” experience is mutually beneficial and serves to help students gain full-time employment in the sport industry. The internship provides the student an opportunity to learn the sport industry while the sport organization evaluates a potential future employee. In essence, the internship has become the cornerstone of a student’s learning experience. The curriculum is multidisciplinary. Students have the flexibility through elective space to complete courses from many other schools and colleges across campus including Journalism, Communications, Business and Economics, and Arts and Sciences.

## Admissions for 2026-2027

### DIRECT ADMISSION CRITERIA

First time students who meet University requirements are directly admitted to the Sport Management major.

Students admitted from other majors within WVU must be in good academic standing (2.0 GPA).

Students transferring from another institution must be in good academic standing (2.0 GPA).

Major Code: 5511

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 66 |
| Professional and Career Development Sequence* | | |

| | |
|---|---|
| Sport Management Major Requirements | 54 |
| Total Hours | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5 and 6 | | 22 |
| PASS 191 | First-Year Seminar | 2 |
| General Electives | | 42 |
| Total Hours | | 66 |

## Professional and Career Development Sequence

| Code | Title | Hours |
|---|---|---|
| **Sequence** * | | |
| PASS 191 | First-Year Seminar | |
| CAHS 300 | Career Exploration in Applied Human Sciences | |
| CAHS 489 | Capstone Experience in AHS | |

## Sport Management Major Requirements

| Code | Title | Hours |
|---|---|---|
| A grade of C- or higher must be earned in all the following courses. | | |
| SM 125 | Sport Facility Management | 3 |
| SM 137 | Sport Event Management | 3 |
| SM 240 | Sport Governance | 3 |
| SM 287 | Contemporary Issues in Sport Management | 3 |
| SM 370 | Sport Finance and Economics | 3 |
| SM 375 | Sport in the Global Market (GEF 7) | 3 |
| SM 380 | History of American Sports | 3 |
| SM 426 | Liability in Sport | 3 |
| SM 485 | Management of Sport Organizations | 3 |
| SM 486 | Sport Marketing & Sales | 3 |
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |
| SEP 371 | Sport in American Society | 3 |
| Professional Minor ** | | 15 |
| Total Hours | | 54 |

*****

PASS 191 is accounted for in the University Requirements, PASS 300 and PASS 489 as part of the Major Requirements.

******

Students must select a professional minor (at least 15 credits) in consultation with their Student Success Specialist. Grade requirements for the professional minor depend upon the minor selected.

## Suggested Plan of Study

| First Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| PASS 191 | 2 | SM 137 | 3 |
| ENGL 101 or 103 (GEF 1) | 3 | GEF 4 | 3 |
| SM 125 | 3 | GEF 5 | 3 |
| GEF 2 | 4 | GEF 6 | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SM 240 | 3 | SM 287 | 3 |
| ENGL 102 or 103 (GEF 1) | 3 | Professional Minor Course 2 | 3 |
| GEF 3 | 3 | Professional Minor Course 3 | 3 |
| Professional Minor Course 1 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SM 380 | 3 | CAHS 300 | 3 |
| SEP 371 | 3 | SM 370 | 3 |
| Professional Minor Course 4 | 3 | SM 375 (GEF 7) | 3 |
| Professional Minor Course 5 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SM 426 | 3 | CAHS 489 | 3 |
| SM 485 | 3 | SM 486 | 3 |
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Accelerated Program

- B.S. Sport Management and M.S. Executive Sport Management (p. 189)

## Accelerated B.S. Sport Management/M.S. Executive Sport Management Program

Students in this accelerated bachelor's to masters (ABM) program have the opportunity to concurrently complete their undergraduate degree in Sport Management and their master's degree in Executive Sport Management via an accelerated pathway. Students may apply for admission to this ABM in the fall semester following completion of a minimum 60 credits and/or at least three semesters of full-time coursework. Only enrolled WVU Sport Management majors may be considered for admission to the program. Transfer students must complete at least 24 credit hours as degree-seeking students at WVU before applying. The minimum standard for admission is a cumulative undergraduate GPA of 3.0, with no provisional admissions allowed. Regular admission will not be offered to students with less than two semesters to complete the bachelor's degree. Students may apply using a Qualtrics application form that requires a resume and personal statement. Applications are due by October 15th with program admission decisions communicated by the end of the fall semester. Applications will be reviewed by an established ABM admissions work group.

Students in this ABM program must maintain a minimum cumulative GPA of 3.0 throughout their enrollment in both the undergraduate and graduate programs. Students in this ABM will complete all 30 credits of master's degree courses, 12 credits of which will count toward elective credit at the undergraduate level. Grades from selected courses (i.e., 12 credits) will be counted toward the students' GPA at both the bachelor's and master's degree levels for the purposes of determining satisfactory performance.  Unless given specific permission by the Dean's Office, students admitted to this ABM program must maintain full-time continuous enrollment during fall and spring terms. Enrollment requirements in the summer term include the completion of 6 credits at the graduate level across consecutive years. Students' eligibility to remain in this ABM program will be evaluated at the end of each semester. Students failing to meet program or University standards will be placed on program probation for no more than one semester, after which they will be terminated from the ABM program. Terminated students as well as students who choose not to continue the ABM program will be eligible to receive their bachelor's degree after completing the traditional bachelor's degree requirements.

## Accelerated BS/MS Degree Requirements

Students must fulfill all degree requirements for the B.S. in Sport Management and the M.S. in Executive Sport Management. Students must also meet all the requirements of the ABM.

## ABM DEGREE REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Sport Management Major Requirements | | 108 |
| Shared Bachelor's/Master's Curriculum Requirements | | 12 |
| MS Executive Sport Management Degree Requirements | | 18 |
| Total Hours | | 138 |

## SHARED BACHELOR'S/MASTER'S COURSEWORK REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| **Select four courses from the following list:** | | **12** |
| SM 527 | Navigating Legal Issues in Sport Management | |
| SM 535 | Management of Human Resources in Sport Organizations | |
| SM 540 | Sport Policy and Governance | |
| SM 546 | Sport Consumer Behavior and Marketing | |
| SM 570 | Financial Decision-Making in Sport | |
| SM 575 | Sport Development and Fundraising | |
| SM 580 | Social and Ethical Responsibility in Sport | |
| SM 586 | Sport Facility Operations | |
| Choose ONE Area of Emphasis | | |
| Sport Industry Management Area of Emphasis | | |
| SM 516 | Applied Research in Sport Management | |
| SM 545 | Current Issues & Applications in Sport Management | |
| OR | | |
| Interscholastic Athletic Administration Area of Emphasis | | |
| SM 571 | Interscholastic Sport Organization and Administration | |
| SM 578 | Leadership in Interscholastic Athletic Administration | |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 191 | 2 | SM 137 | 3 |
| ENGL 101 or 103 (GEF 1) | 3 | GEF 4 | 3 |
| SM 125 | 3 | GEF 5 | 3 |
| GEF 2 | 4 | GEF 6 | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SM 240 | 3 | SM 287 | 3 |
| ENGL 102 or 103 (GEF 1) | 3 | Professional Minor Course 2 | 3 |
| GEF 3 | 3 | Professional Minor Course 3 | 3 |
| Professional Minor Course 1 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| SM 380 | 3 | SEP 371 | 3 | ABM | 3 |

| | | | | | |
|---|---|---|---|---|---|
| CAHS 300 | | 3 SM 370 | | 3 ABM | 3 |
| Professional Minor Course 4 | | 3 SM 375 (GEF 7) | | 3 | |
| Professional Minor Course 5 | | 3 ABM | | 3 | |
| Elective | | 3 ABM | | 3 | |
| | | 15 | | 15 | 6 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| SM 426 | | 3 SM 486 | | 3 ABM | 3 |
| SM 485 | | 3 CAHS 489 | | 3 ABM | 3 |
| ABM | | 3 ABM | | 3 | |
| ABM | | 3 ABM | | 3 | |
| Elective | | 3 Elective | | 3 | |
| Elective | | 3 Elective | | 3 | |
| | | 18 | | 18 | 6 |

Total credit hours: 138

## Major Learning Outcomes

### SPORT MANAGEMENT

The goal of the program is for students to graduate with the essential skills and knowledge to work effectively within the profession of sport management. This is a diverse profession with many pathways.

- **Content Knowledge:** Students will integrate knowledge, skills, and dispositions and apply them to professional issues in sport management.
- **Reflection and Professional Readiness:** Students will reflect on their professional readiness and think critically about the continued refinement of the disciplinary knowledge, skills, and dispositions learned across the sport management curriculum.
- **Professionalism and Ethics:** Students will model professional and ethical behaviors that are consistent with the industry standards and the related recommendations for best practice learned across the sport management curriculum.

# Multidisciplinary Studies, B.MdS.

## Degree Offered

- Bachelor of Multidisciplinary Studies (B. MdS.)

## Nature of the Program

The CAHS Multidisciplinary Studies (MDS) program offers students the flexibility to create a program of study to meet a student's career aspirations in an applied human sciences field. Students develop a breadth of knowledge and a set of employable skills in the areas of applied human sciences by combining three minors of which two minors must be from CAHS (see below for list of minors). The flexibility and potential course offerings available through this major will help students succeed in both traditional and non-traditional employment opportunities in applied human science professions.

The CAHS MDS provides:

- a personalized plan of study for the ideal career.
- students with the opportunity to turn their passion for helping people build better lives into a dream career.
- students with the academic flexibility to explore unique educational opportunities offered at the University.

Minors in Applied Human Sciences:

- Addiction Studies
- Child Development and Family Studies
- Development Through Sport and Physical Activity
- Esports Management
- Exercise Psychology
- Health Coaching
- Human Services

- Personal Training and Group Fitness
- Physical Training and Performance
- Secondary STEM Education
- Special Education
- Sport and Performance Psychology
- Sport Innovation and Global Industry Trends
- Sport Coaching
- Sport Communication

It is important to know that the possibilities are only constrained by one's imagination!

## Admissions for 2026-2027

Interested students are admitted into the MDS-CAHS major. Students must have a minimum overall GPA of 2.0 to graduate from WVU. Students who fall below this 2.0 GPA will be placed on academic probation and subject to additional requirements such as required meetings with academic advisers and a retention specialist, study halls and tutoring, meeting with peer advisers, and meetings with the CAHS academic affairs committee.

Major Code: 5504

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 or ENGL 103 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 69 |
| Multidisciplinary Studies Major Requirements | | 51 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 6, 7, and 8 | | 34 |
| One of the following: | | 1-2 |
| CDFS 191 | First-Year Seminar | |
| EDUC 191 | First-Year Seminar | |

| | | |
|---|---|---|
| CAHS 191 | First-Year Seminar | |
| General Electives | | 34-33 |
| Total Hours | | 69 |

## Multidisciplinary Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| CAHS 300 | Career Exploration in Applied Human Sciences | 3 |
| CAHS 489 | Capstone Experience in AHS | 3 |
| **AHS Minor 1** | | **15** |
| **AHS Minor 2** | | **15** |
| **Additional Minor** | | **15** |
| Total Hours | | 51 |

*

Students must complete at least 60 credit hours of 200-400 level coursework.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| First-Year Seminar | 2 | GEF 2 | 4 |
| GEF 1 | 3 | GEF 6 | 3 |
| GEF 5 | 3 | GEF 8 | 3 |
| GEF 7 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 3 | 3 | GEF 1 | 3 |
| GEF 4 | 3 | AHS Minor 1 | 3 |
| GEF 8 | 3 | AHS Minor 1 | 3 |
| GEF 8 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CAHS 300 | 3 | AHS Minor 1 | 3 |
| AHS Minor 1 | 3 | AHS Minor 2 | 3 |
| AHS Minor 1 | 3 | AHS Minor 2 | 3 |
| AHS Minor 2 | 3 | Minor 3 | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AHS Minor 2 | 3 | CAHS 489 | 3 |
| AHS Minor 2 | 3 | Minor 3 | 3 |
| Minor 3 | 3 | Minor 3 | 3 |
| Minor 3 | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

# Major Learning Outcomes

## MULTIDISCIPLINARY STUDIES

Program graduates will integrate the knowledge, skills, and dispositions learned across three discrete areas of study (academic minors) and apply them to complex professional problems using a multidisciplinary approach that accounts for different perspectives, various information sources and analytical tools, contextual uncertainties, and possible solutions.

Program graduates will reflect on their professional readiness and think critically about the continued refinement of the disciplinary knowledge, skills, and dispositions learned across the multidisciplinary studies curriculum.

Program graduates will model professional and ethical behaviors that are consistent with the industry standards and the related recommendations for best practice learned across the multidisciplinary curriculum.

# Arts and Sciences- Eberly College of

## Overview and Mission

First established in 1867, and named in 1993, the Eberly College of Arts and Sciences is the heart of West Virginia University. Its West Virginia University's largest academic college and boasts the most disciplinary breadth, providing education in the areas of literature and the humanities, mathematical and data science, natural science, and social and behavioral sciences.

Eberly values interdisciplinarity. In addition to their primary majors, students often earn minors or double majors which allow them to create unique academic profiles. Through Eberly's varied academic offerings, students are encouraged to tackle the world's most pressing challenges through subject-area expertise, hands-on experience, and creativity.

The Eberly College is committed to student success inside and outside of the classroom. All undergraduate students participate in the Eberly Edge program as their core college curriculum. The Eberly Edge is a unique educational experience that aims to prepare students, regardless of major, for their next steps. This innovative program promotes interdisciplinary thinking, fosters a sense of belonging, and develops desirable career competencies for professional and personal success.

Students in the Eberly College are guided by award-winning faculty who are excellent teachers, prolific scholars, and skilled mentors. Our faculty embrace hands-on approaches to teaching and learning and are committed to the success of their students. Student success is further enhanced by Eberly's Foundational STEM Collaborative, Writing Studio, and dedicated advisors and career development specialists. Eberly's faculty, curriculum, and student support services provide the foundation for continued growth and development long after graduation as student tackle 21$^{st}$ century's most pressing issues.

## ADMINISTRATION

### DEAN

- R. Gregory Dunaway - Ph.D. (University of Cincinnati)
  Dean

### ASSOCIATE DEANS

- Valérie Lastinger - Ph. D. (University of Georgia)
  Academic Affairs
- Asuntina S. Levelle - J.D. (West Virginia University)
  Financial Planning and Management
- Rita Rio - Ph.D. in Biology (Yale University)
  Associate Dean for Research and Graduate Studies

### ASSISTANT DEANS

- Andrea Bebell - Ph.D. (West Virginia University)
  Undergraduate Student Services and Programs
- John Navaratnam - Ph.D. (West Virginia University)
  Curriculum and Assessment

## EBERLY EDGE PROGRAM

An education in arts and sciences nurtures intellectual curiosity and empowers students with the skills they need for a dynamic and rapidly evolving world. Graduates are given an edge for life as private citizens as well as professionals. The Eberly Edge, an innovative core curriculum, stresses the connections between diverse academic disciplines through intentional collaboration and integration of the arts and sciences. In doing so, the Eberly Edge prioritizes meaningful education experiences that foreground professional preparedness and experiential learning opportunities that not only demonstrate the synergy between academic disciplines but reinforces core competencies identified by employers as desirable skills. Further, the Eberly Edge's focus on outcomes will serve to differentiate the Eberly College of Arts and Sciences and attract future students within a quickly evolving and competitive market. For current students, the Eberly Edge will support retention efforts through its intentional focus on shared values, experiences, goals, and community.

All Eberly majors in a B.A., B.S, B.M.D.S., and B.S.W. program must complete the Eberly Edge as described on the catalog curriculum page for each program.

Sections of courses taught for the Eberly Edge program are assessed separately from other sections of the same course. While all sections of a course share a similar content, sections designated as EDG sections meet additional requirements and a different pedagogical approach. For this reason,

Eberly Edge courses may not be taken via transient work or via dual campus enrollment. Transfer students will work with the College Office transfer adviser to understand how the Eberly Edge coursework will be fulfilled.

## PROGRAM LEARNING OBJECTIVES

1. **Data in society:** Evaluate reliability, validity, and scope, including assessing the role of technology in creation, analysis, representation, and accessibility of information.
2. **Effective and civil communication:** Demonstrate effective and civil communication in spoken and written forms that respond appropriately to audience, purpose, and context.
3. **Ethics and civic responsibility**: Compare and contrast the outcomes of applying different ethical principles and frameworks to everyday life, learning, and workplace scenarios.
4. **Global and regional perspectives:** Develop awareness of the impact cultural, economic, and social structures have on communities near home or around the world.
5. **Integration of arts and sciences & application for policy and practice:** Integrate diverse disciplinary knowledge bases to effectively understand and address complex and boundary spanning topics and design ethical, data-driven solutions to local/global issues and effectively communicate them to relevant stakeholders as part of an interdisciplinary team.
6. **High-Impact Learning Experience:** Integrate outside-the-classroom experiences and observations with academic studies to apply knowledge in complex situations.

## EBERLY EDGE CURRICULUM

As part of their graduation requirements, students must fulfill all 6 Edge requirements, either through a major course requirement or a through an Eberly Edge (EDG) designated section of a course, for a total of 18 credits. Courses used to fulfill one of the EDG requirements can also double as a general education course, a major or minor course, but must be a course or a section of a course approved for the Eberly Edge.

- Each major may have at minimum 3 credits of overlap. To see what the overlap is for each major, please navigate to the specific major. The overlap approved overlap will change when students change majors. To see the overlap, please refer to each major link in the catalog.
- If students pursue a dual degree or a double-major, they will fulfill the Eberly Edge curriculum of the primary degree.
- Eberly Edge courses are eligible for the D/F repeat policy. EDG courses can be D/F repeated with any section of the course; however, to fulfill the EDG requirement, it must be D/F repeated with an EDG section specifically.

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civic Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts and Sciences | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 18 |

For questions about the Eberly Edge, please email ECASUGFORMS@mail.wvu.edu

# SpeakWrite Program

The Eberly College of Arts and Sciences is committed to fostering students' abilities in writing, speaking, visual presentations. The College's SpeakWrite (https://speakwrite.wvu.edu/about/) initiative helps students become stronger, more confident communicators in their classes, in their work, and in their community by assessing:

- **P**urpose: What exactly do I want to happen?
- **A**udience: Who is reading, listening, or viewing?
- **C**onventions: What is expected in this context?
- **T**rouble spots: What could get in the way of my goals?

**SpeakWrite Principles:**

- Engagement. When students speak and write purposefully and thoughtfully in their classes, they are engaged. They are ready to enter conversations in their fields and in their communities. They are developing a critical skill, valued by employers and society, that is a hallmark of an Arts and Sciences education.
- Practice. Effective communication is a complex activity that cannot be mastered in a single course. It is the responsibility of the entire academic community. Students need practice conveying the knowledge they gain as they complete their majors.

- Discipline-Specific Knowledge and Abilities. People write and speak with a particular *purpose*, to a particular *audience*, in a particular context defined by particular *conventions*. Speaking and writing in the majors is most effectively guided by those with discipline-specific expertise.

The Eberly Writing Studio (https://speakwrite.wvu.edu/writing-studio/) is available as a resource, consultant, and partner for faculty teaching SpeakWrite courses--and their students.

Several Eberly College undergraduate programs are **SpeakWrite Certified™**. SpeakWrite Certified Programs (https://speakwrite.wvu.edu/about/certified-majors-and-courses/) incorporate and develop students' written, verbal, visual, and mediated communication skills in coursework across the curriculum. Students completing majors in SpeakWrite Certified Programs automatically fulfill the WVU General Education Foundations (GEF) writing and communication skills requirement.

Students completing Eberly College programs that do not carry SpeakWrite Certification fulfill the writing and communication skills requirement by completing ENGL 101 and 102 (or 103), and a minimum of two additional program-designated SpeakWrite Certified courses.

# Degree Options

The Eberly College offers 5 types of degrees: Bachelor of Arts (B.A.), Bachelor of Integrated Studies (B.I.S.), Bachelor of Multidisciplinary Studies (B.M.D.S.), Bachelor of Science (B.S.), Bachelor of Social Work (B.S.W.). In addition, the College offers a State-level degree, the Regents' Bachelor of Arts (R.B.A.).
While those degrees vary greatly in scope and applications, all of our degrees are unified through the College core: the Eberly Edge. This curriculum complements each of our degree programs so that all graduates of the Eberly College have a shared experience and are fully prepared with the skills required for lifelong learning and future careers. The Eberly Edge is a flexible core that provides students with opportunities that enhance their learning in their major curriculum. It includes a high impact experience that students may fulfill either through an experience requirement built into their major, or by an individual one (study abroad, internship, school placement, etc.).

## BACHELOR OF ARTS:

The Bachelor of Arts is designed to offer ample room for students to design part of their curriculum.The 120 credit hours required of all WVU degrees are a careful balance of general education courses, major courses, and general electives. On average, a B.A. degree comprises 30 credits of general education, 39 credit hours of courses in the major and 51 credits of general electives. This balance allows students to easily earn a double-major, or additional minors.This well-rounded degree gives students a broad educational foundation that they will use as lifelong learners. Students' familiarity with a variety of disciplines spanning the humanities, social sciences and natural sciences gives them broad adaptability for the careers in many fields, even as those fields rapidly change.

*B.A. Structure*: To preserve this balance of the B.A. students who earn 120 credits may earn a maximum of 46 credits in their major.

## BACHELOR OF INTEGRATED STUDIES:

The Bachelor of Integrated Studies is designed as a very flexible degree with 30 credits of general education, 30 credits of major electives, and 60 credits of general electives. Students can work with their adviser to design a degree that prepares them for their next step. They can take advantage of several career preparation skills such as communication and earn minors.

## BACHELOR OF MULTIDISCIPLINARY STUDIES:

The Bachelor of Multidisciplinary Studies is an online or a face-to-face program that allows students to earn three minors in the areas of their choice across all colleges. The flexible curriculum includes opportunities for service learning and internships.

## BACHELOR OF SCIENCE:

The Bachelor of Science is designed to provide a focused study in the science of a student's major as well as acquiring foundational knowledge of mathematics, statistics, and science outside of the major. On average, the Bachelor of Science comprises about 30 credits of general education, 60 credit hours of courses in the major and 30 credits of general electives. Students graduating with a B.S. acquire an appreciation of the sciences in a broad interdisciplinary context. The in-depth, wide-ranging preparation in the sciences opens the door for students to qualify for a variety of careers in industry, government, or research.

*B.S. Structure*: To ensure a broad preparation in the sciences, each major with the B.S. degree designation must include at the minimum MATH 150 and of 2 pairs of 2 different foundational sciences outside of the major (BIOL, CHEM, PHYS, SUST). The bachelor's degrees in Data Science and in Mathematics may replace one pair of science with MATH 156 and STAT 215.

## BACHELOR OF SOCIAL WORK:

The B.S.W. is a professional, nationally accredited degree that prepares students for a career in social work in a variety of contexts. The B.S.W. curriculum ensures that students are well prepared to practice their chosen profession in hospitals, schools, non-profit organizations or government agencies. The B.S.W. curriculum is accredited by the Council on Social Work Education (C.S.W.E.). It currently comprises 25 credits of general education coursework, 69 credit hours in the major and about 16 general elective credits.

*B.S.W. Structure*: The B.S.W. curriculum requires an array of courses in allied disciplines as well as a core courses in social work. Prior to their junior year, students must satisfy all requirements to be admitted to the professional level of the curriculum. Students educational experience culminates with a field placement.

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## Minors

Most major programs in the Eberly College of Arts and Sciences also offer academic minors (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/#minorstext). In addition, minors are available in Africana Studies, Gerontology, Leadership Studies, LGBTQ Studies, Medical Humanities and Health Studies, Native American Studies, and Statistics. If a student successfully completes the requirements for a minor, it will be recorded on the student's official record and will appear on transcripts.

Requirements for academic minors are set by the department offering the minor. Specific courses may be required as well as a minimum grade or grade point average for courses in the minor. Courses in the minor may not be taken pass/fail. The minor field may not be the same as the student's major field.

## Certificate Programs

The Eberly College offers an undergraduate certificate program in Behavior Analysis (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/behavior_analysis/).

## Eberly College of Arts and Sciences Minors

Eberly majors can select from a great variety of minors in our college (see below) or in other colleges. Earning a minor is an excellent way for students to round up their education.

### DEPARTMENT OF BIOLOGY

- Biology (http://catalog.wvu.edu/undergraduate/minors/biology/)

### DEPARTMENT OF COMMUNICATION STUDIES

- Communication Studies (http://catalog.wvu.edu/undergraduate/minors/communication_studies/)

### DEPARTMENT OF ENGLISH

- Creative Writing (http://catalog.wvu.edu/undergraduate/minors/creative_writing/)
- English (http://catalog.wvu.edu/undergraduate/minors/english/)
- Medical Humanities and Health Studies (http://catalog.wvu.edu/undergraduate/minors/medicalhumanitiesandhealthstudies/)
- Professional Writing (http://catalog.wvu.edu/undergraduate/minors/professional_writing_and_editing/)

### DEPARTMENT OF FORENSIC AND INVESTIGATIVE SCIENCE

- Forensic and Investigative Science (http://catalog.wvu.edu/undergraduate/minors/forensicinvestigativesci/)

### DEPARTMENT OF GEOLOGY AND GEOGRAPHY

- Geography (http://catalog.wvu.edu/undergraduate/minors/geography/)
- Geography: Geographic Information Science (GIS) (http://catalog.wvu.edu/undergraduate/minors/gis/)
- Geology (http://catalog.wvu.edu/undergraduate/minors/geology/)

### DEPARTMENT OF HISTORY

- Africana Studies (http://catalog.wvu.edu/undergraduate/minors/africana_studies/)
- History (http://catalog.wvu.edu/undergraduate/minors/history/)

### DEPARTMENT OF PHILOSOPHY

- Applied Ethics (http://catalog.wvu.edu/undergraduate/minors/applied_ethics/)
- Philosophy (http://catalog.wvu.edu/undergraduate/minors/philosophy/)
- Religious Studies (http://catalog.wvu.edu/undergraduate/minors/religious_studies/)

### DEPARTMENT OF PHYSICS AND ASTRONOMY

- Astronomy (http://catalog.wvu.edu/undergraduate/minors/astronomy/)
- Physics (http://catalog.wvu.edu/undergraduate/minors/physics/)

### DEPARTMENT OF PSYCHOLOGY

- Psychology (http://catalog.wvu.edu/undergraduate/minors/psychology/)

### DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

- Anthropology (http://catalog.wvu.edu/undergraduate/minors/anthropology/)
- Criminology (http://catalog.wvu.edu/undergraduate/minors/criminology/)
- Sociology (http://catalog.wvu.edu/undergraduate/minors/sociology/)

### DEPARTMENT OF WOMEN AND GENDER STUDIES

- LGBTQ Studies (http://catalog.wvu.edu/undergraduate/minors/lgbtqstudies/)
- Women and Gender Studies (http://catalog.wvu.edu/undergraduate/minors/women_and_gender_studies/)

### DEPARTMENT OF WORLD LANGUAGES

- Arabic Studies (http://catalog.wvu.edu/undergraduate/minors/arabicstudies/)
- Chinese Studies (http://catalog.wvu.edu/undergraduate/minors/chinese_studies/)
- French (http://catalog.wvu.edu/undergraduate/minors/french/)
- Spanish (http://catalog.wvu.edu/undergraduate/minors/spanish/)

### PROGRAM: NATIVE AMERICAN STUDIES

- Native American Studies (http://catalog.wvu.edu/undergraduate/minors/native_american_studies/)

### SCHOOL OF MATHEMATICAL AND DATA SCIENCES

- Actuarial Science (http://catalog.wvu.edu/undergraduate/minors/actuarial_science/)
- Applied Mathematics (http://catalog.wvu.edu/undergraduate/minors/applied_mathematics/)
- Data Science (http://catalog.wvu.edu/undergraduate/minors/data_science/)
- Pure Mathematics (http://catalog.wvu.edu/undergraduate/minors/mathematics/)
- Statistics (http://catalog.wvu.edu/undergraduate/minors/statistics/)

### SCHOOL OF POLICY AND POLITICS

#### Leadership Studies

- Leadership Studies (http://catalog.wvu.edu/undergraduate/minors/leadership_studies/)

#### Political Science

- American Politics & Policy (http://catalog.wvu.edu/undergraduate/minors/american_politics__policy/)
- International & Comparative Politics (http://catalog.wvu.edu/undergraduate/minors/international__comparative_politics/)
- Law & Legal Studies (http://catalog.wvu.edu/undergraduate/minors/law__legal_studies/)
- Political Science (General) (http://catalog.wvu.edu/undergraduate/minors/political_sciencegeneral/)
- Political Theory (http://catalog.wvu.edu/undergraduate/minors/political_theory/)

### SCHOOL OF SOCIAL WORK

- Gerontology (http://catalog.wvu.edu/undergraduate/minors/gerontology/)

## Policies


- Admission to Arts and Sciences Degree Programs (p. 199)
- GPA Policy (p. 200)
- Office Hours (p. 200)
- Minimum and Maximum Loads (p. 200)
- Credit by Examination Rules for Eberly College (p. 200)
- Probation and Suspension (p. 201)
- Graduation (p. 202)


## Admission to Arts and Sciences Degree Programs

High school students and transfer students are admitted directly to some majors, while some programs require completion of a few basic courses; specific requirements are described in departmental sections that follow.  For current students who wish to move to an Eberly degree program,

the minimal College requirement for admission is a 2.0 overall average. Please see the Admission Tab for each major to see specific admission requirements.

## Eberly GPA Policy

- All degree programs in the Eberly College require a cumulative grade point average of 2.0, unless accreditation standards require a higher cumulative GPA.
- All majors in the Eberly College set performance standards for courses applied to meet major requirements. Performance may be evaluated in 3 different ways, at the discretion of the unit (please see individual major pages). If a major offers areas of emphasis (AOE), the AoE follows the same rules as the rest of the major.
  - a GPA of 2.0 in all courses applied to major requirements;
  - a minimum grade of C- in all courses applied to major requirements;
  - a GPA of 2.0 in all courses applied to major requirements, with a minimum grade of C- in selected courses.

## Office Hours

Faculty must hold regular weekly office hours during the semester/instructional period in which students may consult outside of class time to discuss course content and other related matters. Modality of the office hours will follow that of the course.

- Faculty teaching one or more courses are expected to hold a minimum of three regularly scheduled office hours per week outside of class times.
  - Depending on the course's modality, these office hours can be scheduled either for face-to-face interaction and/or synchronous online communication.
  - In the case of face-to-face courses, instructor may opt to conduct only one office hour synchronous online.
  - At least one of the three office hours shall be scheduled on a day the course is not in session.
- In addition to regularly scheduled office hours, faculty shall arrange alternative appointments (by appointment at a mutually convenient time) for students' conflicts.
- Office hours, including schedule, location, and contact information, shall be listed on the syllabus, on eCampus, and posted near the faculty member's office by the end of the first week of instruction.

## Permission to Enroll in a Graduate Course

- As per university policy, students who meet the criteria may seek permission to enroll in a graduate course numbered 500-599.
- If approved, students may enroll for up to one graduate course per semester.
- The percentage of undergraduate students in a 500 level class may not exceed 20% of the overall enrollment.

## Minimum and Maximum Load

Students should earn 15 credits a semester (or 30 credits a year) in order to stay on track in their 4-year graduation plan. A minimum of twelve hours in a semester is required for full-time status. No student enrolled in the College may enroll for more than twenty hours in a semester without permission from the Assistant Dean for Undergraduate Student Services and Programs. Typically, overload petitions are restricted to graduating seniors who take degree-pursuant courses, who have a completion rate above 90%, and have earned an overall GPA of 3.00.

## Credit by Examination Rules

Credit by examination provides students the opportunity to receive credit in courses by demonstrating that they have acquired sufficient knowledge of a subject without formal enrollment in a course or study in the classroom. This opportunity is offered only to students enrolled full- or part-time at the University. The initiation of a credit-by-examination request does not entitle a student to special in-class instruction or tutoring by an instructor.

Students may petition to receive credit by examination for any course listed by a department in the College as a course for which credit by examination is appropriately awarded. Applications, course lists, and examination schedules are available each semester.

A student may apply to challenge a course for credit by examination if

- The student is at the time of examination registered in the University
- The student's official record does not show credit for the course (i.e., any grade of S, P, A, B, C, D, or I)
- The student is not officially enrolled in the course at the time of examination (a student who withdraws from a course after the end of the official registration period is officially enrolled in that course until the end of the semester, and not eligible to take the course by examination during that semester); and
- A grade of F, FNA, FSA, IF, or UF has not been recorded on the student's transcript for the course within 2 calendar years of the date of the examination. A student may challenge the same course by examination only two times

Credit only (not a grade) will be awarded for the successful completion of the examination with a grade of C or higher. Because a comprehensive examination is used to establish credit, it is the policy of the College that a student should demonstrate at least an average (C) knowledge of course

content to receive any credit.  The criteria for earning a C are made known in advance to students who request the information from the department offering the course examination.

A non-refundable fee is charged for credit by examination and must be paid within the prescribed period prior to each examination period.

# Probation and Suspension

## ACADEMIC PROBATION

After final grades are complete for the fall and spring semesters, the Registrar notifies students who have a GPA of less than a 2.00 and places them on Academic Probation until their GPA reaches the minimum 2.00. Probationary students must remedy their deficiency during the following semester. Students who accumulate three semesters of Academic Probation and who do not remedy their GPA by the end of the third term of Academic Probation will receive an Academic Suspension.

## ACADEMIC PROBATION

After final grades are complete for the fall and spring semesters, the Registrar notifies students who have a GPA of less than a 2.00 and places them on Academic Probation until their GPA reaches the minimum 2.00. Probationary students must remedy their deficiency during the following semester. Students who accumulate three semesters of Academic Probation and who do not remedy their GPA by the end of the third term of Academic Probation will receive an Academic Suspension. The three semesters are in total and need not be consecutive. Please see the university policy on Academic Probation and Suspension (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probation_and_suspension) for more details.

Eberly students who are placed on Academic Probation sign a contract which outlines schedule, meeting, and GPA requirements.  Please see the Eberly website for details.

**NOTE: The plan of study and the probation contract will be used at the end of the semester if the student has to file an Academic Suspension and/or a Financial Aid appeal.**

Please see the university policy on Academic Probation and Suspension (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probation_and_suspension) for more details.

Eberly students who are placed on Academic Probation sign a contract which outlines schedule, meeting, and GPA requirements.  Please see the Eberly website for details.

**NOTE: The plan of study and the probation contract will be used at the end of the semester if the student has to file an Academic Suspension and/or a Financial Aid appeal.**

## DISMISSAL FROM MAJOR

Eberly students must meet the benchmarks outlined in the Degree Progress tab; failure to do so may result in removal from the major.  All Eberly majors require that students have a 2.00 overall grade point average, but a few programs require a higher GPA. At the discretion of the department and the Dean, students with a GPA of 1.9 may be retained within their major. Students who have a GPA below a 1.9 are placed in the Bachelors of Integrated Studies (BIS) major until they bring their GPA to the desired 2.00. At that point, they can either go back to their original major, or switch to another major, either within or outside of the college. Students in the BIS major are advised in the Academic Affairs Office, where they can explore their major and career choices. This is a temporary placement, usually for one semester. While students are listed in the BIS program, they must remain in contact with their desired program adviser, who will place a note in DegreeWorks to attest the student's visit. The Eberly Director of Undergraduate Advising will remove the advising hold after students have also met with their desired program adviser.

## ACADEMIC SUSPENSION

After final grades are posted in fall and spring, the Registrar notifies students who have a deficient GPA (please check the Catalog (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#Suspension_Guid)).

## ACADEMIC SUSPENSION APPEALS

Students can file an Academic Suspension appeal by submitting a Suspension Appeal form, along with supporting documentation, to the Director of Undergraduate Advising. Please refer to the College website (http://eberly.wvu.edu/students/current-students/probation-and-suspension-policy/) for important deadline information. The appeals are heard by a committee of faculty.

## READMISSION AFTER SUSPENSION

Students who have been suspended need to reapply to the university. When they come back to WVU, they are placed on Academic Probation until their GPA reaches a 2.00. Students seeking readmission should consult the Eberly Office of Academic Affairs website, under "Student seeking Readmission."

# Graduation

## GRADUATION AND DIPLOMA APPLICATION

*The **semester of** graduation*, seniors will receive an email from the Registrar's Office to remind them to fill out a graduation application online through their MIX account. The application is usually available the second week of any given semester for graduation at the end of that term, and remains open for about 6 weeks.

### IMPORTANT NOTES:

- No candidate can graduate without completing an application for graduation and diploma.
- If students' curriculum is incorrect in DegreeWorks, they should first submit a graduation application and then immediately email ECASUGFORMS@mail.wvu.edu to fill out the proper curriculum change forms.
- After submitting their application online, students will receive an email confirmation. Subsequently, they will receive a conditional approval email, or a denial notification. The conditional approval does not guarantee graduation.
- If students do not graduate on the date for which they initially applied, the graduation application is submitted automatically for up to three additional semesters.

## COMMENCEMENT CEREMONY

In addition, students who wish to participate in the Commencement Ceremony (May or December) should register on line through the University Graduation (http://graduation.wvu.edu/) website the semester of graduation. Participation in the Commencement Ceremony does not mean that a student will graduate and be eligible to receive a diploma.

Students may petition the Assistant Dean for Undergraduate Student Services and Programs to participate in the Commencement Ceremony prior to completion of their degree requirements if they are registered for their last six credit hours the following semester (Fall, Spring, Summer). For example, a student who will graduate in August and is registered for the last six credits during the summer term may petition the Assistant Dean for Undergraduate Student Services and Programs to participate in the May ceremony.

# Eberly Edge Program Learning Outcomes

- Evaluate reliability, validity, and scope, including assessing the role of technology in creation, analysis, representation, and accessibility of information.
- Demonstrate effective and civil communication in spoken and written forms that respond appropriately to audience, purpose, and context.
- Compare and contrast the outcomes of applying different ethical principles and frameworks to everyday life, learning, and workplace scenarios.
- Develop awareness of the impact cultural, economic, and social structures have on communities near home or around the world.
- Integrate diverse disciplinary knowledge bases to effectively understand and address complex and boundary spanning topics.
- Design ethical, data-driven solutions to local/global issues and effectively communicate them to relevant stakeholders as part of an interdisciplinary team.
- Integrate outside-the-classroom experiences and observations with academic studies to apply knowledge in complex situations.

# Degree Designation Learning Outcomes

## BACHELOR OF ARTS (B.A.)

A primary mission of the Eberly College of Arts and Sciences is to promote full development of each student as an individual and as a member of society. Students completing a Bachelor of Arts degree in the Eberly College fulfill broad general education foundation requirements, Bachelor of Arts degree requirements, study of at least one discipline in depth, and complimentary coursework that spans disciplinary boundaries. The hallmark of an Arts and Sciences education is opportunity for students to craft programs of study that integrate interests and address aspirations through a combination of major and minor, or dual major, areas of study.

Bachelor of Arts degree programs in the Eberly College integrate

- Knowledge of central principles, practices, facts, concepts, theories, and disciplinary tools in a major area of concentration
- Skills in communication using a variety of channels including writing, speaking, reading, listening, and viewing
- Practice in analyzing and solving problems, recognizing ambiguities, proposing alternatives, drawing inferences, developing imaginative approaches, constructing predictions, and making reasoned decisions using appropriate information resources and analytical tools
- Study of a foreign language to attain an intermediate level of proficiency for interacting in a non-native language and culture
- Opportunities for defining relationships between the student’s degree program and post-baccalaureate goals

## BACHELOR OF INTEGRATED STUDIES (B.I.S.)

The Bachelor of Integrated Studies allows flexible learning options with the integrative coursework, aligned with a student's future professional and academic goals and interests. It may also utilize credit for prior learning. The major focuses on communications and integrative skills that prepare graduates for future employment or continuing education.

The Bachelor of Integrated Studies degree program enables students to:

- Recognize integrative and applied learning, including synthesis across general and specialized studies.
- Connect experience that occurs outside the classroom with academic studies to broaden and deepen understanding to explore complex issues in original ways.
- Demonstrate the ability to understand and ask meaningful questions about complex topics, as well as evaluate multiple sources of knowledge relevant to complex topics.
- Develop intellectual and practical skills, including inquiry and analysis, critical and creative thinking, and written and oral communication as well as develop foundations and skills for lifelong learning.
- Cultivate flexible writing and oral presentation skills adaptable to a variety of contexts with a clear sense of purpose, audience, and conventions.

## BACHELOR OF MULTIDISCIPLINARY STUDIES (B.M.D.S.)

A primary mission of the Eberly College of Arts and Sciences is to promote full development of each student as an individual and as a member of society. Students completing a Bachelor of Multidisciplinary Studies degree in the Eberly College complete broad general education foundation requirements, MDS core requirements, and three academic minors that work together to achieve individual educational and/or career goals. The BMDS degree program does not limit students to courses of study in a particular college or school, but rather stresses the importance of breadth of knowledge and cross-disciplinary communication.

The Bachelor of Multidisciplinary Studies degree program in the Eberly College integrates

- Knowledge of and aptitude with principles, practices, facts, concepts, theories and tools in three minor areas of concentration
- Communication skills using a variety of channels including writing, speaking, reading, listening, and viewing
- Practices derived from specialized knowledge in individual disciplines to analyze problems from divergent perspectives, recognize ambiguities, propose alternatives, draw inferences, develop imaginative approaches, construct predictions, and make reasoned decisions using appropriate information resources and analytical tools
- Multidisciplinary techniques fostering students' ability to communicate strengths of their self-chosen course of study
- Opportunities for defining relationships between the student's degree program and post-baccalaureate goals

## BACHELOR OF SCIENCE (B.S.)

A primary mission of the Eberly College of Arts and Sciences is to promote full development of each student as an individual and as a member of society. Students completing a Bachelor of Science degree in the Eberly College fulfill broad general education foundation requirements, Bachelor of Science degree requirements, and study of at least one discipline in depth. The hallmark of an Arts and Sciences education is opportunity for students to craft programs of study that integrate interests and address aspirations through a combination of major and minor, or dual major, areas of study.

The Bachelor of Science degree programs in the Eberly College integrate

- Knowledge and skills of central principles, practices, facts, concepts, theories, and disciplinary tools in a major area of concentration
- Skills in communication using a variety of channels including writing, speaking, reading, listening, and viewing
- Practice in analyzing and solving problems, recognizing ambiguities, proposing alternatives, drawing inferences, developing imaginative approaches, constructing predictions, and making reasoned decisions using appropriate information resources and analytical tools
- Application of scientific principles and methods across three natural and/or computational science disciplines
- Opportunities for defining relationships between the student's degree program and post-baccalaureate goals

## BACHELOR OF SOCIAL WORK (B.S.W.)

The mission of the School of Social Work's B.S.W. program is to prepare social work practitioners who are dedicated to upholding the ethical standards of the social work profession. An important focus of the West Virginia University School of Social Work is our focus on practice in small towns and rural communities, including the well-being of older adults. Our mission emphasizes the importance of preparing social workers with the necessary knowledge, values, and skills to practice effectively at the micro, mezzo, and macro levels of intervention in settings consistent with our rural context. Students completing a Bachelor of Social Work degree complete broad general education foundation requirements and work within the School of Social Work that is designed:

- To prepare undergraduate students for professional, competent, entry-level generalist practice, with an emphasis on rural and small-town settings, through a curriculum including liberal arts and social work foundations; human behavior in the social environment; practice, policy, and assessment/research with individuals, families, groups, communities, and society

- To prepare students for practice with diverse, vulnerable, and oppressed populations and to further social and economic justice
- To prepare students to engage in effective practice that is responsive to changing the social context with an existing value base and ethical standards of the social work profession
- To provide a foundation to develop an identity as a professional social worker and conduct oneself accordingly

## REGENTS BACHELOR OF ARTS (R.B.A.)

West Virginia University offers the Regents Bachelor of Arts (R.B.A.) as an innovative degree program designed to meet the unique needs of adult learners and non-traditional students. Specifically, the R.B.A. provides a comprehensive general education and individualized curriculum designed to align with the needs of each student. The R.B.A. program is designed to be flexible and can be tailored toward goals/aspirations such as pursuing a graduate/professional degree, transitioning into a new career, increasing one's marketability within an established career, and/or fulfilling a life-long goal of completing a bachelor's degree. The R.B.A. program can be completed either on campus or online at one's own pace. Additionally, R.B.A students may pursue any Minors (http://catalog.wvu.edu/undergraduate/minors/#minorsofferedtext) offered through West Virginia University or Areas of Emphasis unique to the R.B.A. program. Moreover, R.B.A. offers unique opportunities not available through traditional degree programs. The R.B.A. program offers F-Forgiveness (https://rba.wvu.edu/degree-info/f-forgiveness-policy/) to students if the failing grades are obtained four years or more prior to admission/readmission to the program. Additionally, eligible students may acquire college credit for professional, volunteer, and military experiences in select areas via the many credit for prior learning options (https://rba.wvu.edu/credit-for-prior-learning/) available through the R.B.A. program. Pursuing the R.B.A. program and utilizing the unique opportunities available through the program provides many students with a time efficient and cost effective avenue to obtain a Bachelor of Arts degree.

The Regents Bachelor of Arts degree program in the Eberly College enables students to:

- Develop foundational habits of academic life and cultural literacy; disciplinary ways of knowing and posing questions; conducting inquiry; making arguments; close reading, analysis, critical thinking; numerical analysis and scientific method; effective writing and speaking; academic research; systematic problem solving; rigorous academic study
- Develop and refine skills of Learning Goal 1; encounter and examine issues of multiculturalism, diversity, social justice, and citizenship; refines over-reaching area of emphasis
- Integrate learning; apply knowledge and skills to contemporary problems and ethical quandaries; self-reflective projects and narratives; connect past with future

## Accreditation

Forensic Biology, Forensic Chemistry and Forensic Examiner B.S. programs within the Eberly College of Arts and Sciences have specialized accreditation through the Forensic Science Education Programs Accreditation Commission of the American Academy of Forensic Science.

Social Work within the Eberly College of Arts and Sciences has specialized accreditation through the Council on Social Work Education.

The Certificate in Behavior Analysis within the Eberly College of Arts and Sciences is accredited by the Association for Behavior Analysis International.

## Certifications

Chemistry within the Eberly College of Arts and Sciences has specialized certification through the American Chemical Society.

# Anthropology, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

Anthropology is a deeply comparative and participatory discipline that prepares students for meaningful life and work in our diverse and ever more interconnected world. The curriculum fosters an awareness of the structure and diversity of human societies, past and present, and offers a broad range of perspectives on the experiences and meanings of being human. Students are exposed to the methods of inquiry and to the special knowledge and insights of anthropology. Courses in the department also are intended to facilitate the application of anthropological principles to a wide range of contemporary social problems.

Anthropology graduates may pursue careers in nonprofit, public, or private sector fields. Majors are well-equipped for graduate training in the social sciences in pursuit of academic or applied research careers. For more information about this program, please visit the departmental website (https://soca.wvu.edu/students/undergraduate-students/b-a-in-anthropology/).

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field.

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# FACULTY

## PROFESSOR AND CHAIR

- Daniel Renfrew - Ph.D. (Binghamton University) Anthropology
  Environmental and political anthropology, Social movements, Latin American cultures

## PROFESSORS

- Sharon R. Bird - Ph.D. (Washington State University) Sociology
  Social Inequality (race/ethnicity/class/gender/LGBTQ+), Workplace equity, Research methods
- Henry H. Brownstein - Ph.D. (Temple University) Sociology
  Distinguished Research Professor. Drugs and society, Drug policy, Violence, Qualitative research methods
- Katie E. Corcoran - Ph.D. (University of Washington) Sociology
  Theory, Organizations, Culture, Criminology, Religion, Social networks
- Walter S. DeKeseredy - Ph.D. (York University) Sociology
  Anna Deane Carlson Endowed Chair of Social Sciences. Violence against women, Critical criminology, Masculinities and crime, Criminology theory
- R. Gregory Dunaway - Ph.D. (University of Cincinnati) Sociology
  Dean of the Eberly College of Arts and Sciences
- S. Melissa Latimer - Ph.D. (University of Kentucky) Sociology
  Gender/race/ethnicity, Inequality/labor markets/welfare systems
- James Nolan, III - Ph.D. (Temple University) Sociology
  Criminal justice, Group and social processes
- Jason Manning - Ph.D. (University of Virginia) Sociology
  Conflict and social control, Violence, Sociology of knowledge
- Rachel Stein - Ph.D. (University of Akron) Sociology
  Criminology, Victimization, Media and crime
- Karen Weiss - Ph.D. (SUNY-Stony Brook) Sociology
  Criminology, Victimization, Gender/sexuality/culture
- Rachael A. Woldoff - Ph.D. (Ohio State University) Sociology
  Community, Crime, Inequality/race/class
- Joshua Woods - Ph.D. (Michigan State University) Sociology
  Social psychology, Media, Complex organizations, Sociology of risk

## ASSOCIATE PROFESSORS

- Corey Colyer - Ph.D. (Syracuse University) Sociology
  People processing systems, Agencies of social control
- Amy Hirshman - Ph.D. (Michigan State University) Anthropology
  Mesoamerican archaeology, Social complexity, Ceramics
- Christopher P. Scheitle - Ph.D. (Pennsylvania State University) Sociology
  Religion, Science in society, Crime, Organizations
- Jennifer Steele - Ph.D. (Pennsylvania State University) Rural Sociology
  Natural resource sociology, Rural and community development
- Jesse Wozniak - Ph.D. (University of Minnesota) Sociology
  Policing, Criminology, Deviance, State power

## ASSISTANT PROFESSORS

- Daniel Brewster - M.A. (West Virginia University) Communication Studies
  Culture, Community
- Brandie S. Pugh - Ph.D. (University of Delaware) Sociology
  Inequality, Corporate crime, Interpersonal violence, Philosophy of science
- Genesis Snyder - ABD (Binghamton University) Anthropology
  General anthropology, Historical archaeology

### TEACHING INSTRUCTORS

- Douglas Sahady - M.A. (California University of Pennsylvania) Social Science

### PROFESSORS EMERITI

- Ronald C. Althouse - Ph.D. (University of Minnesota) Sociology
  Theory, Work, Occupational safety and health
- Ann L. Paterson - Ph.D. (Michigan State University) Sociology
- Patricia C. Rice - M.A. (Ohio State University) Anthropology
- Joseph J. Simoni - Ph.D. (University of Notre Dame) Sociology
- William I. Torry - Ph.D. (Columbia University) Anthropology

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major, or from another institution with fewer than 24 credits, and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major, or from another institution with 24 hours or more, must have an overall GPA of a 2.0 and have completed ANTH 105 (http://catalog.wvu.edu/search/?P=ANTH%20105) with a grade of C- .

Major Code: 14C3

Click here to view the Suggested Plan of Study (p. 208)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Departmental Requirements for the B.A. in Anthropology

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

- **Calculation of GPA in the Major**: A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of C- required in SOC 101, ANTH 105, ANTH 259, ANTH 359. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing Requirement**: Anthropology Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two SpeakWrite Certified Courses TM: ANTH 488 , and either ANTH 259 or ANTH 359 .

- **Capstone Requirement:** The General Education Foundation requires the successful completion of a Capstone course**.** Anthropology majors must complete ANTH 488 for 3 credits.
- **Experiential Learning**: Students interested in archaeological careers or graduate studies are encouraged to take Archaeological Field School (ANTH 357) through WVU or a transfer equivalent. Students interested in applied cultural anthropology careers or graduate studies are encouraged to consult with faculty about transient opportunities for Ethnographic Research Methods (ANTH 356). In addition, students are encouraged to do Independent Study (SOC 495), additional fieldwork, or an internship (SOC 491) in their junior or senior year, combining experiential work with previously acquired skills in a project appropriate to their career goals. SOC 490, SOC 491, and SOC 495 can be taken for variable credit and will count as general elective credits towards graduation, but they cannot be applied to major requirements.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 69 |
| Eberly Edge Requirements | | 15 |
| Anthropology Major Requirements | | 36 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| **Outstanding GEF Requirements 1, 2, 3, 5, and 8** | | **27** |
| SOC 191 | First-Year Seminar | 1 |
| General Electives | | 41 |
| Total Hours | | 69 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (ANTH 105) | | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 15 |

## Anthropology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE REQUIREMENTS:** | | **12** |
| SOC 101 | Introduction to Sociology | |
| ANTH 105 | Introduction to Anthropology | |
| ANTH 259 | The Craft of Anthropology | |
| ANTH 359 | Anthropological Thought | |
| **SUBFIELD REQUIREMENTS:** | | **6** |
| Select two of the following: | | |
| ANTH 252 | Biological Anthropology | |
| ANTH 254 | Cultural Anthropology | |
| ANTH 258 | Introduction to Archaeology | |
| **SUBFIELD ENRICHMENT REQUIREMENTS:** | | **3** |
| Select one of the following: | | |
| STAT 111 | Understanding Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| ENGL 221 | The English Language | |
| **UPPER-DIVISION ANTHROPOLOGY REQUIREMENTS** | | **12** |

| | | |
|---|---|---|
| Select four of the following: | | |
| ANTH 349 | Human Osteology | |
| ANTH 350 | Latin American Culture | |
| ANTH 352 | Historical Archaeology | |
| ANTH 354 | Mesoamerican Archaeology | |
| ANTH 355 | Cultural Resource Management | |
| ANTH 356 | Ethnographic Field Methods | |
| ANTH 357 | Archaeological Field School | |
| ANTH 358 | Anthropology of Health and Illness | |
| ANTH 450 | Archaeology of Ancient States | |
| ANTH 451 | Material Culture | |
| ANTH 457 | Social Movements | |
| ANTH 458 | Environmental Anthropology | |
| **CAPSTONE EXPERIENCE** | | **3** |
| ANTH 488 | The Capstone Experience | |
| Total Hours | | 36 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SOC 191 | 1 | ENGL 101 (GEF 1) | 3 |
| ANTH 105 (EDG 4 & F7) | 3 | SOC 101 (GEF 4) | 3 |
| Subfield Enrichment Requirement | 3 | EDG 2: Effective and Civil Communication | 3 |
| EDG 1: Data and Society | 3 | F2A | 3 |
| F5 | 3 | F6 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | ANTH 259 | 3 |
| Subfield Requirement Course 1 | 3 | Subfield Requirement Course 2 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | F8 Course 2* | 3 |
| F2A | 3 | General Elective | 3 |
| F8 Course 1* | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 8* | 3 | ANTH 359 | 3 |
| Subfield Enrichment Course | 3 | Upper-level Anthropology Course 2 | 3 |
| Upper-level Anthropology Course 1 | 3 | ARSC 380 (EDG 5) | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Upper-level Anthropology Course 3 | 3 | ANTH 488 | 3 |
| General Elective | 3 | Upper-level Anthropology Course 4 | 3 |
| General Elective | 3 | EDG 6: High Impact Experience | 3 |
| General Elective | 3 | General Elective | 3 |

| | | |
|---|---|---|
| General Elective | 3 General Elective | 3 |
| | 15 | 15 |

Total credit hours: 120

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Students completing a minor, a double major or a dual degree already fulfill F 8.

## Degree Progress

Students are expected to meet the benchmarks set below.

- Complete SOC 101 and ANTH 105 with grades of C- or higher by the end of the second semester in the program;
- Complete ANTH 259 and two additional 200-level anthropology courses by the end of the fourth semester in the program;
- Complete ANTH 359 , one 300 or 400-level anthropology course and either STAT 111, STAT 211, ENGL 221, or LING 311 by the end of the sixth semester in the program.
- Maintain a GPA of 2.0 overall and a minimum GPA of 2.0 in all SOCA courses counting toward major requirements.
- All majors must meet with their adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### ANTHROPOLOGY

Students graduating with a BA in Anthropology will be able to:

1. Describe anthropology's core theoretical perspectives, its distinctive history, and its unique breadth and range as a discipline.
2. Interpret past and present human life-ways holistically and comparatively.
3. Discuss the importance of knowledge and understanding of a culturally and biologically diverse world.
4. Differentiate between the multiple methods employed by anthropologists across its subfields.
5. Apply ethical principles to the conduct of anthropological research and the applications of its findings.
6. Critically analyze anthropological questions and issues by retrieving and synthesizing appropriate information and evidence and identifying implications for research and practice/policy.
7. Demonstrate effective, clear and persuasive communication skills according to disciplinary conventions.

# Biochemistry, B.S.

## Degree Offered

- Bachelor of Science

Students earning a B.S. in Biochemistry are not eligible to earn a B.S. in Chemistry or Biology, a B.S. in Animal & Nutritional Sciences, or a minor in Biology.

Please go to the B.S. Biochemistry (p. 793) page for specific information regarding the program, including admissions requirements, program requirements and expected learning outcomes.

# Biology

## Degrees Offered

- Bachelor of Science

## Nature of the Program

The Department of Biology offers a Bachelor of Science degree with two majors: the Bachelor of Science in Biology and the Bachelor of Science in Biology Pre-medical. These two programs are structured to meet the foundational needs of all students who are interested in a career in the broad area of the life sciences or health sciences. In the Biology major, these requirements are complemented by additional coursework in communication and statistics; in the Biology Pre-medical major, these requirements are complemented by chemistry, physics, and social foundations of health.

After completing an initial four-semester core sequence in the biological sciences, students in the Biology major may choose an Area of Emphasis in Cell/Molecular Biology, Ecology/Ecosystems/Global Change, or Integrative Biology. Students in the Biology Pre-medical major may choose an Area of Emphasis in Human Health or Global Health. All students must complete 7 upper-division electives.

The undergraduate programs in biology provide excellent preparation for students planning to apply to graduate programs in the biological sciences or to professional schools and programs including medical, osteopathic, dental, physical or occupational therapy, optometry, pharmacy, veterinary medicine, physician assistant, and chiropractic. A degree in biology prepares students for a wide range of careers in the biological sciences including medicine, biotechnology, genetics, forensics, ecology, environmental biology, and other biologically-related technical fields in government and private industry. With appropriate electives, a student with a degree in biology may also choose to enter the fields of law, journalism, education, business, health care administration, pharmaceutical sales, or work for a variety of federal agencies.

Regardless of the degree program chosen, students will experience a wide variety of classroom environments from large lecture sections to small group discussions and intensive laboratory-oriented courses. Laboratory courses include topics such as human anatomy, molecular genetics, plant ecology, and plant physiology as well as many other laboratory experiences across the biological disciplines.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

**Minors**

All students have the possibility of earning one or more minors; follow link for a list of all available minors and their requirements. (p. 52)Please note that students may not earn a minor in their major field.

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# FACULTY

## CHAIR

- Jennifer Hawkins - Ph.D. (Iowa State University)

## ASSOCIATE CHAIRS

- Kevin Barry - Ph.D. (University of Maryland)
  Associate Chair for Undergraduate Advising, Recruitment, and Retention
- Edward Brzostek - Ph.D. (Boston University)
  Associate Chair for Graduate Studies
- Dana Huebert Lima - Ph.D. (University of Wisconsin)
  Associate Chair for Undergraduate Studies

## PROFESSORS

- Kevin C. Daly - Ph.D. (University of Arizona)
  Regular Graduate Faculty, Sensory neurobiology, Neural coding, Brain-behavior interactions, Comparative psycho-biology
- Donna Ford-Werntz - Ph.D. (Washington University/Missouri Botanical Garden)
  Plant systematics: Portulacaceae, West Virginia flora.
- Jennifer Hawkins - Ph.D. (University of Iowa)
  Regular Graduate Faculty, Plant comparative genomics, molecular evolution
- Dana Huebert Lima - Ph.D. (University of Wisconsin)
  Associate Graduate Faculty, Cellular & Molecular Biology
- Rita V.M. Rio - Ph.D. (Yale University)
  Regular Graduate Faculty, Symbioses
- Jennifer Stueckle - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Aquatic toxicology
- Richard B. Thomas - Ph.D. (Clemson University)
  Regular Graduate Faculty, Physiological plant ecology, Forest ecology, Global climate change
- Stephanie Young - Ph.D. (West Virginia University)
  Molecular & Forensic Biology

## ASSOCIATE PROFESSORS

- Craig Barrett - Ph.D. (Ohio State University)
  Regular Graduate Faculty, Plant Evolutionary Biology
- Kevin Barry - Ph.D. (University of Maryland)
  Conservation ecology
- Sadie Bergeron - Ph.D. (University of Massachusetts - Amherst)

Regular Graduate Faculty, Developmental Neurobiology

- Edward Brzostek - Ph.D. (Boston University)
  Regular Graduate Faculty, Forest ecology, ecosystem modeling
- Timothy Driscoll - Ph.D. (Virginia Tech)
  Regular Graduate Faculty, Bioinformatics, microbial metagenomics
- Sarah M. Farris - Ph.D. (University of Illinois at Urbana-Champaign)
  Evolution and development of the insect brain, Neuroanatomy
- Zachariah Fowler - Ph.D (West Virginia University)
  Forest ecology
- Jennifer Gallagher - Ph.D. (Yale University)
  Regular Graduate Faculty, Functional genomics of yeast
- Amaris Guardiola - Ph.D. (Duke University)
- Gary Marsat - Ph.D. (McGill University)
  Regular Graduate Faculty, Neurobiology
- Ember Morrissey - Ph.D. (Virginia Commonwealth University)
  Regualr Graduate Faculty, Soil microbial ecology
- John Navaratnam - Ph.D. (West Virginia University)
  Wetland Biogeochemistry

### ASSISTANT PROFESSORS

- Chris Arnold - Ph.D. (Stanford University)
  Regular Graduate Faculty, Development, regeneration, and asexual reproduction
- Becca Coltogirone - Ph.D. (West Virginia University)
  Developmental Neuroscience and Molecular Biology
- Eric Horstick - Ph.D. (University of Michigan)
  Regular Graduate Faculty, Developmental genetics, neuroscience, behavioral genetics
- Kathryn Jewett - Ph.D. (Washington State University)
  Neuroscience
- Steve Kannenberg - Ph.D. (Indiana University)
  Regular Graduate Faculty, Eco-physiology, ecosystem ecology, and global change
- Justin Mathias - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Forest biogeochemistry and ecophysiology
- Gabriela Pacheco Sanchez - Ph.D., D.VM. (University of Sao Paulo, National University of San Marcos)
- Grace Savoy-Burke - Ph.D. (University of Delaware)
  Entomology
- Katrina Stewart - Ph.D. (West Virginia University)
- Christine Zawaski - Ph.D. (MichiganTechnological University)
  Greenhouse Manager

### PROFESSORS EMERITI

- Clifton P. Bishop - Ph.D. (University of Virginia)
- Jonathan Cumming - Ph.D. (Cornell University)
- Jorge Flores - Ph.D. (George Washington University)
- Philip E. Keeting - Ph.D. (University of Medicine and Dentistry of New Jersey)
- Gerald E. Lang - Ph.D. (Rutgers University)
- Kevin Lee - Ph.D. (Temple University SoM.)
- Joseph A. Marshall - Ph.D. (University of Maryland)
- James B. McGraw - Ph.D. (Duke University)
- William T. Peterjohn - Ph.D. (Duke University)
- Elizabeth Thomas - M.S.

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 40.

- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 40.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirements prior to being admitted to the major: BIOL 115, BIOL 115L or BIOL 119L, BIOL 117, BIOL 117L or BIOL 120L, CHEM 115 (http://catalog.wvu.edu/search/?P=CHEM%20115), and CHEM 115L (http://catalog.wvu.edu/search/?P=CHEM%20115L), with a minimum grade of C-.

Major Code:

Biology: **1436**

Biology Pre-Medical: **14F8**

## Degree Progress

Students remain in the Biology major provided they meet the benchmark expectations listed below.

**B.S. Biology:**

- By the end of the second semester in the major (excluding summer), students must have, at minimum, completed either MATH 124 orMATH 126 with a minimum grade of C-.
- By the end of their third semester into the major, students intending to graduate with a B.S. in Biology are expected to have completed BIOL 115, BIOL 115L, BIOL 117, BIOL 117L, CHEM 115, and CHEM 115L with a minimum grade of C- in each course and a 2.0 GPA overall. In addition, students must meet with their Biology adviser every semester. Students who do not meet their benchmarks will be removed from their major.
- **Readmission after being removed from the Biology - B.S.:** Students must meet the benchmarks listed below.
  - Completed (BIOL 219 AND BIOL 219L) or BIOL 221 with a minimum grade of C- in each course.
  - Have an overall GPA of 2.0.
  - Have a Biology GPA of 2.0.

# Biology B.S.

Click here to view the Suggested Plan of Study (p. 216)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge requirements, major requirements, and electives with a minimum of 120 hours.

## Departmental Requirements for the B.S. in Biology

Students intending to graduate with a B.S. in Biology must earn a minimum of 53 hours of coursework in biology or approved courses in the biological sciences, with a minimum of 120 hours total required for graduation.

- **Calculation of Major GPA:** A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of a C- in BIOL 115, BIOL 119L, BIOL 117, and BIOL 120L. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat. Students who transfer into the Biology major may use BIOL 115L in place of BIOL 119L and BIOL 117L in place of BIOL 120L.
- **Writing and Communication Skills Requirement**: The B.S. in Biology is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Areas of Emphasis:** The B.S. in Biology offers 3 areas of emphasis: Cell and Molecular Biology, Ecology, Ecosystems and Global Change, and Integrative Biology. Each student must complete an area of emphasis.
- **Capstone Requirement:** The university requires the successful completion of a Biology capstone course (BIOL 320 or BIOL 321 or the research capstone, BIOL 486).
- **Research Option:** With permission of the department, students may enroll in BIOL 386, BIOL 484, or BIOL 485. These courses can lead to the research capstone, BIOL 486. Up to 6 credits of research can be used towards the biology electives within each track.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 36 |
| Eberly Edge Requirements | | 12 |
| Biology Major Requirements | | 72 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| BIOL 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 36 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society (BIOL 387 and either BIOL 323L or BIOL 485) | | |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience ((BIOL 320 or BIOL 321; or (BIOL 386 or BIOL 484) and BIOL 486)) | | |
| Total Hours | | 12 |

## Biology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **19** |
| MATH 150 | Applied Calculus | |
| or MATH 155 | Calculus 1 | |

| | | |
|---|---|---|
| CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| or CHEM 111 | Survey of General, Organic, and Biological Chemistry 1 | |
| & 111L | and Survey of Chemistry 1 Laboratory | |
| & CHEM 112 | and Survey of General Organic Biological Chemistry 2 | |
| & CHEM 112L | and Survey of Chemistry 2 Laboratory | |
| Select one pair of courses: | | |
| PHYS 101 | Introductory Physics 1 | |
| & 101L | and Introductory Physics 1 Laboratory | |
| & PHYS 102 | and Introductory Physics 2 | |
| & PHYS 102L | and Introductory Physics 2 Laboratory | |
| PHYS 111 | General Physics 1 | |
| & 111L | and General Physics 1 Laboratory | |
| & PHYS 112 | and General Physics 2 | |
| & PHYS 112L | and General Physics 2 Laboratory | |
| SUST 101 | Sustainable Earth | |
| & 101L | and Sustainable Earth Laboratory | |
| & SUST 201 | and Earth System Science | |
| & SUST 201L | and Earth System Science Laboratory | |
| SUST 101 | Sustainable Earth | |
| & 101L | and Sustainable Earth Laboratory | |
| & SUST 207 | and Climate System Science | |
| & SUST 207L | and Climate System Science Laboratory | |
| **CORE COURSES** | | |
| **Foundational Core Courses** | | **18** |
| BIOL 115 | Principles of Biology | |
| & BIOL 119L | and Foundations Inquiry Lab 1 | |
| BIOL 117 | Introductory Physiology | |
| & BIOL 120L | and Foundations Inquiry Lab 2 | |
| BIOL 219 | Cellular and Molecular Biology | |
| & BIOL 222L | and Intermediate Inquiry Lab | |
| BIOL 221 | Ecology and Evolution | |
| BIOL 223 | Quantitative Biology | |
| **Advanced Biology Core Courses** | | **11** |
| BIOL 302 | Biometry | |
| BIOL 315 | Communicating Natural Science | |
| BIOL 323L | Advanced Inquiry Lab | |
| BIOL 327 | Professional Development | |
| BIOL 387 | Experimental Design & Communication 1 | |
| BIOL 487 | Experimental Design & Communication 2 | |
| **AREA OF EMPHASIS** | | **12** |
| Select one of the areas of emphasis below. | | |
| Cell and Molecular Biology | | |
| Ecology, Ecosystems and Global Change | | |
| Integrative Biology | | |
| **UPPER-DIVISION BIOLOGY ELECTIVES** | | **9** |
| Select at least one course from each group below outside of the selected AoE. ** | | |
| **Cell/Molecular Electives** | | |
| BIOL 310 | Advanced Cellular/Molecular Biology | |
| & 310L | and Advanced Cellular/Molecular Biology Laboratory | |
| BIOL 312 | Introduction to Virology | |
| BIOL 313 | Molecular Basis of Cellular Growth | |
| BIOL 316 | Developmental Biology | |
| & 316L | and Developmental Biology Laboratory | |

| | |
|---|---|
| BIOL 324<br>& 324L | Molecular Genetics<br>and Molecular Genetics Laboratory |
| BIOL 335 | Cell Physiology |
| BIOL 348 | Neuroscience 1 |
| BIOL 350<br>& 350L | Plant Physiology<br>and Plant Physiology Laboratory |
| BIOL 410 | Cell and Molecular Biology Methods |
| BIOL 418 | Medical Genetics |
| BIOL 420 | Genomics |
| BIOL 423<br>& 423L | Biochemistry of Nucleic Acids and Proteins<br>and Biochemistry of Nucleic Acids and Proteins Laboratory |
| BIOL 425 | Developmental Genetics |
| BIOL 426 | Molecular Biology of Cancer |
| BIOL 454 | Immunology |
| BIOL 455 | Evolution of Infectious Diseases |
| BIOL 474 | Neurogenetics and Behavior |
| BIOL 475 | Neurobiological Diseases |
| **Organismal Biology Electives** | |
| BIOL 316<br>& 316L | Developmental Biology<br>and Developmental Biology Laboratory |
| BIOL 324<br>& 324L | Molecular Genetics<br>and Molecular Genetics Laboratory |
| BIOL 338 | Behavioral Ecology |
| BIOL 340 | Invertebrate Zoology |
| BIOL 341<br>& 341L | Ichthyology<br>and Ichthyology Laboratory |
| BIOL 344<br>& 344L | Advanced Human Physiology<br>and Advanced Human Physiology Laboratory |
| BIOL 345<br>& 345L | Human Anatomy<br>and Human Anatomy Laboratory |
| BIOL 349 | Neuroscience 2 |
| BIOL 350<br>& 350L | Plant Physiology<br>and Plant Physiology Laboratory |
| BIOL 363 | Plant Geography |
| BIOL 418 | Medical Genetics |
| BIOL 425 | Developmental Genetics |
| BIOL 436 | Comparative Animal Physiology |
| BIOL 438 | Animal Behavior |
| BIOL 439 | Neuroethology |
| BIOL 450<br>& 450L | Plant Systematics<br>and Plant Systematics Laboratory |
| BIOL 474 | Neurogenetics and Behavior |
| BIOL 475 | Neurobiological Diseases |
| BIOL 478 | Sensory Neural Systems and Behavior |
| BIOL 479 | Principles of Systems Neuroscience |
| AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory |
| PSYC 426 | Physiological Psychology |
| **Ecology / Ecosystem Electives** | |
| BIOL 338 | Behavioral Ecology |
| BIOL 339 | Animal Communication & Behavior |
| BIOL 361<br>& 361L | Plant Ecology<br>and Plant Ecology Laboratory |
| BIOL 363 | Plant Geography |

| | | |
|---|---|---|
| BIOL 365 & 365L | Conservation Biology and Conservation Biology Laboratory | |
| BIOL 420 | Genomics | |
| BIOL 448 | Plant-Microbial Interactions | |
| BIOL 455 | Evolution of Infectious Diseases | |
| BIOL 456 | Microbial Symbiosis | |
| BIOL 457 | Ecology of Parasites | |
| BIOL 461 | Principles of Evolution | |
| BIOL 462 | Ecosystem Models | |
| BIOL 463 | Global Ecology | |
| BIOL 477 | Evolution of the Human Brain | |
| AEM 401 | Environmental Microbiology | |
| GEOL 331 | Paleontology | |
| WMAN 446 & 446L | Freshwater Ecology and Freshwater Ecology Laboratory | |
| **Integrative Biology Electives** | | |
| AGBI 410 | Introductory Biochemistry | |
| BIOL 339 | Animal Communication & Behavior | |
| BIOL 376L | Research Methods Laboratory | |
| BIOL 386 | Undergraduate Research | |
| BIOL 430 | Bioinformatics | |
| BIOL 474 | Neurogenetics and Behavior | |
| BIOL 476 & 476L | Computational Neuroscience and Computational Neuroscience Laboratory | |
| BIOL 484 | Undergraduate Research 1 | |
| BIOL 485 | Undergraduate Research 2 | |
| **CAPSTONE EXPERIENCE** | | **3** |
| Select one of the following options: | | |
| BIOL 320 | The Total Science Experience: Genomics | |
| BIOL 321 | Total Science Experience Lab | |
| BIOL 486 | Honors Investigation and Thesis | |
| Total Hours | | 72 |

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STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses.

******

Up to 6 credits of research (BIOL 386, or BIOL 484 and BIOL 485) can be used towards the Upper-Division Biology Electives.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 191 | 1 | BIOL 117 & BIOL 120L (GEF 8) | 4 |
| BIOL 115 & BIOL 119L (GEF 2) | 4 | CHEM 116 & 116L (GEF 8) | 4 |
| CHEM 115 & 115L (GEF 8) | 4 | ENGL 101 (GEF 1) | 3 |
| MATH 150 or 155 | 3 | EDG 2: Effective and Civil Communication | 3 |
| GEF 4 | 3 | General Elective | 1 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 219 & BIOL 222L | 5 | BIOL 221 | 3 |
| ENGL 102 (GEF 1) | 3 | BIOL 327 | 1 |
| STEM Foundation Science 1 | 4 | BIOL 223 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | STEM Foundation Science 2 | 4 |
| | | EDG 4: Global and Regional Perspectives | 3 |
| | | General Elective | 1 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARSC 380 | 3 | BIOL 315 | 3 |
| BIOL 387 | 1 | BIOL 323L (EDG 1) | 2 |
| AoE Course 1 | 3 | AoE Course 4 | 3 |
| AoE Course 2 | 3 | GEF 5 | 3 |
| AoE Course 3 | 3 | GEF 6 | 3 |
| BIOL 302 | 3 | | |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 487 | 1 | Upper-Division Biology Elective | 3 |
| Upper-Division Biology Elective | 3 | BIOL Capstone (EDG 6)* | 3 |
| Upper-Division Biology Course | 3 | General Elective | 3 |
| GEF 7 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 2 |
| General Elective | 3 | | |
| | 16 | | 14 |

Total credit hours: 120

*

Capstone options include BIOL 320, BIOL 321 or BIOL 486

## Areas of Emphasis Offered:

- Cellular and Molecular Biology (p. 217)
- Ecology, Ecosystems, and Global Change (p. 218)
- Integrative Biology (p. 218)

## Cellular and Molecular Biology Area of Emphasis Requirements:

This Area of Emphasis will prepare students for health professions, pharmacy and pharmacology, and graduate school in cellular or molecular biology, virology, genetics, immunology and a variety of related fields.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| AGBI 410 | Introductory Biochemistry | 3 |
| BIOL 310 | Advanced Cellular/Molecular Biology | 3 |
| or BIOL 335 | Cell Physiology | |
| BIOL 316 | Developmental Biology | 3 |
| or BIOL 425 | Developmental Genetics | |
| BIOL 324 | Molecular Genetics | 3 |

| | | |
|---|---|---|
| or BIOL 418 | Medical Genetics | |
| Total Hours | | 12 |

## Ecology, Ecosystems and Global Change  Area of Emphasis Requirements:

This Area of Emphasis will prepare students for government and industry careers in natural climate solutions, conservation, and environmental consulting, as well as graduate school in ecology, biogeochemistry, climate change and a variety of related fields.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| BIOL 338 | Behavioral Ecology | 3 |
| or BIOL 361 & 361L | Plant Ecology and Plant Ecology Laboratory | |
| or BIOL 456 | Microbial Symbiosis | |
| or BIOL 457 | Ecology of Parasites | |
| or WMAN 446 & 446L | Freshwater Ecology and Freshwater Ecology Laboratory | |
| BIOL 365 & 365L | Conservation Biology and Conservation Biology Laboratory | 3 |
| or BIOL 448 | Plant-Microbial Interactions | |
| or BIOL 462 | Ecosystem Models | |
| or BIOL 463 | Global Ecology | |
| BIOL 436 | Comparative Animal Physiology | 3 |
| or BIOL 350 & 350L | Plant Physiology and Plant Physiology Laboratory | |
| BIOL 461 | Principles of Evolution | 3 |
| Total Hours | | 12 |

## Integrative Biology Area of Emphasis Requirements:

This Area of Emphasis provides an overview of the sub-fields available to biologists. This area of emphasis will prepare students for careers in health care, government, consulting and industry. It also provides preparation for Master's Degree programs in biomedical science or ecology and environmental science.

## Curriculum Requirements

Course options for each of the groups of biology electives are listed on the B.S. Biology page (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/biology/biology_bs/), under the section "Upper-Division Biology Electives."

| Code | Title | Hours |
|---|---|---|
| Select one course from the Cell & Molecular Electives | | 3 |
| Select one course from the Organismal Electives | | 3 |
| Select one course from the Ecology and Ecosystems Electives | | 3 |
| Select one course from the Integrative Biology Electives | | 3 |
| Total Hours | | 12 |

## Major Learning Outcomes

### BIOLOGY

Upon successful completion of the B.S. degree, **Biology** majors will demonstrate competency in these areas:

1. Biological Foundations:  Students will demonstrate competency in the content areas (listed below) at three biological levels - cellular/molecular, organismal/physiological, ecosystem/ populations)

- Information flow
- Transformations of energy and matter

- Structure-function relationships
- Evolution
- Systems and interactions

2. Integrative skills: Students will demonstrate interpersonal skills including: effective communication with both professional and general audiences in written and oral forms, the ability to work in collaborative teams, global perspective, and application of knowledge and skills from across the curriculum to social issues.

3: Scientific Tools: Students will be able to apply science process skills, including: scientific literacy, experimental design, collecting and analyzing data quantitatively and statistically, application of critical and analytical thinking.

# Biology Pre-medical, B.S.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, College B.S. requirements, STEM Foundations requirements, major requirements, and electives with a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences page (p. 212).

## Departmental Requirements for the B.S. in Biology Pre-Medical

Students intending to graduate with a B.S. in Biology Pre-Medical must earn a minimum of 48 hours of coursework in biology or approved courses in the biological sciences, with a minimum of 120 hours total required for graduation.

- **Calculation of Major GPA:** A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of a C- in BIOL 115, BIOL 119L, BIOL 117, and BIOL 120L. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat. Students who transfer into the Biology Pre-medical major may use BIOL 115L in place of BIOL 119L and BIOL 117L in place of BIOL 120L.
- **Writing and Communication Skills Requirement**: The Biology Pre-Medical Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.

- **Area of Emphasis:** The B.S. in Biology Pre-Medical offers 2 areas of emphasis: Human Health and Global Health. Each student must complete an area of emphasis.
- **Capstone Requirement**: The university requires the successful completion of a Biology capstone course (BIOL 320 or BIOL 321 or the research capstone, BIOL 486).
- **Research Option:** With permission of the department, students may enroll in BIOL 386, BIOL 484, or BIOL 485. These courses can lead to the research capstone, BIOL 486. Up to 6 credits of research can be used towards biology electives within each track.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 27 |
| Eberly Edge Requirements | | 9 |
| Biology Major Requirements | | 84 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 6 or 7 | | 9 |
| BIOL 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 27 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society (BIOL 387 and either BIOL 323L or BIOL 485) | | |
| EDG 2: Effective and Civil Communication (GEF 5) | | 3 |
| EDG 3: Ethics and Civil Responsibility (PHIL 331) | | |
| EDG 4: Global and Regional Perspectives (GEF 6 or 7) | | 3 |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (BIOL 320, or BIOL 321; or (BIOL 386 or BIOL 484) and BIOL 486)) | | |
| Total Hours | | 9 |

## Biology Pre-Medical Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **19** |
| MATH 150 | Applied Calculus | |
| or MATH 155 | Calculus 1 | |
| CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| PHYS 101 | Introductory Physics 1 | |
| & 101L | and Introductory Physics 1 Laboratory | |
| & PHYS 102 | and Introductory Physics 2 | |
| & PHYS 102L | and Introductory Physics 2 Laboratory | |
| **SOCIAL FOUNDATIONS OF HEALTH** | | **9** |
| PSYC 101 | Introduction to Psychology | |
| PHIL 331 | Health Care Ethics | |
| SOC 101 | Introduction to Sociology | |
| or PUBH 201 | Global Perspectives of Public Health | |
| or PUBH 202 | Social Determinants of Health | |
| **CORE COURSES** | | **32** |

| | | |
|---|---|---|
| BIOL 115<br>& BIOL 119L | Principles of Biology<br>and Foundations Inquiry Lab 1 | |
| BIOL 117<br>& BIOL 120L | Introductory Physiology<br>and Foundations Inquiry Lab 2 | |
| BIOL 219<br>& BIOL 222L | Cellular and Molecular Biology<br>and Intermediate Inquiry Lab | |
| BIOL 221 | Ecology and Evolution | |
| BIOL 223 | Quantitative Biology | |
| BIOL 323L | Advanced Inquiry Lab | |
| BIOL 327 | Professional Development | |
| BIOL 387 | Experimental Design & Communication 1 | |
| BIOL 487 | Experimental Design & Communication 2 | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | |
| **AREA OF EMPHASIS** | | **15** |
| Select one of the areas of emphasis below. | | |
| Global Health (15 Hours) | | |
| Human Health (16 Hours) | | |
| **UPPER-DIVISION BIOLOGY ELECTIVES** ** | | **6** |
| Select 6 credits of biology courses at the 300 or 400 level*** | | |
| **CAPSTONE EXPERIENCE** | | **3** |
| Select one of the following options: | | |
| BIOL 320 | The Total Science Experience: Genomics | |
| BIOL 321 | Total Science Experience Lab | |
| BIOL 486 | Honors Investigation and Thesis | |
| Total Hours | | 84 |

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STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses.

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Up to 6 credits of research (BIOL 386 or BIOL 484 and BIOL 485) can be used towards the Upper-Division Biology Electives. Excluding BIOL 318, BIOL 320, BIOL 321, BIOL 327, BIOL 387, BIOL 486, BIOL 487, BIOL 490, BIOL 494 and above.

*******

These biology elective courses may not overlap with the Area of Emphasis.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 191 | 1 | BIOL 117<br>& BIOL 120L (GEF 8; B.S. First Area 2) | 4 |
| BIOL 115<br>& BIOL 119L (GEF 2) | 4 | CHEM 116<br>& 116L (GEF 8; B.S. Second Area 2) | 4 |
| CHEM 115<br>& 115L (GEF 8) | 4 | ENGL 101 (GEF 1) | 3 |
| MATH 150 (GEF 3) | 3 | PHIL 331 (EDG 3) | 3 |
| PSYC 101 (GEF 4) | 3 | General Elective | 1 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 219<br>& BIOL 222L | 5 | BIOL 221 | 3 |
| ENGL 102 (GEF 1) | 3 | BIOL 327 | 1 |

| | | | |
|---|---|---|---|
| CHEM 233 & 233L | 4 | BIOL 223 | 3 |
| EDG 2: Effective and Civil Communication (GEF 5) | 3 | CHEM 234 & 234L | 4 |
| | | PHYS 101 | 4 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 387 (EDG 1) | 1 | BIOL 323L (EDG 1) | 2 |
| AoE Course 1 | 3 | AoE Course 3 | 3 |
| AoE Course 2 | 3 | AoE Course 4 | 3 |
| PHYS 102 | 4 | ARSC 380 (EDG 5) | 3 |
| EDG 4: Global and Regional Perspectives (GEF 6 or 7) | 3 | General Elective | 3 |
| General Elective | 1 | General Elective | 1 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AoE Course 5 | 3 | BIOL 487 | 1 |
| Upper-Division Biology Elective | 3 | BIOL Capstone (EDG 6) | 3 |
| GEF 6 or GEF 7 | 3 | Upper-Division Biology Elective | 3 |
| General Elective | 3 | SOC 101 (or PUBH 201 or PUBH 202) | 3 |
| General Elective | 3 | General Elective | 3 |
| | | General Elective | 2 |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis

- Global Health (p. 222)
- Human Health (p. 223)

## Global Health Area of Emphasis

This focused training will prepare the graduate for professional programs in public health, infectious disease, conservation biology, and biomedical research.

| Code | Title | Hours |
|---|---|---|
| BIOL 455 | Evolution of Infectious Diseases | 3 |
| BIOL 310 | Advanced Cellular/Molecular Biology | 3 |
| or BIOL 312 | Introduction to Virology | |
| or BIOL 313 | Molecular Basis of Cellular Growth | |
| or BIOL 316 | Developmental Biology | |
| or BIOL 324 | Molecular Genetics | |
| or BIOL 335 | Cell Physiology | |
| or BIOL 348 | Neuroscience 1 | |
| or BIOL 409 | Biochemical Basis of Therapeutics | |
| or BIOL 418 | Medical Genetics | |
| or BIOL 425 | Developmental Genetics | |
| or BIOL 426 | Molecular Biology of Cancer | |
| or BIOL 454 | Immunology | |
| or BIOL 475 | Neurobiological Diseases | |
| BIOL 338 | Behavioral Ecology | 3 |
| or BIOL 340 | Invertebrate Zoology | |

| | | |
|---|---|---|
| or BIOL 344 & 344L | Advanced Human Physiology and Advanced Human Physiology Laboratory | |
| or BIOL 345 & 345L | Human Anatomy and Human Anatomy Laboratory | |
| or BIOL 436 | Comparative Animal Physiology | |
| or BIOL 438 | Animal Behavior | |
| or BIOL 457 | Ecology of Parasites | |
| or AEM 341 & 341L | General Microbiology and General Microbiology Laboratory | |
| BIOL 363 | Plant Geography | 3 |
| or BIOL 365 & 365L | Conservation Biology and Conservation Biology Laboratory | |
| or BIOL 448 | Plant-Microbial Interactions | |
| or BIOL 462 | Ecosystem Models | |
| or BIOL 463 | Global Ecology | |
| or AEM 401 | Environmental Microbiology | |
| or WMAN 446 & 446L | Freshwater Ecology and Freshwater Ecology Laboratory | |
| BIOL 420 | Genomics | 3 |
| or BIOL 430 | Bioinformatics | |
| or BIOL 462 | Ecosystem Models | |
| or BIOL 476 | Computational Neuroscience | |
| Total Hours | | 15 |

## Human Health Area of Emphasis

This focused training will prepare the graduate for professional programs in medicine, dentistry, physician's assistant programs, and biomedical research.

| Code | Title | Hours |
|---|---|---|
| AGBI 410 | Introductory Biochemistry | 3 |
| BIOL 310 | Advanced Cellular/Molecular Biology | 3 |
| or BIOL 324 | Molecular Genetics | |
| or BIOL 418 | Medical Genetics | |
| or BIOL 425 | Developmental Genetics | |
| BIOL 315 | Communicating Natural Science | 3 |
| or COMM 309 | Health Communication | |
| BIOL 312 | Introduction to Virology | 3 |
| or BIOL 454 | Immunology | |
| or BIOL 455 | Evolution of Infectious Diseases | |
| or AEM 341 & 341L | General Microbiology and General Microbiology Laboratory | |
| BIOL 345 & 345L | Human Anatomy and Human Anatomy Laboratory | 4 |
| or BIOL 344 & 344L | Advanced Human Physiology and Advanced Human Physiology Laboratory | |
| Total Hours | | 16 |

## Major Learning Outcomes

### BIOLOGY PRE-MEDICAL

Upon successful completion of the B.S. degree, students will demonstrate competency in these areas:

1. Biological:  Students will demonstrate competency in the content areas (listed below) at three biological levels - cellular/molecular, organismal/physiological, ecosystem/populations)

- Information Flow
- Tranformations of energy and matter
- Structure-function relationships
- Evolution
- Systems and interactions

2. Professional Skills: Students will demonstrate interpersonal skills including: effective communication with both professional and general audiences in written and oral forms, the ability to work in collaborative teams, global perspectives, social awareness, ethical and moral reasoning, demonstrated ability to synthesize and apply knowledge and skills from across the curriculum to social issues and problems.

3. Scientific Process Skills: Students will be able to apply science process skills, including: scientific literacy, experimental design, collecting and analyzing data quantitatively and statistically, application of critical and analytical thinking to address scientific questions.

# Chemistry, B.S.

## Degrees Offered

- Bachelor of Science

## Nature of the Program

The Bennett Department of Chemistry offers the **bachelor of science with a major in chemistry**. This program is configured to meet the needs of all students who have an interest in the broad field of chemistry and includes three focus areas that are related to students' career goals.

The three focus areas are (i) Chemistry & Health, (ii) Chemistry & the Environment, and (iii) Certified Chemist. The focus area of **Chemistry & Health** prepares students for careers in health-related sciences and entry into health professional schools such as dentistry, pharmacy, medicine, and biomedical research. The **Chemistry & the Environment** focus area prepares students for careers in environmental testing and analysis and for further schooling in environmental or toxicological chemistry. Areas such as secondary school teaching; chemical laboratory technical work; law; or business may be pursued with a proper choice of electives. The **Certified Chemist** focus area is approved by the American Chemical Society (ACS). This focus area is for students who desire to qualify for professional positions in industrial and governmental laboratories as well as those who plan to do graduate work in chemistry or allied areas in preparation for research careers in industry or academia.

A chemistry degree is **versatile** and **marketable**. A myriad of career options such as forensics, counterfeit specialist, environmental chemistry, occupational health and safety, industrial engineering, patent and intellectual property law, pharmaceutical research or sales, cosmetics, food science/flavorist, and fuel science are open to chemistry majors. In addition, chemistry is one of the most important topics for pre-med students and the acceptance rate of chemistry majors to health professional schools is very high.

Regardless of focus area, the bachelor of science in chemistry is similar during the first two years. Students should complete the calculus 1 requirement as soon as possible to facilitate their choice of focus area and/or as a prerequisite for both the physics and physical chemistry courses. The three focus areas differ primarily in the upper-level chemistry elective requirements. The Certified Chemist program requires more upper-level chemistry courses than the other two focus areas. However, students can easily shift between the three focus areas or transfer into the chemistry major from another major.

The Department of Chemistry is located in Clark Hall, a state-of-the-art teaching facility for chemistry. Clark Hall offers many new instruments, numerous safety features, excellent ventilation and ample hoods, and complete accessibility for the physically handicapped. The department also has modern research facilities in the adjacent Chemistry Research Laboratory (CRL) building where interested undergraduates may participate in research projects.

## Chemistry Scholarships

In addition to financial aid offered by the University, the department maintains **several scholarships specifically for chemistry majors**. The Ann Shelbaer Ammons Memorial Scholarship, Mountaineer Chemistry Scholarship, John A. Moore Trust Scholarships, the Charles L. Lazzell Scholarship, the Carpenter Family Scholarship, the Robert L. and Patricia Miller Stultz Chemistry Scholarship, the Herbert and Hannah Seigel Chemistry Scholarship, the Willard W. Hodge Scholarship, the Morrissey-Ropp Chemistry Scholarships, the William R. and Phylis T. Moore Organic Chemistry Scholarship, the Joseph T. Green Memorial Scholarship, and the Bud and Patty Blizzard Scholarships are awarded to students in the B.S. program with records of outstanding achievement and demonstrated financial need. Several of these scholarships are restricted to West Virginia residents. Scholarship recipients are expected to remain as chemistry majors and to maintain a 3.0 average in their degree programs in order to be eligible for continued support.

## Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (p. 52). Please note that students may not earn a minor in their major field.

# FACULTY

## CHAIR

- Brian Popp - Ph.D. (University of Wisconsin-Madison)

## ASSOCIATE CHAIR OF GRADUATE STUDIES

- Fabien Goulay - Ph.D. (Université of Rennes, France)

## ASSOCIATE CHAIR OF UNDERGRADUATE STUDIES

- Michelle Richards-Babb - Ph.D. (Lehigh University)

## PROFESSORS

- Gregory Dudley - Ph.D. (Massachusetts Institute of Technology)
  Regular Graduate Faculty; Eberly Family Distinguished Professor; Chemical Synthesis, Organic Reaction Methodology, Medicinal Chemistry
- Terry Gullion - Ph.D. (College of William & Mary)
  Regular Graduate Faculty; Physical Chemistry, Solid State NMR, Biological Materials, Polymers
- Lisa Holland - Ph.D. (University of North Carolina-Chapel Hill)
  Regular Graduate Faculty; Micro-separations, High Throughput Drug Screening
- Fred L. King - Ph.D. (University of Virginia)
  Analytical Chemistry, Mass Spectrometry, Trace Elements, Gas-phase Chemistry
- Joshua Osbourn - Ph.D. (University of Pittsburgh)
  Teaching Faculty; Organic Chemistry
- Brian Popp - Ph.D. (University of Wisconsin-Madison)
  Regular Graduate Faculty; Organic and Organometallic Chemistry, Catalysis
- Betsy Ratcliff - Ph.D. (University of Binghamton-SUNY)
  Teaching Faculty; Chemical Education, Physical Chemistry
- Michelle Richards-Babb - Ph.D. (Lehigh University)
  Regular Graduate Faculty; Chemical Education
- Stephen Valentine - Ph.D. (Indiana University)
  Regular Graduate Faculty; Eberly Professor of Chemistry; Mass Spectrometric Analysis of Biomolecules

## ASSOCIATE PROFESSORS

- Erin Battin - Ph.D. (Clemson University)
  Teaching Faculty; Bioinorganic Chemistry
- Fabien Goulay - Ph.D. (Université de Rennes)
  Regular Graduate Faculty; Physical Chemistry, Laser Spectroscopy
- Carolyn Kitchens - Ph.D. (University of Pittsburgh)
  Teaching Faculty; Biochemistry
- Peng Li - Ph.D. (Texas Technical University)
  Regular Graduate Faculty; Bioanalytical Chemistry
- Mark Tinsley - Ph.D. (Leeds University, England)
  Regular Graduate Faculty; Teaching Faculty; Physical Chemistry, Nonlinear Dynamics
- Mingming Xu - Ph.D. (Ohio University)
  Teaching Faculty; Analytical Chemistry

## ASSISTANT PROFESSORS

- Hacer Karatas Bristow - Ph.D. (University of Michigan)
  Regular Graduate Faculty; Chemical Biology, Bioorganic and Medicinal Chemistry
- Brian Dolinar - Ph.D. (University of Wisconsin-Madison)
  Regular Graduate Faculty; Inorganic Chemistry
- David Mersing - Ph.D. (West Virginia University)
  Teaching Faculty; Physical Chemistry
- Brian Nichols - Ph.D. (West Virginia University)
  Teaching Faculty; Organic Chemistry
- Oluwaboti (Tobi) Odeleye - Ph.D. (South Dakota State University)
  Regular Graduate Faculty; Chemical Education
- Trina Perrone - Ph.D. (West Virginia University)

Teaching Faculty; Organic Chemistry

- Mark Schraf - M.S. (West Virginia University)
  Teaching Faculty; Analytical Chemistry

### PROFESSORS EMERITI

- Harry Finklea - Ph.D. (California Institute of Technology)
- Charles Jaffe - Ph.D. (University of Colorado)
- Jeffrey Petersen - Ph.D. (University of Wisconsin-Madison )
- Kenneth Showalter - Ph.D. (University of Colorado)
- Ronald Smart - Ph.D. (University of Michigan)
- Bjorn Soderberg - Ph.D. (Royal Institute of Technology, Sweden)
- Kung Wang - Ph.D. (Purdue University)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: completion of CHEM 115 (http://catalog.wvu.edu/search/?P=CHEM%20115), CHEM 115L (http://catalog.wvu.edu/search/?P=CHEM%20115L), CHEM 116 (http://catalog.wvu.edu/search/?P=CHEM%20116), and CHEM 116L (http://catalog.wvu.edu/search/?P=CHEM%20116L) with a grade of C-.

Major Code: 1439

Click here to view the Suggested Plan of Study (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/bennettdepartmentofchemistry/chemistry_bs/#SPOS)

## Degree Requirements

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences (p. 229) page.

## Departmental Requirements for the B.S. in Chemistry

- **Calculation of GPA in the major:** A grade of C- is required in all courses applied to major requirements, including the STEM Foundations. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing Requirement**: Chemistry Bachelor of Science fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), CHEM 402, and WRIT 305.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course, which for the B.S. Chemistry degree involves CHEM 402.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 33 |
| Eberly Edge Requirements | | 18 |
| Chemistry Major Requirements | | 69 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, and 6 or 7 | | 15 |
| CHEM 191 | First-Year Seminar | 1 |

| | |
|---|---|
| General Electives | 17 |
| Total Hours | 33 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2 : Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (GEF 6 or 7) | | 3 |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 18 |

## Chemistry Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **23** |
| MATH 155 | Calculus 1 | |
| MATH 156 | Calculus 2 | |
| or STAT 211 | Elementary Statistical Inference | |
| PHYS 101<br>& 101L<br>& PHYS 102<br>& PHYS 102L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory<br>and Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| or PHYS 111<br>& 111L<br>& PHYS 112<br>& PHYS 112L | General Physics 1<br>and General Physics 1 Laboratory<br>and General Physics 2<br>and General Physics 2 Laboratory | |
| Select one pair of courses: | | |
| BIOL 115<br>& 115L<br>& BIOL 117<br>& BIOL 117L | Principles of Biology<br>and Principles of Biology Laboratory<br>and Introductory Physiology<br>and Introductory Physiology Laboratory | |
| SUST 101<br>& 101L<br>& SUST 201<br>& SUST 201L | Sustainable Earth<br>and Sustainable Earth Laboratory<br>and Earth System Science<br>and Earth System Science Laboratory | |
| SUST 101<br>& 101L<br>& SUST 207<br>& SUST 207L | Sustainable Earth<br>and Sustainable Earth Laboratory<br>and Climate System Science<br>and Climate System Science Laboratory | |
| **CORE COURSES** | | **23** |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | |
| CHEM 322 | Inorganic Chemistry 1 | |
| **FOCUS AREAS** | | **11** |
| Select a minimum of 11 credits from the suggested areas below | | |
| **Chemistry & Health** | | |

| | | |
|---|---|---|
| CHEM 335 & 335L | Methods of Structure Determination and Methods of Structure Determination Laboratory | |
| CHEM 336 | Fundamental Concepts in Early Drug Discovery | |
| CHEM 422L | Inorganic Synthesis Laboratory | |
| AGBI 410 | Introductory Biochemistry | |
| **Chemistry & the Environment** | | |
| CHEM 310 & 310L | Instrumental Analysis and Instrumental Analysis Laboratory | |
| CHEM 312 | Environmental Chemistry | |
| CHEM 341 & 341L | Physical Chemistry: Brief Course and Physical Chemistry: Brief Course Laboratory | |
| **ACS Certified Chemist** | | |
| CHEM 341 & 341L | Physical Chemistry: Brief Course and Physical Chemistry: Brief Course Laboratory | |
| CHEM 422L | Inorganic Synthesis Laboratory | |
| AGBI 410 | Introductory Biochemistry | |
| Select two classes from the group below: | | |
| CHEM 310 | Instrumental Analysis | |
| CHEM 348 | Physical Chemistry 2 | |
| CHEM 422 | Inorganic Chemistry 2 | |
| Select one course from the group below: | | |
| CHEM 310L | Instrumental Analysis Laboratory | |
| CHEM 348L | Physical Chemistry 2 Laboratory | |
| **UPPER-DIVISION ELECTIVES** ** | | **9** |
| Select a minimum of nine credits from the following list | | |
| Any upper-division CHEM course that is not used to fulfill another requirement | | |
| CHEM 497 | Research | |
| MATH 343 | Introduction to Linear Algebra | |
| **CAPSTONE EXPERIENCE** | | **3** |
| CHEM 402 | Chemistry Capstone: Chemical Literature | |
| Total Hours | | 69 |

## FOOTNOTES

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STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses

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Only three hours of CHEM 497 may be counted toward the 9-credit upper-division Chemistry requirement. With approval of a chemistry advisor, up to 3 credits may come from a non-chemistry course.

*******

It is recommended for students planning to pursue a graduate degree to complete MATH 251 and MATH 261 as a part of their undergraduate course work.

## Suggested Plan of Study

| **First Year** | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| CHEM 191 | 1 | ENGL 101 (GEF 1) | 3 |
| GEF 4 | 3 | CHEM 116 & 116L (GEF 8)* | 4 |
| GEF 6 or 7 | 3 | MATH 156 or STAT 211 (GEF 8) | 3 |
| CHEM 115 & 115L (GEF 2)* | 4 | EDG 1: Data and Society | 3 |
| MATH 155 (GEF 3) | 4 | General Elective | 2 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 215<br>& 215L | 4 | ENGL 102 (GEF 1) | 3 |
| CHEM 233<br>& 233L | 4 | CHEM 234<br>& 234L | 4 |
| EDG 2: Effective and Civil Communication | 3 | EDG 3: Ethics and Civil Responsibility | 3 |
| PHYS 101<br>& 101L (GEF 8) | 4 | PHYS 102<br>& 102L | 4 |
| | | General Elective | 1 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Focus Area Course 1 | 3 | CHEM 322 | 3 |
| Focus Area Course 2 | 4 | Focus Area Course 3 | 4 |
| EDG 4: Global and Regional Perspectives (GEF 6 or 7) | 3 | EDG 5 : Practicing Arts & Sciences (ARSC 380) | 3 |
| General Elective | 3 | GEF 5 | 3 |
| General Elective | 2 | General Elective | 2 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Chemistry Elective 1 | 3 | CHEM 402 | 3 |
| Chemistry Elective 2 | 3 | Chemistry Elective 3 | 3 |
| Stem Science Pairing 1 | 4 | EDG 6: High Impact Experience | 3 |
| General Elective | 3 | Stem Science Pairing 2 | 4 |
| General Elective | 2 | General Elective | 2 |
| | 15 | | 15 |

Total credit hours: 120

## Degree Progress

- By the end of their second semester (excluding summer) in the major, at a minimum, students must have completed MATH 126 with a minimum grade of C-.
- By the end of the second semester in the major or two semesters after completing CHEM 110, completion of CHEM 115, CHEM 115L, CHEM 116 and CHEM 116L with C- or better in each.
- By the end of the second year in the major or two semesters after completing CHEM 116 and CHEM 116L, completion of CHEM 234 and CHEM 234L with C- or better and a 2.0 in the major.
- All majors must meet with a Chemistry adviser each semester.

Students who do not meet their benchmark expectations may be removed from the major.

## Major Learning Outcomes

### CHEMISTRY

1. Students will demonstrate competency at a foundational level in a minimum of four of the five traditional sub-disciplines of chemistry (listed below) and in-depth knowledge in at least three of the five sub-disciplines. Further, students will recognize that higher order interactions of macromolecular, supramolecular, mesoscale, and nanoscale systems are distinct from those of small molecules.

- Analytical chemistry
- Biochemistry
- Inorganic chemistry
- Organic chemistry
- Physical chemistry

2. Students will be able to define problems clearly, develop testable hypotheses, design and execute experiments, analyze data using appropriate statistical methods, identify and account for fundamental uncertainties in experimental measurements, and draw appropriate conclusions.

3. Students will demonstrate safe and effective lab techniques spanning at least three of the five traditional sub-disciplines of chemistry.

4. Students will be able to interact effectively and productively with a diverse group of peers to solve scientific problems.

5. Students will demonstrate effective written and oral communication skills including interpretation/presentation of results, navigating the scientific literature, and properly citing the works of others.

# Communication Studies, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Department of Communication Studies offers a curriculum to meet the needs of liberal arts and pre-professional students oriented toward communication-related careers such as marketing, sales, recruiting, management, and market research, among many others. The undergraduate curriculum focuses on the application of theory and research in human communication to a variety of personal, social, and organizational settings. All majors complete COMM 491 or COMM 492, an internship or directed study, and COMM 403, the capstone course. These two courses allow students to integrate academic content with real-world experience. For more information about this program, please go to http://communicationstudies.wvu.edu.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

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## FACULTY

### CHAIR

- Lindsay Morris-Neuberger - Ph.D. (Michigan State University)
  Health and Risk Communication, Campaigns

### PROFESSORS

- Elizabeth L. Cohen - Ph.D. (Georgia State University)
  Media Psychology, Entertainment Education, New Media, Health and Risk Communication
- Megan R. Dillow - Ph.D. (Pennsylvania State University)
  Interpersonal and Relational Communication, Health Communication, Communication Theory
- Alan K. Goodboy - Ph.D. (West Virginia University)
  Instructional, Interpersonal, Quantitative Methods
- Christine E. Kunkle - Ph.D. (University of Nebraska)
  Family, Life-span, Interpersonal
- Matthew M. Martin - Ph.D. (Kent State University)
  Instructional, Interpersonal, Communication Traits
- Lindsay Morris-Neuberger - Ph.D. (Michigan State University)
  Health and Risk Communication, Campaigns
- Scott A. Myers - Ph.D. (Kent State University)
  Instructional, Organizational

### ASSISTANT PROFESSORS

- Megan A. Vendemia - Ph.D. (Ohio State University)
  Communication Technology, Media Effects

### TEACHING ASSISTANT PROFESSORS

- John G. Cole - M.A. (West Virginia University)
  Instructional, Organizational, Computer Technology

### PROFESSORS EMERITA

- Melanie Booth-Butterfield - Ph.D. (University of Missouri)
- Joan Gorham - Ed.D. (Northern Illinois University)
- Virginia P. Richmond - Ph.D. (University of Nebraska)

### ASSOCIATE PROFESSORS EMERITA

- John Shibley - Ph.D. (Ohio State University)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: completion of one COMM course with a minimum grade of C-.

Major Code: 1474

Click here to view the Suggested Plan of Study (p. 232)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in Communication Studies

Completion of the major requires students to earn a minimum of 36 credit hours in Communication Studies courses. All students wishing to obtain a degree in Communication Studies must comply with the following:

- **Calculation of the GPA in the Majo**r: A minimum GPA of 2.0 is required in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat**.**
- **Writing and Communication Requirement:** The Communication Studies Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.

- **Capstone Requirement**: The university requires the successful completion of a Capstone course: COMM 403.
- **Experiential Learning:** All students must complete a minimum of 3 credits internship (COMM 491 or COMM 492).

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 69 |
| Eberly Edge Requirements | | 15 |
| Communication Studies Major Requirements | | 36 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| **Outstanding GEF Requirements 1, 2, 3, 4, 5, 6, 7 and 8** | | **34** |
| COMM 191 | First-Year Seminar | 1 |
| General Electives | | 34 |
| Total Hours | | 69 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences | | 3 |
| EDG 6: High Impact Experience (COMM 491 or COMM 492) | | |
| Total Hours | | 15 |

## Communication Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES** | | **9** |
| COMM 173 | Fundamentals of Communication Studies | |
| COMM 201 | Communication Research Methods | |
| COMM 203 | Communication Theory | |
| **ELECTIVE COURSES** | | **21** |
| Select 21 credit hours of COMM courses, with a minimum of 15 credit hours at the 300- or 400-level (excluding 490) | | |
| **EXPERIENTIAL LEARNING:** | | **3** |
| COMM 491 | Professional Field Experience * | |
| or COMM 492 | Directed Study | |
| **CAPSTONE:** | | **3** |
| COMM 403 | Capstone Seminar | |
| Total Hours | | 36 |

*****
COMM 491 must be taken for a minimum of 3 credits.

## Suggested Plan of Study

| First Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| COMM 191 | 1 | ENGL 101 (GEF 1) | 3 |
| COMM 173 | 3 | EDG 2 : Effective and Civil Communication | 3 |

| | | | | |
|---|---|---|---|---|
| EDG 1: Data and Society | | 3 F5 | | 3 |
| F2B | | 4 F6 | | 3 |
| General Elective | | 4 F3 | | 3 |
| | | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COMM 203 | | 3 COMM 201 | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 ENGL 102 (GEF 1) | 3 |
| F4 | | 3 EDG 4: Global and Regional Perspectives | 3 |
| F7 | | 3 F8 Course 1* | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COMM Elective 1 | | 3 COMM 491 or 492 (EDG 6) | 3 |
| ARSC 380 (EDG 5) | | 3 COMM Elective 2 | 3 |
| F8 Course 2* | | 3 COMM Elective 3 | 3 |
| F8 Course 3* | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| COMM Elective 4 | | 3 COMM 403 (Capstone) | 3 |
| COMM Elective 5 | | 3 COMM Elective 6 | 3 |
| General Elective | | 3 COMM Elective 7 | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

*

Courses taken to satisfy the F8 requirement may overlap with major courses. Students who complete a minor, a second major or a dual degree already meet F8.

## Degree Progress

- By the end of the fourth semester in the major, students should have completed COMM 201 and COMM 203 with a minimum grade of C- in each.
- All majors must meet with a COMM adviser each semester.

Students who do not meet these expectations may be removed from their major.

## Major Learning Outcomes

### COMMUNICATION STUDIES

Upon successful completion of the B.A. degree, **Communication Studies** majors will be able to:

1. Identify and explain the primary communication theories, perspectives, principles, and concepts associated with the Communication Studies discipline.

2. Analyze and critique messages using communication theories, perspectives, principles, and concepts.

3. Interpret, design, and conduct original communication-based research.

4. Create and deliver effective communication messages across oral, written, and mediated channels appropriate to the audience, purpose, and context.

# Criminology, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The criminology major focuses on the social roots and implications of criminal behavior and the operation of the criminal justice system. Students learn to apply the theoretical and methodological tools of sociology to make sense of crime and social control in modern society, while selecting from a variety of substantive course topics. These include but are not limited to: juvenile delinquency, street crime and gangs, corporate and white collar crime, hate crime, terrorism, drug use and abuse, media and crime, the culture of police work, and punishment and social control.

The sociological approach to crime distinguishes criminology from the related field of criminal justice, which emphasizes the procedural activities of criminal justice agencies. Criminology treats crime as the product of complex social forces, seeking to understand why laws are made in the first place, how and why these laws are violated, and how society responds when laws are broken. This holistic societal perspective prepares graduates to pursue a broad range of careers such as policing, security, corrections, law, social services, and business. The major also prepares students for graduate studies in the social sciences in pursuit of academic or applied research careers or for professional training in law, public administration, social work, and related fields. For more information about this program, please visit the departmental website (https://soca.wvu.edu/students/undergraduate-students/b-a-in-criminology/).

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; please consult the list of all available minors and their requirements (p. 52). Please note that students may not earn a minor in their major field.

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## FACULTY

### PROFESSOR AND CHAIR

- Daniel Renfrew - Ph.D. (Binghamton University) Anthropology
  Environmental and political anthropology, Social movements, Latin American cultures

### PROFESSORS

- Sharon R. Bird - Ph.D. (Washington State University) Sociology
  Social Inequality (race/ethnicity/class/gender/LGBTQ+), Workplace equity, Research methods
- Henry H. Brownstein - Ph.D. (Temple University) Sociology
  Distinguished Research Professor. Drugs and society, Drug policy, Violence, Qualitative research methods
- Katie E. Corcoran - Ph.D. (University of Washington) Sociology
  Theory, Organizations, Culture, Criminology, Religion, Social networks
- Walter S. DeKeseredy - Ph.D. (York University) Sociology
  Anna Deane Carlson Endowed Chair of Social Sciences. Violence against women, Critical criminology, Masculinities and crime, Criminology theory
- R. Gregory Dunaway - Ph.D. (University of Cincinnati) Sociology
  Dean of the Eberly College of Arts and Sciences
- S. Melissa Latimer - Ph.D. (University of Kentucky) Sociology
  Gender/race/ethnicity, Inequality/labor markets/welfare systems
- James Nolan, III - Ph.D. (Temple University) Sociology
  Criminal justice, Group and social processes
- Jason Manning - Ph.D. (University of Virginia) Sociology
  Conflict and social control, Violence, Sociology of knowledge
- Rachel Stein - Ph.D. (University of Akron) Sociology
  Criminology, Victimization, Media and crime
- Karen Weiss - Ph.D. (SUNY-Stony Brook) Sociology
  Criminology, Victimization, Gender/sexuality/culture
- Rachael A. Woldoff - Ph.D. (Ohio State University) Sociology
  Community, Crime, Inequality/race/class

- Joshua Woods - Ph.D. (Michigan State University) Sociology
  Social psychology, Media, Complex organizations, Sociology of risk

### ASSOCIATE PROFESSORS

- Corey Colyer - Ph.D. (Syracuse University) Sociology
  People processing systems, Agencies of social control
- Amy Hirshman - Ph.D. (Michigan State University) Anthropology
  Mesoamerican archaeology, Social complexity, Ceramics
- Christopher P. Scheitle - Ph.D. (Pennsylvania State University) Sociology
  Religion, Science in society, Crime, Organizations
- Jennifer Steele - Ph.D. (Pennsylvania State University) Rural Sociology
  Natural resource sociology, Rural and community development
- Jesse Wozniak - Ph.D. (University of Minnesota) Sociology
  Policing, Criminology, Deviance, State power

### ASSISTANT PROFESSORS

- Daniel Brewster - M.A. (West Virginia University) Communication Studies
  Culture, Community
- Brandie S. Pugh - Ph.D. (University of Delaware) Sociology
  Inequality, Corporate crime, Interpersonal violence, Philosophy of science
- Genesis Snyder - M.A. (Western Michigan University) Anthropology
  Historical archaeology

### TEACHING INSTRUCTORS

- Douglas Sahady - M.A. (California University of Pennsylvania) Social Science

### PROFESSORS EMERITI

- Ronald C. Althouse - Ph.D. (University of Minnesota)
  Sociology Theory, Work, Occupational safety and health
- Ann L. Paterson - Ph.D. (Michigan State University) Sociology
- Patricia C. Rice - M.A. (Ohio State University) Anthropology
- Joseph J. Simoni - Ph.D. (University of Notre Dame) Sociology
- William I. Torry - Ph.D. (Columbia University) Anthropology

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major. Students must have a placement into a Math course to receive a complete schedule for their first semester.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: completion of SOC 101 (http://catalog.wvu.edu/search/?P=SOC%20101) with a C- or higher and eligibility to take MATH 124 (http://catalog.wvu.edu/search/?P=MATH%20124).

Major Code: 1424

Click here to view the Suggested Plan of Study (p. 238)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |

| | | |
|---|---|---|
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in Criminology

All Criminology majors are required to take a common set of core courses and choose major electives based on their scholarly and career interests.

- **Calculation of the GPA in the major:** A minimum GPA of a 2.0 is required in all courses applied to the major, with a minimum grade of C- is required in SOC 191, ANTH 105, and SOC 101. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for the D/F repeat
- **Writing and Communication Requirement:** Criminology Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two **SpeakWrite Certified Courses™**: SOC 488, and a 2nd course selected from: ANTH 350, ANTH 352, ANTH 354, ANTH 450, ANTH 457, ANTH 458, HIST 203, HIST 207, HIST 221, HIST 241, HIST 242, HIST 259, HIST 264, PSYC 241, CRIM 318, SOC 323, SOC 360, WGST 150, WGST 225.
- **Capstone Requirement:** The university requires completion of a Capstone course. Criminology majors must complete SOC 488 successfully.
- **Experiential Learning**: Students are encouraged to pursue a Professional Field Experience (SOC 491) or independent Study (SOC 495) in their junior or senior year, combining experiential work with previously acquired skills in a project appropriate to their career goals. These courses may be taken for variable credit and will count towards graduation credits, but not major requirements.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 65 |
| Eberly Edge Requirements | | 15 |
| Criminology Major Requirements | | 40 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 5, and 8 | | 24 |
| First-Year Seminar | | |
| General Electives | | 41 |
| Total Hours | | 65 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (ANTH 105) | | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |

| | |
|---|---|
| EDG 6: High Impact Experience | 3 |
| Total Hours | 15 |

## Criminology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Orientation to the Major** | | **1** |
| SOC 191 | First-Year Seminar (Minimum Grade of C-) | |
| or SOC 361 | Practicing Sociology and Anthropology | |
| **Common Core Requirements** | | **18** |
| ANTH 105 | Introduction to Anthropology (Minimum Grade of C-) | |
| SOC 101 | Introduction to Sociology (Minimum Grade of C-) | |
| CRIM 232 | Criminology | |
| CRIM 234 | The Criminal Justice System | |
| SOC 301 | Sociological Theory | |
| SOC 311 | Social Research Methods | |
| **Statistics Requirement** | | **3** |
| STAT 211 | Elementary Statistical Inference | |
| **Upper-level Criminology Requirements** | | **12** |
| Select four of the following: | | |
| CRIM 302 | Deviant Behavior | |
| CRIM 303 | Juvenile Delinquency | |
| CRIM 318 | Hate Crime | |
| CRIM 319 | Police Culture and Socialization | |
| CRIM 321 | Punishment and Social Control | |
| CRIM 324 | Gender and Crime | |
| CRIM 334 | Corporate and White Collar Crime | |
| CRIM 345 | Terrorism | |
| CRIM 346 | Victimology | |
| CRIM 415 | Mass Media, Crime and Deviance | |
| CRIM 431 | Cybercrime | |
| CRIM 432 | Drugs, Crime, and Society | |
| CRIM 433 | Inside Out Prison Exchange | |
| CRIM 435 | Criminal Justice Process | |
| CRIM 444 | Neighborhoods and Crime | |
| CRIM 461 | Issues in Crime and Justice | |
| CRIM 464 | Rural Criminology | |
| CRIM 478 | Violence Against Women | |
| SOC 331 | Sociology of Law | |
| SOC 470 | Cities and Urban Life | |
| SOC 494 | Seminar | |
| **Sociology or Anthropology Elective Courses** | | **3** |
| Select one of the following: | | |
| ANTH 252 | Biological Anthropology | |
| ANTH 254 | Cultural Anthropology | |
| ANTH 258 | Introduction to Archaeology | |
| ANTH 350 | Latin American Culture | |
| ANTH 352 | Historical Archaeology | |
| ANTH 354 | Mesoamerican Archaeology | |
| ANTH 355 | Cultural Resource Management | |
| ANTH 357 | Archaeological Field School | |
| ANTH 358 | Anthropology of Health and Illness | |
| ANTH 450 | Archaeology of Ancient States | |

| | | |
|---|---|---|
| ANTH 451 | Material Culture | |
| ANTH 457 | Social Movements | |
| ANTH 458 | Environmental Anthropology | |
| CRIM 302 | Deviant Behavior | |
| CRIM 318 | Hate Crime | |
| SOC 207 | Social Problems in Contemporary America | |
| SOC 221 | Families and Society | |
| SOC 225 | Inequality and the Media | |
| SOC 226 | Sexuality and Society | |
| SOC 235 | Race and Ethnic Relations | |
| SOC 304 | Complex Organizations | |
| SOC 312 | Death and Dying | |
| SOC 320 | Social Psychology | |
| SOC 323 | Sociology of Rural Life | |
| SOC 331 | Sociology of Law | |
| SOC 333 | Sociology of Work and Work Places | |
| SOC 337 | Sociology of American Business | |
| SOC 360 | Sociology of Gender | |
| SOC 405 | Class, Status, and Power | |
| SOC 463 | Economy and Society | |
| **Capstone Experience** | | **3** |
| SOC 488 | The Capstone Experience | |
| Total Hours | | 40 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SOC 191 | 1 | ENGL 101 (GEF 1) | 3 |
| F6 | 3 | ANTH 105 (EDG 4 & F7) | 3 |
| SOC 101 (GEF 4) | 3 | EDG 2: Effective and Civil Communication | 3 |
| EDG 1: Data and Society | 3 | F2A | 3 |
| General Elective | 3 | F5 | 3 |
| General Elective | 1 | General Elective | 1 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CRIM 232 | 3 | ENGL 102 (GEF 1) | 3 |
| STAT 211 (F3) | 3 | CRIM 234 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | F8 Course 2* | 3 |
| F2A | 3 | General Elective | 3 |
| F8 Course 1* | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARSC 380 (EDG 5) | 3 | SOC 311 | 3 |
| SOC 301 | 3 | Upper-level Criminology Course | 3 |
| Upper-level Criminology Course | 3 | Sociology or Anthropology Elective | 3 |
| F8 Course 3* | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

| Fourth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| Upper-level Criminology Course | | 3 SOC 488 (Capstone) | 3 |
| Upper-level Criminology Course | | 3 General Elective | 3 |
| EDG 6: EEDG High Impact Experience | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

*

Students who complete a minor, a double major or a dual degree already fulfill F 8.

## Degree Progress

Students are expected to meet the benchmarks set below.

- Complete SOC 101 and ANTH 105 with grades of C- or higher and be eligible to take MATH 124 by the end of the second semester in the program.
- Complete CRIM 232 , CRIM 234, and STAT 211 by the end of the fourth semester in the program.
- Complete SOC 301, SOC 311, and two additional 300-level courses by the end of of the sixth semester in the program.
- Maintain a GPA of 2.0 overall and a minimum GPA of 2.0 in all CRIM, SOC, and ANTH courses counting toward major requirements.
- All majors must meet with their adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### CRIMINOLOGY

Students graduating with a BA in **Criminology** will have the ability to:

1. Describe the sociological approach to crime and social control and how it is similar to and different from other approaches.
2. Describe the history and core components of the American criminal justice system (police, corrections, and courts), and provide examples of ways that society shapes and is shaped by these institutions.
3. Discuss how criminological theories and research contribute to our understanding of crime, victimization, and the criminal justice system and to contemporary public policy.
4. Apply ethical principles to the conduct of criminological research and the applications of its findings.
5. Critically analyze contemporary issues in crime and justice by retrieving and synthesizing appropriate information and evidence and identifying implications for research and practice/policy.
6. Demonstrate effective, clear and persuasive communication skills according to disciplinary conventions

# Data Science, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Data science is an interdisciplinary field with roots in applied mathematics, statistics and computer science. The Bachelor of Science in Data Science seeks to meet the increased employment demands across many industries and research fields.

Data Science majors will develop quantitative and computational skills to solve real-world problems. For example, data scientists are responsible for creating and maintaining dashboards in a pandemic, predicting traffic patterns to improve driver safety and helping apps like Uber Eats optimize food delivery. Students can customize the degree to fit their interests by selecting a focus area of their choice to create a degree with practical applications.

Working with their academic advisers, data science students will take classes in a discipline related to their interests and career goals. Students can choose their area of emphasis among a variety of areas including the social sciences, humanities, and sciences. Examples include astronomy, biology, criminology, geography, geology, GIS, physics, public health, psychology, and sociology.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field. An undergraduate student majoring in data science may choose to minor in actuarial science, applied mathematics, pure mathematics, or statistics.

## Mathematics Learning Center

The Calculus Learning Center (https://mathanddata.wvu.edu/academic-support/math-learning-center-tutors/) (CLC) is a free walk-in tutoring center open 5-days a week that employs students who are proficient in mathematics. It is located at ARM 301, and the hours are posted on the door or on the School of Mathematical and Data Sciences' webpage. The CLC tutors help with all undergraduate mathematics courses from Calculus 1 through Calculus 4. The CLC also employs students who are proficient in mathematics. For more information about the center, call (304)293-2011 or contact Dr. Renee LaRue at reneelarue@math.wvu.edu.

Students in other foundational mathematics courses can receive help at the STEM Learning Center (https://stemcollab.wvu.edu/stem-learning-center/).

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## FACULTY

### DIRECTOR OF THE SCHOOL OF MATHEMATICAL AND DATA SCIENCES

- Jessica Deshler - Ph.D. (University of New Mexico)
  Regular Graduate Faculty, Undergraduate Mathematics Education, Equity in Mathematics, Graduate Student Development

### ASSOCIATE DIRECTOR OF THE INSTITUTE OF MATH LEARNING

- Lori Ogden - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Undergraduate Mathematics Education

### ASSOCIATE DIRECTOR FOR GRADUATE PROGRAMS

- Kevin Milans - Ph.D. (University of Illinois)
  Regular Graduate Faculty, Combinatorics, Graph Theory, and Partially Ordered Sets

### ASSOCIATE DIRECTOR FOR UNDERGRADUATE PROGRAMS

- Charis Tsikkou - Ph.D. (Brown University)
  Regular Graduate Faculty, Hyperbolic and Mixed Type Partial Differential Equations, Conservation Laws

### ASSOCIATE DIRECTOR OF THE SCHOOL OF MATHEMATICAL AND DATA SCIENCES

- Adrian Tudorascu - Ph.D. (Carnegie Mellon University)
  Regular Graduate Faculty, Partial Differential Equations, Optimal Transport

### PROFESSORS

- Krzysztof Ciesielski - Ph.D. (Warsaw University)
  Regular Graduate Faculty, Topology, Set Theory, MRI Imaging
- Marjorie Darrah - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Applied Mathematics, Mathematics Education
- Jessica Deshler - Ph.D. (University of New Mexico)
  Regular Graduate Faculty, Undergraduate Mathematics Education, Equity, Graduate Student Development
- Harvey Diamond - Ph.D. (Massachusetts Institute of Technology)
  Regular Graduate Faculty, Approximation theory, Applied Mathematics
- Harry Gingold - D.Sc. (Israel Institute of Technology)
  Regular Graduate Faculty, Discrete Finite Difference systems of Equations, Factorization of Power Series, Foundation (Geometry), Mathematical Cryptography, Optimization, Compactification, Ordinary Differential Systems of Equations, Asymptotics, Approximations, Turning point theory, Celestial Mechanics
- Erin Goodykoontz - Ed.D (West Virginia University)
  Introductory Concepts of Mathematics
- Ádám M. Halász - Ph.D. (State University of New York at Stony Brook)
  Regular Graduate Faculty, Molecular systems biology, Monte Carlo methods, Mathematical Physics
- Rong Luo - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Graph Theory, Discrete Math
- David Miller - Ph.D. (Oklahoma State University)
  Regular Graduate Faculty, Undergraduate math Education, Cognitive Science, STEM Education

- Robert Mnatsakanov - Ph.D. (Moscow Institute of Electronics and Mathematics)
  Regular Graduate Faculty, Applied Probability, Approximation of functions from moments, Risk Models
- Laura Pyzdrowski - Ed.D. (West Virginia University)
  Regular Graduate Faculty, Undergraduate Math Education, STEM Education, K-12 Outreach, Distance Learning, Instructional Technology
- Kenneth Ryan - Ph.D. (Iowa State University)
  Regular Graduate Faculty, Semi-supervised learning and design of experiments
- Adrian Tudorascu - Ph.D. (Carnegie Mellon University)
  Regular Graduate Faculty, Particial Differential Equations, Optimal Transport
- Jerzy Wojciechowski - Ph.D. (University of Cambridge)
  Regular Graduate Faculty, Combinatorics, Graph Theory

## ASSOCIATE PROFESSORS

- Olgur Celikbas - Ph.D. (University of Nebraska)
  Regular Graduate Faculty, Commutative Algebra, Homologic Algebra
- Vito D'Orazio - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Data Sciences
- Renee LaRue - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Undergraduate Mathematics Education
- Kevin Milans - Ph.D. (University of Illinois)
  Regular Graduate Faculty, Combinatorics, Graph Theory, Partially Ordered Sets
- Lori Ogden - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Undergraduate Mathematics Education, Associate Director for the Institute for Math Learning
- Casian Pantea - Ph.D. (University of Wisconsin - Madison)
  Regular Graduate Faculty, Mathematical Biology, Dynamical Systems
- Vicki Sealey - Ph.D. (Arizona State University)
  Regular Graduate Faculty, Undergraduate Mathematics Education, Calculus student learning
- Charis Tsikkou - Ph.D. (Brown University)
  Regular Graduate Faculty, Hyperbolic and Mixed Type Partial Differential Equations

## ASSISTANT PROFESSORS

- Krista Bresock - Ph.D. (West Virginia University)
  Undergraudate Mathematics Education
- Ela Celikbas - Ph.D. (University of Nebraska)
  Regular Graduate Faculty, Commutative Algebra, Representation Theory
- Srinjoy Das - Ph.D. (University of California, San Diego)
  Regular Graduate Faculty, Data Sciences
- Ryan Hansen - Ph.D. (West Virginia University)
  Combinatorics
- Cody Hood - Ph.D. (West Virginia University)
  Undergraduate Mathematics Education
- Josh Karr - Ph.D. (West Virginia University)
  Mathematics Education
- Jennifer Kearns - M.S. (West Virginia University)
  Undergraduate Mathematics Education
- Mihyun Kim - Ph.D. (Colorado State University)
  Regular Graduate Faculty, Functional Data Analysis, Extreme Value Analysis, and Time Series Analysis
- Clark Metz - Ph.D. (West Virginia University)
  Higher Education
- Matthew Schraeder - Ph.D. (West Virginia University)
  Undergraduate Mathematics Education
- Ignacio Segovia Dominguez - Ph.D. (Center for Research in Mathematics, A.C.)
  Regular Graduate Faculty, Applied Mathematics, Statistical Modeling and Computer Science
- Youngseok Song - Ph.D. (Colorado State University)
  Regular Graduate Faculty, High-dimensional Statistics, Graphical Model, Large-scale Inferences, Network Analyses
- Iwona Wojciechowska - Ph.D. (West Virginia University)

### INSTRUCTORS

- Joelleen Bidwell - M.A. (West Virginia University)
- Gabriel Tapia - M.S. (West Virginia University)
- Galyna Voitiuk - Ph.D. (West Virginia University)
- Sylvanus Waibogha - M.S. (West Virginia University)

### PROFESSORS EMERITI

- Anthony A. Billings - M.S. (West Virginia University, A.B.D. (Carnegie Mellon University))
  Statistical Computing, Statistical Modeling, Robust Estimation, Nonlinear Dynamic Systems, Statistical Education
- Gary Ganser - Ph.D. (Rensselaer Polytechnic Institute)
  Modeling, Data Analysis
- John Goldwasser - Ph.D. (University of Wisconsin-Madison)
  Combinatorics, Graph Theory
- Jack T. Goodykoontz - Ph.D. (University of Kentucky)
  Topology
- Henry W. Gould - M.A. (University of Virginia)
  Number Theory, Combinatorics, Special Functions
- Erdogan Gunel - Ph.D. (State University of New York at Buffalo)
  Bayesian Inference, Biostatistics, Categorical Data Analysis
- Harumi Hattori - Ph.D. (Rensselaer Polytechnic Institute)
  Differential Equations, Continuum Mechanics
- Gerald R. Hobbs - Ph.D. (Kansas State University)
  Biostatistics, Nonparametric Statistics, Regression Analysis
- Hong-Jian Lai - Ph.D. (Wayne State University)
  Graph Theory, Matroid Theory
- Dening Li - Ph.D. (Fudan University)
  Partial Differential Equations
- Michael E. Mays - Ph.D. (Pennsylvania State University)
  Number Theory
- James E. Miller - Ph.D. (University of Kentucky)
  Complex Analysis
- Sherman Riemenschneider - Ph.D. (Syracuse University)
  Approximation Theory, Wavelets, Signal Processing
- Cun-Quan Zhang - Ph.D. (Simon Fraser University)
  Graph Theory, Combinatorics, Algorithms, Bioinformatics, Data mining

## Admissions for 2026-2027

The Admissions Requirements will be as follows for the 2025-2026 Academic Year.

- First Time Freshmen are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with 24-29 hours must have at least a 2.0 overall GPA and meet the following requirements prior to being admitted to the major: completion of  MATH 126 (http://catalog.wvu.edu/search/?P=MATH%20126) with a grade of C-.
- Students transferring from another WVU major or from another institution 30 or more hours must have at least a 2.0 overall GPA and meet the following requirements prior to being admitted to the major: completion of MATH 155 (http://catalog.wvu.edu/search/?P=MATH%20155) with C-.

Major Code: 14E7

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Student must complete the WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.S. in Data Science

- **Calculation of Major GPA:** A minimum GPA of a 2.0 is required in all courses applied to major requirements. If a course is repeated, all attempts will be included the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirements:** Data Science Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), DSCI 480 and DSCI 481, and one additional **SpeakWrite Certified Courses™**
- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Data Science majors must complete DSCI 480 and DSCI 481.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 32 |
| Eberly Edge Requirement | | 12 |
| Data Science Major Requirements | | 76 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, and 6 or 7 | | 15 |
| DSCI 191: First-Year Seminar | | 1 |
| General Electives | | 16 |
| Total Hours | | 32 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society (DSCI 450) | | |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (GEF 6 or 7) | | 3 |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |

| | |
|---|---|
| EDG 6: High Impact Experience (DSCI 480 & DSCI 481) | |
| Total Hours | 12 |

## Data Science Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS*** | | **12** |
| MATH 155 | Calculus 1 | |
| Select one science pair: | | |
| BIOL 115<br>& 115<br>& BIOL 117<br>& BIOL 117L | Principles of Biology<br>and Principles of Biology<br>and Introductory Physiology<br>and Introductory Physiology Laboratory | |
| CHEM 111<br>& 111L<br>& CHEM 112<br>& CHEM 112L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory<br>and Survey of General Organic Biological Chemistry 2<br>and Survey of Chemistry 2 Laboratory | |
| CHEM 115<br>& 115L<br>& CHEM 116<br>& CHEM 116L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory<br>and Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| PHYS 101<br>& 101L<br>& PHYS 102<br>& PHYS 102L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory<br>and Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| PHYS 111<br>& 111L<br>& PHYS 112<br>& PHYS 112L | General Physics 1<br>and General Physics 1 Laboratory<br>and General Physics 2<br>and General Physics 2 Laboratory | |
| SUST 101<br>& 101L<br>& SUST 201<br>& SUST 201L | Sustainable Earth<br>and Sustainable Earth Laboratory<br>and Earth System Science<br>and Earth System Science Laboratory | |
| **CORE COURSES** | | |
| **Computer Science/Mathematics/Statistics Core** | | **25** |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | |
| MATH 156 | Calculus 2 | |
| MATH 251 | Multivariable Calculus | |
| MATH 441 | Applied Linear Algebra | |
| STAT 215 | Introduction to Probability and Statistics | |
| STAT 312 | Intermediate Statistical Methods | |
| **Data Science Core** | | **24** |
| DSCI 101 | Introduction to Data Science | |
| DSCI 221 | Reproducible Data Science using R | |
| DSCI 222 | Data Science Workflows using Python | |
| DSCI 301 | Databases for Data Science | |
| DSCI 310 | Statistical Machine Learning 1 | |
| DSCI 311 | Statistical Machine Learning 2 | |
| DSCI 410 | Big Data in Practice: Cloud and Parallel Computing | |
| DSCI 450 | Current Topics in Data Science | |
| **TECHNICAL ELECTIVES** | | **12** |
| Select four courses from the list below: | | |
| ASTR 469 | Observational Astronomy | |

| | | |
|---|---|---|
| BIOL 476 | Computational Neuroscience | |
| COMM 201 | Communication Research Methods | |
| COMM 401 | Advanced Communication Research Methods | |
| CS 320 | Analysis of Algorithms | |
| CS 350 | Computer System Concepts | |
| CS 472 | Artificial Intelligence | |
| CS 474 | Introduction to Responsible and Safe AI | |
| GEOG 300 | Geographical Data Analysis | |
| GEOG 454 | Environmental Geographic Information Systems | |
| GEOG 455 & 455L | Introduction to Remote Sensing and Introduction to Remote Sensing Laboratory | |
| GEOG 457 | Open-Source Spatial Analytics | |
| MATH 303 | Introduction to the Concepts of Mathematics | |
| MATH 322 | Introduction to Programming and Computational Mathematics | |
| MATH 378 | Discrete Mathematics | |
| MATH 420 | Numerical Analysis 1 | |
| POLS 300 | Empirical Political Analysis | |
| STAT 331 | Sampling Methods | |
| STAT 445 | Introductory Regression Analysis | |
| SUST 250 & 250L | Digital Earth and GIS and Digital Earth and GIS Laboratory | |
| WRIT 303 | Multimedia Writing | |
| **CAPSTONE EXPERIENCE** | | **3** |
| DSCI 480 | Capstone Design | |
| DSCI 481 | Capstone Experience | |
| Total Hours | | 76 |

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The STEM Foundation courses are common to all STEM majors and are excluded from the 50% count of upper-division courses.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DSCI 101 | 3 | DSCI 221 | 3 |
| DSCI 191 | 1 | ENGL 101 (GEF 1) | 3 |
| CS 110 (GEF 2) | 3 | CS 111 | 3 |
| CS 110L | 1 | CS 111L | 1 |
| MATH 155 (GEF 3) | 4 | MATH 156 (GEF 8 Course 1) | 4 |
| GEF 4 | 3 | General Elective | 1 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DSCI 222 | 3 | DSCI 301 | 3 |
| STAT 215 (GEF 8 Course 2) | 3 | ENGL 102 (GEF 1) | 3 |
| MATH 251 | 4 | MATH 441 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | STAT 312 | 3 |
| General Elective | 1 | Science Course 1 (GEF 8 Course 3) | 4 |
| | 14 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DSCI 310 | 3 | DSCI 311 | 3 |
| EDG 4: Global and Regional Perspectives (GEF 6 or 7) | 3 | ARSC 380 (EDG 5) | 3 |
| Technical Elective 1 | 3 | GEF 6 or 7 | 3 |

| | | | |
|---|---|---|---|
| Science Course 2 | | 4 General Elective | 3 |
| General Elective | | 2 Technical Elective 2 | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DSCI 410 | | 3 DSCI 481 (EDG 6) | 2 |
| DSCI 450 (EDG 1) | | 3 Technical Elective 4 | 3 |
| DSCI 480 (EDG 6) | | 1 General Elective | 3 |
| Technical Elective 3 | | 3 General Elective | 3 |
| EDG 2: Effective and Civil Communication | | 3 General Elective | 3 |
| GEF 5 | | 3 | |
| | | 16 | 14 |

Total credit hours: 120

## Degree Progress

- By the beginning of a student's third regular semester (fall or spring), they should have completed MATH 155 with a C- or better.
- During the first four regular semesters (fall and spring) in the major, student must complete their foundational mathematics courses through MATH 441, CS 110, CS 111, DSCI 101, DSCI 221, and DSCI 222.
- A minimum cumulative and major GPA of a 2.0 must be maintained. Students who do not meet this benchmark will be removed from the major.
- All majors must meet with a department advisor working in data science or statistics each semester.

## Major Learning Outcomes

### DATA SCIENCE

Learning Outcome 1: Students will communicate data science workflows in both written and oral forms.

Outcome 1.1 Students will demonstrate their ability to develop and use appropriate data science techniques to address ‘science’ (subject matter) topics and questions.

Outcome 1.2 Students will communicate the biases and other implications of the data and analysis.

Outcome 1.3 Students will prepare a clear and concise written project and orally present a data science workflow and analysis effectively and professionally.

Learning Outcome 2: Students will understand and demonstrate the programming and technological aspects of a data science workflow

Outcome 2.1 Students will develop workflows using the languages and platforms common in data science practice (eg. R and Python, Rstudio and JupyterLab)

Outcome 2.2 Students will demonstrate their ability to acquire and manipulate data via a variety of platforms (eg. databases to cloud computing)

Outcome 2.3 Students will demonstrate their ability to use technologies for collaboration (eg. Git and GitHub)

Learning Outcome 3: Students will demonstrate their ability to visualize and model data

Outcome 3.1 Students will demonstrate visualization of data from simple plots for smaller data sets to visualizations for big data

Outcome 3.2 Students will demonstrate their ability to use current machine learning and other data science modeling methods appropriately and understand the underlying statistical and mathematical concepts.

# Earth and Environmental Science, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Bachelor of Science in Earth and Environmental Science exposes students to Earth systems, the processes that drive them, their impacts on human society, and how to apply the scientific method to investigate real-world problems. Graduates will be prepared for both specific and evolving career pathways including: environmental, hydrologic, geochemical, and geospatial consulting; the evolving energy industry (e.g., geothermal energy

production, carbon extraction, and sequestration, and discovery and recovery of minerals critical to the battery/electronic production (e.g., rare earth elements)); regulatory agencies at state and federal levels; and entrepreneurial efforts to capitalize on the societal shifts that necessarily accompany our global shift towards a more sustainable future. They will also be well prepared for admission to graduate and professional schools.

Students in the Earth and Environmental Science BS will take courses that focus on geohazard assessment and mitigation, exploration and efficient use of land, water, energy and mineral resources, and developing adaptation and mitigation strategies to environmental and climate change.

## Minors

All students have the possibility of earning one or more minors; a list of all available minors and their requirements (p. 52) is available. Please note that students may not earn a minor in their major field.

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# FACULTY

## CHAIR

- Brent McCusker - Ph.D. (Michigan State University)

## ASSOCIATE CHAIR

- Joseph Lebold - Ph.D. (West Virginia University)

## PROFESSORS

- Kathleen Benison - Ph.D. (The University of Kansas)
  Regular Graduate Faculty, Sedimentary Geology - Planetary Geology
- Dengliang Gao - Ph.D. (Duke University)
  Regular Graduate Faculty, Exploration Geophysics, Petroleum and Structural Geology
- Amy Hessl - Ph.D. (University of Arizona)
  Regular Graduate Faculty, Biogeography, Forest Ecosystems, Climate Variability
- Brent McCusker - Ph.D. (Michigan State University)
  Regular Graduate Faculty, Livelihood Systems & Climate Change, Africa, Policy Making
- Brendan McNeil - Ph.D. (Syracuse University)
  Regular Graduate Faculty, GIS, Environmental modeling, Forest Ecosystem Services
- Shikha Sharma - Ph.D. (University of Lucknow)
  Regular Graduate Faculty, Isotope Geochemistry
- Jaime Toro - Ph.D. (Stanford University)
  Regular Graduate Faculty, Structure and Tectonics
- Dorothy Vesper - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Aqueous Geochemistry, Hydrogeology

## ASSOCIATE PROFESSORS

- Jamison Conley - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Spatial Analysis, Geocomputation, Health Geography
- Karen Culcasi - Ph.D. (Syracuse University)
  Regular Graduate Faculty, Geopolitics, Identity, Middle East
- Cynthia Gorman - Ph.D. (Rutgers University)
  Regular Graduate Faculty, Gender, Migration, Human Rights, Refugee Communities
- James Lamsdell - Ph.D. (The University of Kansas)
  Regular Graduate Faculty, Paleobiology, Arthropods, Macroevolution, Heterochrony, Paleoecology, Phylogenetics
- Rick Landenberger - Ph.D. (West Virginia University)
  Forest ecology, Land use Management and Restoration
- Joseph Lebold - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Paleoecology, Paleontology, Regional Geology
- Maria Alejandra Perez - Ph.D. (University of Michigan)
  Regular Graduate Faculty, Cultural Geography, Science & Technology Studies, Speleology, Latin America and the Caribbean
- Amy Weislogel - Ph.D. (Stanford University)
  Regular Graduate Faculty, Sedimentology
- Bradley Wilson - Ph.D. (Rutgers University)
  Regular Graduate Faculty, Social Movements, Local/Global Food Systems, Food Justice

### ASSISTANT PROFESSORS

- Michael Harman - Ph.D. (West Virginia University)
  3D visualization, modeling complex landforms and processes, GIS
- Jacob Hileman - Ph.D. (University of California, Davis)
  Environmental Science, Sustainability
- Aaron Maxwell - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Geospatial Instruction, Remote Sensing, Image Analysis, Spatial Modeling
- Holly Moulton - Ph.D. (University of Oregon)
  Feminist political ecology, Gender, Climate change adaptation, Indigenous studies, Critical development studies, ice loss, and Andean communities

### PROFESSOR EMERITI

- Robert Behling - Ph.D. (The Ohio State University)
- Timothy Carr - Ph.D. (University of Wisconsin - Madison)
- Joe Donovan - Ph.D. (Pennsylvania State University)
- Greg Elmes - Ph.D. (Pennsylvania State University)
- Trevor Harris - Ph.D. (University of Hll)
- Thomas Kammer - Ph.D. (Indiana University)
- Steven Kite - Ph.D. (University of Wisconsin)
- Kenneth C. Martis - Ph.D. (Michigan University)
- Henry Rauch - Ph.D. (Pennsylvania State University)
- Robert C. Shumaker - Ph.D. (Cornell University)
- Richard Smosna - Ph.D. (University of Illinois)
- Timothy Warner - Ph.D. (Purdue University)
- Thomas Wilson - Ph.D. (West Virginia University)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 30 credits and 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 30 hours or more must have at least a 2.0 overall GPA and meet the following requirement prior to being admitted to the major: completion of MATH 124 or MATH 126 with a C-.

Major Code: 14F6

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.S. in Earth and Environmental Science

- **Calculation of the GPA in the Major**: A minimum GPA of 2.0 is required in all courses applied to major requirements, with a minimum grade of C- in SUST 101/101L, SUST 102, SUST 201/201L, GEOL 286/286L, CHEM 115/115L, and CS 110/110L. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Requirement:** Earth and Environmental Science Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™**.
- **Areas of Emphasis:** Earth and Environmental Science majors will choose a curriculum from one of these Areas of Emphasis: Climate and Environmental Science; Geoscience and Sustainable Energy; GIS Methods.
- **Capstone Requirement**: The university requires the successful completion of a Capstone requirement. In Earth and Environmental Science, based on the Area of Emphasis (AoE): GEOL 403, GEOL 404, GEOG 452, or GEOL 496. The course selected for the capstone should not be already used to meet any other major requirement; students who complete GEOL 404 may apply the course to EDG 6.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 32 |
| Eberly Edge Requirements | | 15 |
| Earth and Environmental Science Major Requirements | | 73 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, and 6 | | 15 |
| SUST 191 | First-Year Seminar | 1 |
| General Electives | | 16 |
| Total Hours | | 32 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (SUST 102) | | |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 15 |

## Earth and Environmental Science Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **22** |
| MATH 150 | Applied Calculus | |
| or MATH 155 | Calculus 1 | |
| STAT 211 | Elementary Statistical Inference | |
| Select one pair of science courses: | | |

| | | |
|---|---|---|
| PHYS 101 | Introductory Physics 1 | |
| & 101L | and Introductory Physics 1 Laboratory | |
| & PHYS 102 | and Introductory Physics 2 | |
| & PHYS 102L | and Introductory Physics 2 Laboratory | |
| PHYS 111 | General Physics 1 | |
| & 111L | and General Physics 1 Laboratory | |
| & PHYS 112 | and General Physics 2 | |
| & PHYS 112L | and General Physics 2 Laboratory | |
| Select one pair of science courses: | | |
| BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| & BIOL 117 | and Introductory Physiology | |
| & BIOL 117L | and Introductory Physiology Laboratory | |
| CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| **FOUNDATION COURSES** | | **19** |
| SUST 101 | Sustainable Earth | |
| & 101L | and Sustainable Earth Laboratory | |
| SUST 102 | Global Sustainability | |
| SUST 201 | Earth System Science | |
| & 201L | and Earth System Science Laboratory | |
| SUST 240 | Earth Data Analytics | |
| SUST 250 | Digital Earth and GIS | |
| & 250L | and Digital Earth and GIS Laboratory | |
| SUST 388 | Careers in Sustainability | |
| **AREA of EMPHASIS:** | | **16** |
| Climate and Environmental Science | | |
| Geoscience and Sustainable Energy | | |
| GIS Methods | | |
| **UPPER-DIVISION ELECTIVES** ** | | **12** |
| Select 12 credits of GEOL, GEOG or SUST at the 300-or above | | |
| **CAPSTONE:** | | **3** |
| Select one from the following based on the AoE selected: | | |
| GEOL 403 | Geological Data Analysis | |
| GEOL 404 | Geology Field Camp | |
| GEOG 452 | Geographic Information Science: Applications | |
| GEOL 496 | Senior Thesis | |
| Total Hours | | 72 |

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Courses listed under the STEM Foundation section are excluded from the count of major courses at the lower and upper division.

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Courses used to fulfill an AoE requirement may not be used to fulfill upper-division electives.

## Suggested Plans of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SUST 101 & 101L (F2A) | 4 | CHEM 115 & 115L (F8 Course 1) | 4 |
| SUST 102 (EDG 4; F7) | 3 | ENGL 101 (F1) | 3 |
| SUST 191 | 1 | SUST 240 | 3 |
| MATH 155 (F3) | 4 | EDG 2: Effective and Civil Communication | 3 |

| | | | |
|---|---|---|---|
| EDG 1: Data and Society | | 3 F4 | 3 |
| | | 15 | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 116 & 116L (F8 Course 2) | | 4 ENGL 102 (F1) | 3 |
| SUST 201 & 201L | | 4 PHYS 101 & 101L (F8 Course 3) | 4 |
| SUST 250 & 250L (F8) | | 4 AoE Course 1 | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 General Elective | 4 |
| | | 15 | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SUST 388 | | 1 ARSC 380 (EDG 5) | 3 |
| PHYS 102 & 102L | | 4 SUST Studies Elective Course 1 | 3 |
| AoE Course 2 | | 3 SUST Studies Elective Course 2 | 3 |
| AoE Course 3 | | 4 AoE Course 4 | 3 |
| F5 | | 3 F6 | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AoE Course 5 | | 3 Capstone | 3 |
| SUST Studies Elective Course 3 | | 3 SUST Studies Elective Course 4 | 3 |
| EDG 6: High Impact Experience | | 3 General Elective | 3 |
| STAT 211 | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Areas of Emphasis

- Climate and Environmental Science (p. 251)
- Geoscience and Sustainable Energy (p. 252)
- GIS Methods (p. 252)

## Climate and Environmental Science Area of Emphasis Curriculum

| Code | Title | Hours |
|---|---|---|
| **CLIMATE & ENVIRONMENTAL SCIENCE CORE COURSES:** | | **10** |
| SUST 207 & 207L | Climate System Science and Climate System Science Laboratory | |
| GEOL 275 | Geologic Field & Computer Methods Laboratory | |
| GEOL 365 | Environmental Geology | |
| **CLIMATE & ENVIRONMENTAL SCIENCE ELECTIVES:** | | **6** |
| Select 2 courses from the following: | | |
| GEOL 321 | Geomorphology | |
| GEOL 463 | Physical Hydrogeology | |
| SUST 308 | Climate Modeling | |
| Total Hours | | 16 |

## Geoscience and Sustainable Energy Area of Emphasis Curriculum

| Code | Title | Hours |
|---|---|---|
| GEOL 275 | Geologic Field & Computer Methods Laboratory | 3 |
| GEOL 286 & 286L | Introduction to Minerals & Rocks and Introduction to Minerals & Rocks Laboratory | 4 |
| GEOL 311 & 311L | Stratigraphy and Sedimentation and Stratigraphy and Sedimentation Laboratory | 4 |
| GEOL 341 & 341L | Structural Geology and Structural Geology Laboratory | 4 |
| SUST 372 | Sustainable Energy | 3 |
| Total Hours | | 18 |

## GIS Methods Area of Emphasis Curriculum

| Code | Title | Hours |
|---|---|---|
| **GIS METHODS CORE COURSES:** | | **10** |
| GEOG 350 & 350L | Geospatial Problem Solving and Geospatial Problem Solving Laboratory | |
| GEOG 451 | Introduction to GIS Programming | |
| GEOG 455 & 455L | Introduction to Remote Sensing and Introduction to Remote Sensing Laboratory | |
| **GIS METHODS ELECTIVES:** | | **6** |
| Select 2 courses from the following: | | |
| GEOG 300 | Geographical Data Analysis | |
| GEOG 409 | Applied International Development | |
| GEOG 452 | Geographic Information Science: Applications | |
| GEOG 453 | Spatial Databases | |
| GEOG 454 | Environmental Geographic Information Systems | |
| GEOG 456 | Remote Sensing Applications | |
| GEOG 457 | Open-Source Spatial Analytics | |
| GEOG 461 | Web GIS | |
| GEOG 462 | Digital Cartography | |
| SUST 302 | Research for Sustainable Development | |
| Total Hours | | 16 |

## Degree Progress

- Majors are expected to maintain a 2.0 GPA overall and a 2.0 in all SUST, GEOG and GEOL courses.
- By the end of the 4th semester in the major, students should have completed SUST 201, 240, and 250 and should be making satisfactory progress through the sequence of STEM requirements for the major (CHEM 115 or CS 110; PHYS 101 or 111; and MATH 150 or 153 or 155)
- All majors must meet with their departmental advisor each semester to evaluate progress.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### EARTH AND ENVIRONMENTAL SCIENCE

1. Apply knowledge of the relationship between earth systems and society to sustainability challenges.
2. Develop and evaluate sustainable solutions using quantitative, qualitative, computational, or geospatial skills.
3. Identify, document, and describe relationships between rock, water, air, and life in the context of Earth as a complex and dynamic system.
4. Apply the scientific method to generate, interpret, model and evaluate 2D, 3D, and temporal data to address Earth Science and Sustainability-related problems.

5. Communicate technical information clearly and effectively in written, oral, graphical, and geospatial format to diverse audiences in order to inform evidence-based decision-making.

# English, B.A.

## Degree Offered

- Bachelor of Arts
- BA in English/Secondary Education (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/englishseced/)

## Nature of the Program

Tailor your degree in English to your interests by focusing on literature and cultural studies, creative writing, English secondary education, or professional writing. Explore the power of language to open doors, shape worlds, and realize dreams. How will you contribute to the world?

Focusing on **Literature and Cultural Studies** allows you to immerse yourself in the books, films, and other texts that define our global culture. Cultivate critical thinking, communication, and research skills to fill your tool box for a lifetime of learning and engagement while preparing for a variety of professional schools and career paths.

An emphasis on **Creative Writing** lets you study the craft of writing fiction, poetry, or creative nonfiction with accomplished authors. Take workshops on writing for children, writing and photography, and writing about place. Meet the many authors invited to read on campus and help produce *Calliope*, WVU's undergraduate literary journal.

With an emphasis on **Professional Writing and Editing** you will learn to translate complex information into clear prose for diverse audiences and analyze how information flows through organizational structures. Apply these skills in a capstone internship with a local business, non-profit, or government agency to see your writing come alive.

Can you name a teacher who made a difference in your life or a book that changed how you think? With a Bachelor of Arts in **English/Secondary Education** you can bring those experiences to others. You'll complete all the requirements for teacher certification in WV and gain valuable classroom experience. Please see the English/Secondary Education (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/englishseced/) listing for more information.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements. English is a SpeakWrite (https://speakwrite.wvu.edu/) certified program.

## 3+3 Program

The Department of English participates in the 3+3 Program with the WVU College of Law, which is an opportunity for qualified undergraduate students to earn their bachelor's degree and law degree in six years instead of seven years. Students accepted into the 3+3 program begin taking classes at WVU Law in what would be their senior year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

## Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

## Publications

*Calliope*, a publication of WVU student writing, is sponsored by the Department of English.

*Hellbender Magazine* is a literary magazine edited by MFA students and the Council of Writers of the West Virginia University MFA program.

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## FACULTY

### CHAIR

- Brian Ballentine - Ph.D. (Case Western Reserve University)

### ASSISTANT CHAIR

- Christine Hoffmann - Ph.D. (University of Arkansas)

### M.A. & PH.D. SUPERVISOR

- Adam Komisaruk - Ph.D. (University of California, Los Angeles)

## M.F.A. PROGRAM SUPERVISOR

- Mark Brazaitis - M.F.A. (Bowling Green University)

## M.A. P.W.E. PROGRAM SUPERVISOR

- Brian Ballentine - Ph.D. (Case Western Reserve University)

## PROFESSORS

- Brian Ballentine - Ph.D. (Case Western Reserve University)
  Technical and Professional Communication, Rhetoric
- Mark Brazaitis - M.F.A. (Bowling Green University)
  Creative Writing: Fiction
- Lara Farina - Ph.D. (Fordham University)
  Medieval Literature and Culture, History of Sexuality and Reading
- Catherine Gouge - Ph.D. (West Virginia University)
  Professional Writing, Medical Rhetoric
- Adam Komisaruk - Ph.D. (University of California Los Angeles)
  British Romanticism, 18th-century British Literature
- Kathleen O'Hearn Ryan - Ph.D. (University of Massachusetts)
  20th-century American Literature
- Mary Ann Samyn - M.F.A. (University of Virginia)
  Creative Writing: Poetry
- Natalie Singh-Corcoran - Ph.D. (University of Arizona)
  Writing Center Theory and Practice, Writing Program Administration, Writing Assessment
- Timothy Sweet - Ph.D. (University of Minnesota)
  Eberly Family Distinguished Professor of American Literature, American Studies, Literature and Environment, Native American Literature

## ASSOCIATE PROFESSORS

- Anna Shannon Elfenbein - Ph.D. (University of Nebraska)
  American Literature, Women's Studies, Southern Literature, African-American Fiction, Popular Culture
- Christine Hoffmann - Ph.D. (University of Arkansas)
  Early Modern British Studies
- Christa Parravani - M.F.A. (Rutgers University)
  Creative Writing: Non-fiction
- David Stewart - Ph.D. (Oxford University)
  Associate Vice President for International Outreach. British Romanticism, Literary Theory
- Lisa Weihman - Ph.D. (New York University)
  Modern British and Irish Literature and Culture

## ASSISTANT PROFESSORS

- Erin Brock-Carlson - Ph.D. (Purdue University)
  Professional Writing and Editing
- Brian Broome - M.F.A. (University of Pittsburgh)
  Creative Writing: Non-fiction
- Rose Casey - Ph.D. (Cornell University)
  Modern British Literature
- Jenny Johnson - M.F.A. (Warren Wilson College)
  Poetry
- William Kerns - Ph.D. (Clemson University)
  Secondary English Language Arts Education
- Sarah Morris - Ph.D. (University of Maryland)
  Human Science Phenomenology, Embodiment, Writing Process, and Student-centered Teaching
- Amanda Berardi Tennant - Ph.D. (Carnegie Mellon University)
  Composition and Rhetoric
- Jill Woods - Ph.D. (West Virginia University)
  Business and Technical writing

- Omar Yacoub - Ph.D. (Indiana University of Pennsylvania)
  Composition and Applied Linguistics

### PROFESSORS EMERITI

- Gail Galloway Adams - M.A. (University of Texas)
- Rudolph Almasy - Ph.D. (University of Minnesota)
- Gwen Bergner - Ph.D. (Princeton University)
- Cari Carpenter - Ph.D. (University of Michigan)
- Patrick Conner - Ph.D. (University of Maryland)
- Michael Germana - Ph.D. (University of Iowa)
- Kirk Hazen - Ph.D. University of North Carolina at Chapel Hill
- Ellesa High - Ph.D. (University of Ohio)
- Elizabeth Juckett - Ph.D. (Penn)
- John Lamb - Ph.D. (New York University)
- Byron Nelson - Ph.D. (University of Wisconsin)
- Carolyn Nelson - Ph.D. (University of Wisconsin)
- Kevin Oderman - Ph.D. (University California, Santa Barbara)
- Ethel Morgan Smith - M.A. (Hollins College)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: a 2.0 in all ENGL classes taken.

Major Code: 1442

Click here to view the Suggested Plan of Study (p. 257)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum 120 hours.

## Departmental Requirements for the B.A. in English

- **Calculation of GPA in the major**: A minimum grade of C- is required in all courses applied to the major, including ENGL 101 and ENGL 102, or ENGL 103. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Requirement:** The English Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Area of Emphasis**: in addition to the major requirements, students must select an emphasis in Creative Writing, Literature and Cultural Studies, or Professional Writing and Editing. Please see below for course and grade requirements for each emphasis. A maximum of 42 hours in English, exclusive of ENGL 199, ENGL 101 and ENGL 102, or ENGL 103, ENGL 491 may be included within the 120 hours (minimum) required for graduation.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course. English majors choose, depending on focus, ENGL 418, ENGL 491A or ENGL 496 to meet this requirement. Students should consult with an adviser regarding the Capstone course.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 69 |
| Eberly Edge Program | | 15 |
| English Major Requirements | | 36 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 7 and 8 | | 33 |
| ENGL 191 | First-Year Seminar | 1 |
| General Electives | | 35 |
| Total Hours | | 69 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (met by GMT major requirements) | | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 15 |

## English Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Foundation Course** | | **3** |
| ENGL 200 | Foundations of Literary Study | |
| **Historical Breadth Courses** | | **6** |
| Select two of the following: | | |
| ENGL 241 | American Literature 1 | |
| ENGL 242 | American Literature 2 | |
| ENGL 261 | British Literature before 1800 | |
| ENGL 262 | British Literature 2 | |

| | | |
|---|---|---|
| **English Language course** | | **3** |
| ENGL 221 | The English Language | |
| or WRIT 302 | Editing | |
| **Gender/Multicultural/Transnational courses** | | **6** |
| Select two of the following, at least one of which must be at the 300-level: | | |
| ENGL 226 | World Literature | |
| ENGL 252 | Appalachian Fiction | |
| ENGL 254 | African American Literature | |
| ENGL 255 | Multiethnic Literature | |
| ENGL 285 | Images of Women in Literature | |
| ENGL 288 | Gender and Sexuality in Literature and Film | |
| ENGL 352 | Topics in Appalachian Studies | |
| ENGL 355 | Topics in Multiethnic Literature | |
| ENGL 356 | Topics in Native American Literature | |
| ENGL 374 | Global Anglophone Literature | |
| ENGL 385 | American Women Writers | |
| ENGL 386 | British Women Writers | |
| ENGL 387 | Topics in Women's Literature | |
| ENGL 388 | Topics in Gay/Lesbian Studies | |
| **Study of Major Author Courses** | | **3** |
| Select one of the following: | | |
| ENGL 337 | Study of a Major Author | |
| ENGL 361 | Chaucer | |
| ENGL 363 | Shakespeare 2 | |
| ENGL 365 | Milton | |
| **Area of Emphasis** | | **12** |
| Select an Area of Emphasis in Creative Writing, Literature and Cultural Studies, or Professional Writing and Editing. | | |
| **Capstone Experience** | | **3** |
| Select one of the following based on the Area of Emphasis selected: | | |
| ENGL 418 | Creative Writing Seminar | |
| ENGL 496 | Senior Thesis | |
| WRIT 480 | Capstone Internship | |
| Total Hours | | 36 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF 1) | 3 |
| ENGL 191 | 1 | ENGL Historical Breadth 1 (GEF 6) | 3 |
| ENGL 200 | 3 | EDG 2: Effective and Civil Communication | 3 |
| EDG 1: Data and Society | 3 | F2A | 3 |
| F2A | 3 | F4 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WRIT 302 or ENGL 221 | 3 | ENGL Gender/Multicultural/Transnational 1 (EDG 4) | 3 |
| ENGL Historical Breadth 2 | 3 | EDG 6: High Impact Experience | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | F7 | 3 |
| F3 | 3 | F8 Course 1* | 3 |
| F5 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL Gender/Mlt Cult./Transnat. 2 | 3 | ENGL Major Author | 3 |
| AoE Course 1 | 3 | F8 Course 3* | 3 |
| F8 Course 2* | 3 | AoE Course 2 | 3 |
| ARSC 380 (EDG 5) | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AoE Course 3 | 3 | ENGL Capstone | 3 |
| AoE Course 4 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

*****

Students completing a minor, a double major or a dual degree fulfill the GEF 8 requirement.

## Areas of Emphasis Offered:

- Creative Writing (p. 258)
- Literary and Cultural Studies (p. 259)
- Professional Writing and Editing (PWE) (p. 259)

## CREATIVE WRITING AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Minimum grade of C- or higher is required. | | |
| Select one course in each group: | | |
| **Group 1:** | | **3** |
| ENGL 212 | Creative Writing: Fiction | |
| ENGL 213 | Creative Writing: Poetry | |
| ENGL 214 | Creative Writing: Non-Fiction | |
| **Group 2:** | | **3** |
| ENGL 312 | Creative Writing Workshop: Fiction | |
| ENGL 313 | Creative Writing Workshop: Poetry | |
| ENGL 314 | Creative Writing Workshop: Non-Fiction | |
| **Group 3:** | | **3** |
| ENGL 318 | Topics in Creative Writing | |
| **Group 4:** | | **3** |
| ENGL 212 | Creative Writing: Fiction | |
| ENGL 213 | Creative Writing: Poetry | |
| ENGL 214 | Creative Writing: Non-Fiction | |
| ENGL 312 | Creative Writing Workshop: Fiction | |
| ENGL 313 | Creative Writing Workshop: Poetry | |
| ENGL 314 | Creative Writing Workshop: Non-Fiction | |
| Total Hours | | 12 |

## LITERARY AND CULTURAL STUDIES AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Minimum grade of C- or higher is required. | | |
| Select one of the following courses: | | 3 |
| ENGL 338 | Environmental Criticism | |
| ENGL 382 | Contemporary Literary Theory | |
| ENGL 383 | Introduction to Cultural Studies | |
| ENGL 384 | Introduction to American Studies | |
| Literature Electives 300 level or above * | | 9 |
| Total Hours | | 12 |

*

Excludes courses required for the Creative Writing and Professional Writing and Editing Areas of Emphasis.

## PROFESSIONAL WRITING AND EDITING (PWE) AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Minimum grade of C- or higher is required. | | |
| **Select four of the following options:** | | **12** |
| WRIT 201 | Public Writing | |
| or WRIT 202 | Introduction to Writing Studies | |
| WRIT 301 | Writing Theory and Practice | |
| WRIT 302 | Editing | |
| WRIT 303 | Multimedia Writing | |
| or WRIT 306 | Topics in Digital Humanities | |
| WRIT 304 | Business and Professional Writing | |
| or WRIT 305 | Technical Writing | |
| WRIT 402 | Publishing | |
| WRIT 403 | Grant Proposal Writing for Community & Industry | |
| WRIT 407 | The Writing of Health and Medicine | |
| WRIT 408 | Rhetoric and Science | |
| Total Hours | | 12 |

## 3+3 Program Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 191 | 1 | ENGL 102 (GEF 1) | 3 |
| ENGL 199 | 1 | Foreign Language 102 | 3 |
| ENGL 101 (GEF 1) | 3 | ENGL Historical Breadth 1 (ECAS Fine Arts Req.; GEF 6) | 3 |
| ENGL 200 | 3 | GEF 3 | 3 |
| Foreign Language 101 | 3 | GEF 4 | 3 |
| GEF 2B | 4 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 5 | 3 | GEF 7 | 3 |
| ENGL Historical Breadth 2 | 3 | EDG 4: GLOBAL AND REGIONAL PERSPECTIVES | 3 |
| ENGL Language Course | 3 | ENGL GMT 2 | 3 |
| ENGL GMT 1 | 3 | ENGL Major Author Course | 3 |
| EDG 3: ETHICS AND CIVIL RESPONSIBILITY | 3 | AoE Course 1 | 3 |
| | 15 | | 15 |

| **Third Year** | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| AoE Course 2 | 3 | AoE Course 4 | 3 |
| AoE Course 3 | 3 | ENGL Capstone (EDG 6) | 3 |
| ARSC 380 (EDG 5) | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |
| **Fourth Year** | | | |
| **Fall** | **Hours** | **Spring** | **Hours** |
| LAW 641 | 1 | LAW 675 | 1 |
| LAW 686 | 4 | LAW 703 | 4 |
| LAW 700 | 3 | LAW 707 | 4 |
| LAW 705 | 3 | LAW 711 | 2 |
| LAW 709 | 4 | LAW 725 | 4 |
| | 15 | | 15 |

Total credit hours: 120

# Degree Progress

- At the end of their second semester in the program, students will have completed ENGL 101, 102, 191, 199, and 200.
- After three semesters students will have completed 9 additional credits of ENGL courses above ENGL 200.
- After four semesters in the program, students will have completed 12 additional credits in ENGL.
- All majors must meet with an English department adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

# Major Learning Outcomes

## ENGLISH

Upon successful completion of the B.A. degree, **English** majors will be able to:

1. Locate and interpret texts within diverse literary, cultural, and historical contexts.

- Identify genre conventions and analyze their effects;
- Identify and analyze effects of complexity or ambiguity in texts, culture, and discourse;
- Situate texts in social, economic, political, and literary histories;
- Connect texts to other literary or cultural texts.

2. Demonstrate a general knowledge of the social and structural aspects of the English language.

- Analyze diachronic and synchronic language variation;
- Articulate the role of social forces on language variation;
- Apply linguistic concepts to solve language problems;
- Analyze natural language, predominantly English.

3. Demonstrate a range of contextually effective writing and communication strategies.

Literature and Cultural Studies:

- Demonstrate awareness of academic discourse and research on a literary topic;
- Apply research, analysis, argumentative development, and critical thinking skills;
- Create and revise communications with the appropriate tone, style, and sentence structure found in academic writing, including incorporation of research;
- Demonstrate command of academic written English and conventions of documenting research.

Creative Writing concentration:

- Situate work within the historical and literary development of the appropriate genre;
- Create and revise a thoughtful, sophisticated work of art that is the product of a careful process of invention and revision;
- Demonstrate a personal and coherent artistic style;
- Demonstrate a sophisticated awareness of and engagement with (or clear challenge of) conventions of the genre.

Professional Writing and Editing concentration:

- Demonstrate an awareness of, and response to, the particular rhetorical needs of audience and purpose;
- Demonstrate an awareness of genre and argument, including appropriate information and persuasive techniques. In addition, the portfolio demonstrates a critical engagement with the process of writing and with the intern's learning process;
- Demonstrate an awareness of professional tone, style, and sentence structure;
- Understand and apply layout, visual design, audience cues, and information structure; adheres to the written conventions of professional writing.

# English/Secondary Education, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

Students who want to become secondary English teachers (grades 5-Adult) complete a series of Secondary Education courses, requirements for General Education Foundations (GEF) components that are related to the area of specialization, and courses specific to the area of specialization: English, Grade 5-Adult.

The program boasts a clear set of research-based program goals and carefully sequenced learning experiences. Students will learn to integrate what one teaches with how it is taught and will receive more than 1,000 hours of experience in public school classrooms. The program functions in close collaboration with exemplary local public schools and has selective and rigorous standards for admission and retention of students as well as rigorous performance requirements that are relevant to effective teaching practice.

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: an overall GPA of a 2.75.

Major Code: 1423

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 credit hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences page.

## Departmental Requirements for the B.A. in English Secondary Education

Students wishing to graduate with a degree in English Secondary Education must complete a total of 96 credit hours in their major. Students must abide by the following rules:

- **Calculation of the GPA in the major**: Students must earn a minimum grade C- in all C&I, EDUC, ENGL, and SPED courses applied toward English/Secondary Education Major Requirements, and minimum cumulative grade point average of 2.75. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills**: The English Secondary Education program is a **SpeakWrite Affiliated Program,** committed to fostering and assessing student's written, verbal, visual, and mediated communication skills. The English Secondary Education major requires its Bachelor of Arts program graduates to complete at minimum the following SpeakWrite certified courses: ENGL 101 and ENGL 102 (or ENGL 103), ENGL 200, ENGL 241 , ENGL 242, ENGL 261, ENGL 263, ENGL 405.
- **WV State Certification Requirements**:
  - PRAXIS II #5038 English Language Arts (NOTE: Successful completion of this assessment is required prior to the year-long residency. Scores must be received prior to obtaining a clinical experience permit.)
  - edTPA Teacher Performance Assessment – a three-part performance exam during Residency II. (NOTE: Successful completion of this assessment is required for program completion.
  - Teacher candidates complete 125 field experience hours in middle and high schools during the third year of the program. During the final year of the program, teacher candidates complete a year-long residency. The College of Applied Human Sciences coordinates the placement and supervision of teacher candidates as they engage in these professional experiences.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course. Students majoring in English Secondary Education will complete EDUC 485 for their Capstone experience.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requriements | | 28 |
| Eberly Edge Requirements | | 9 |
| English/Secondary Education Major Requirements | | 83 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4 and 5 | | 19 |
| ENGL 191 | First-Year Seminar | 1 |
| General Electives | | 8 |
| Total Hours | | 28 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication (ENGL 309) | | |
| EDG 3:Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (ENGL 226) | | |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |

| | |
|---|---|
| EDG 6: EEDG High Impact Experience (ENGL 491) | |
| Total Hours | 9 |

## English/Secondary Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Foundation Course:** | | **3** |
| ENGL 200 | Foundations of Literary Study | |
| **English Language Course** | | **3** |
| ENGL 221 | The English Language | |
| **Historical Breadth Courses:** | | **9** |
| ENGL 241 | American Literature 1 | |
| ENGL 242 | American Literature 2 | |
| ENGL 261 | British Literature before 1800 | |
| **Gender/Multicultural/Transnational (GMT) Course:** | | **6** |
| ENGL 226 | World Literature | |
| and select one of the following: | | |
| ENGL 352 | Topics in Appalachian Studies | |
| ENGL 355 | Topics in Multiethnic Literature | |
| ENGL 356 | Topics in Native American Literature | |
| ENGL 374 | Global Anglophone Literature | |
| ENGL 385 | American Women Writers | |
| ENGL 386 | British Women Writers | |
| ENGL 387 | Topics in Women's Literature | |
| ENGL 388 | Topics in Gay/Lesbian Studies | |
| **Study of Major Author course:** | | **3** |
| ENGL 263 | Shakespeare 1 | |
| or ENGL 363 | Shakespeare 2 | |
| **Methods Courses:** | | **6** |
| ENGL 309 | Approaches to Teaching Composition | |
| ENGL 405 | Young Adult Literature | |
| **English Electives:** | | **9** |
| Select one ENGL Writing Elective from the list below: | | |
| ENGL 312 | Creative Writing Workshop: Fiction | |
| ENGL 313 | Creative Writing Workshop: Poetry | |
| ENGL 314 | Creative Writing Workshop: Non-Fiction | |
| ENGL 318 | Topics in Creative Writing | |
| WRIT 301 | Writing Theory and Practice | |
| WRIT 302 | Editing | |
| WRIT 303 | Multimedia Writing | |
| WRIT 304 | Business and Professional Writing | |
| WRIT 305 | Technical Writing | |
| WRIT 306 | Topics in Digital Humanities | |
| Select any two ENGL classes at the 200-level or above (only one 200-level course is permitted). | | |
| **UNDERGRADUATE PROFESSIONAL EDUCATION COURSEWORK** | | **41** |
| EDUC 200 | Professional Inquiry in Education | |
| EDP 301 | Learning in PreK-Adult Educational Settings | |
| RDNG 422 | Reading in the Content Areas | |
| C&I 324 | Teaching Language Arts: Secondary School | |
| C&I 424 | Approaches to Teaching Language | |
| C&I 489 | Identity and Cultural Diversity in the Classroom | |
| SPED 404 | Special Education in Contemporary Society | |
| SPED 460 | Differentiation of Instruction | |

| | | |
|---|---|---|
| ENGL 490 | Teaching Practicum | |
| ENGL 491 | Professional Field Experience (Residency 1) | |
| ENGL 491 | Professional Field Experience (Residency 2) | |
| **Capstone Experience:** | | **3** |
| EDUC 485 | Residency/Technology Capstone in Secondary Education | |
| Total Hours | | 83 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF 1) | 3 |
| GEF 2A | 3 | GEF 3 | 3 |
| GEF 5 | 3 | GEF 4 | 3 |
| ENGL 191 | 1 | ENGL 226 (EDG 4 & F7) | 3 |
| ENGL 200 | 3 | EDG 3: Ethics and Civil Responsibility | 3 |
| EDG 1: Data and Society | 3 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 2A | 3 | ENGL 242 (GEF 8 Course 2) | 3 |
| ENGL 221 | 3 | ENGL 263 (GEF 8 Course 3) | 3 |
| ENGL 241 (F6) | 3 | ENGL 405 | 3 |
| ENGL 261 (GEF 8 Course 1) | 3 | EDUC 200 | 3 |
| ENGL Elective at the 200 level or above | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 309 (EDG 2) | 3 | ARSC 380 (EDG 5) | 3 |
| EDP 301 | 3 | ENGL 300-Level GMT | 3 |
| SPED 404 | 3 | 300- or 400-level ENGL or WRIT elective--creative writing or professional writing & editing course suggested | 3 |
| C&I 424 | 3 | ENGL 300-Level Elective | 3 |
| ENGL 490 | 1 | RDNG 422 | 3 |
| General Elective | 3 | ENGL 490 | 1 |
| | 16 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 491 (Residency 1 & EDG 6) | 6 | ENGL 491 (Residency 2) | 9 |
| C&I 324 | 3 | EDUC 485 | 3 |
| C&I 489 | 3 | | |
| SPED 460 | 3 | | |
| | 15 | | 12 |

Total credit hours: 120

## Degree Progress

- By the end of the fourth semester in the major, the student must have completed EDUC 200 with a C or better and must have a minimum GPA of 2.75. If a student does not meet these criteria, they will be removed from the major until the benchmarks are met.
- By the end of the sixth semester in the major, the student must have completed 125 hours of field placement and must have a minimum GPA of 2.75.
- To graduate with this major, a student needs an overall GPA of 2.75.

## Major Learning Outcomes

### ENGLISH/SECONDARY EDUCATION

Upon successful completion of the B.A. degree, **English** majors will be able to:

1. Interpret texts within diverse literary, cultural, and historical contexts.
2. Demonstrate a general knowledge of the social and structural aspects of the English language.
3. Demonstrate a range of contextually effective writing strategies.

The learning goals for the WVU Secondary Teacher Education Program are to prepare students who:

- Have commitment and skills to engage in life-long learning;
- Are effective communicators;
- Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
- Will serve as a facilitator of learning for all students;
- Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
- Are reflective practitioners;
- Are aware of, and have respect for, human diversity;
- Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

# Forensic Biology, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Department of  Forensic and Investigative Science (FIS)  offers a Bachelor of Science degree in three major areas: Forensic Biology, Forensic Chemistry, and Forensic Examiner.  All of these majors provide students with a strong background in the fundamental science and applied practice associated with forensic science.  The Program is accredited by the Forensic Education Programs Accreditation Commission (http://fepac-edu.org/) (FEPAC).

Because of the unique nature of the profession of forensic science, students are forewarned that a record of criminal, unethical, or other socially unacceptable behavior (such as illicit drug use or alcohol offenses) could negatively affect their ability to pass a background check, which may in turn make it difficult or impossible and complete the degree.  Department guidelines are available from departmental advisers.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; click the following link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

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## FACULTY

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- Casper Venter - Ph.D. (University of South Africa)

### DIRECTOR OF GRADUATE STUDIES

- Tina Moroose - M.S. (Marshall University)

### DIRECTOR OF UNDERGRADUATE STUDIES

- Rachel Mohr - Ph.D. (Texas A&M University)

### PROFESSORS

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- Keith Morris - Ph.D. (University of Port Elizabeth)
  Regular Graduate Faculty, Ming Hsieh Distinguished Professor, Impression Evidence, Evidence Interpretation

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  Regular Graduate Faculty, DNA, Forensic Genetics
- Roger Jefferys - M.S. (West Virginia University)
  Criminalistics
- Lisa Licata - M.S. (University of North Texas Health Science Center)
  Criminalistics, DNA
- Rachel Mohr - Ph.D. (Texas A&M University)
  Associate Graduate Faculty, Forensic Entomology
- Robert O'Brien - M.S. (St. Joseph's College)
  Associate Graduate Faculty, Crime Scene Investigation

## Admissions for 2026-2027

- First Time Freshmen with a MATH ACT of 22 or MATH SAT of 540 or with a 3.75 cumulative high school GPA are admitted directly to the major. A minimum ALEKS score of 45 is recommended for the timely completion of the degree.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA must meet the following requirements: MATH ACT of 22 or MATH SAT of 540 or a 3.75 cumulative high school GPA.
- Students transferring from another WVU major or from another institution with 24 hours or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major:  CHEM 115 (http://catalog.wvu.edu/search/?P=CHEM%20115) or higher with a C-.

Major Code: 14D9

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Progam requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.S. in Forensic Biology

- **Calculation of the GPA in the Major**: A minimum grade of C- or better in all courses applied to major requirements, including the STEM Foundations. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement**: The Forensic Biology Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Internship Requirement**: All students are required to successfully complete the FIS 386 internship course for at least 3 hours of credit.
- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Forensic Biology majors must complete FIS 406.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 20 |
| Eberly Edge Requirements | | 9 |
| Forensic Biology Major Requirements | | 91 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| FIS 191 | First-Year Seminar | 1 |
| General Electives | | 1 |
| Total Hours | | 20 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication (FIS 406L) | | |
| EDG 3: Ethics and Civil Responsibility (FIS 485) | | |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (FIS 386) | | |
| Total Hours | | 9 |

## Forensic Biology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **20** |
| CHEM 115 & 115L | Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 116 & 116L | Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory | |
| MATH 155 | Calculus 1 | |

| | | |
|---|---|---|
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | |
| or PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory | |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| or PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | |
| **QUANTITATIVE REQUIREMENT** | | **6** |
| MATH 156<br>& STAT 215 | Calculus 2<br>and Introduction to Probability and Statistics | |
| or STAT 211<br>& STAT 312 | Elementary Statistical Inference<br>and Intermediate Statistical Methods | |
| **BIOLOGY, CHEMISTRY & BIOCHEMISTRY CORE** | | **32** |
| AGBI 410<br>& 410L | Introductory Biochemistry<br>and Introduction to Biochemistry Laboratory | |
| or BMM 339 | Introduction to Human Biochemistry | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| BIOL 219<br>& 219L | Cellular and Molecular Biology<br>and Cellular & Molecular Biology Laboratory | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | |
| FIS 324<br>& 324L | Molecular Genetics for Forensic Science<br>and Molecular Genetics for Forensic Science Laboratory | |
| FIS 432<br>& 432L | Forensic Biology<br>and Forensic Biology Laboratory | |
| **FORENSIC SCIENCE CORE** | | **24** |
| FIS 201 | Introduction to Forensic Identification | |
| FIS 202 | Crime Scene Investigation Overview | |
| FIS 305<br>& 305L | Biological Evidence<br>and Biological Evidence Laboratory | |
| FIS 312<br>& 312L | Applied Forensic Microscopy<br>and Applied Forensic Microscopy Laboratory | |
| FIS 385 | Professional Internship Preparation | |
| FIS 386 | Forensic Identification Internship | |
| FIS 404 | Law and Evidence | |
| FIS 480 | Forensic Quality Assurance | |
| FIS 485 | Professional Ethics in Forensic Science | |
| **UPPER-DIVISION ELECTIVES** [**] | | **6** |
| FIS 301<br>& 301L | Science/Technology of Fingerprint Identification<br>and Science/Technology of Fingerprint Identification Laboratory [***] | |
| FIS 320 | Science and Culture of Illicit Drugs | |
| FIS 330 | Principles of Forensic Photography | |
| FIS 400 | Population Genetics for Forensic Science | |
| FIS 401 | Professional Forensic Communication | |
| FIS 407<br>& 407L | Gravesite Forensics<br>and Gravesite Forensics Laboratory | |
| FIS 427<br>& 427L | Medicolegal Forensics<br>and Medicolegal Forensics Laboratory | |
| FIS 495 | Independent Study | |

| | | |
|---|---|---|
| FIS 497 | Research | |
| FIS 498 | Honors | |
| **CAPSTONE EXPERIENCE** | | **3** |
| FIS 406L | Capstone: Courtroom Testimony and Laboratory | |
| Total Hours | | 91 |

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STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses

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A maximum of 3 credits combined may come from FIS 495 or FIS 497. FIS 498C may not be used to fulfill this requirement.

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FIS 301 & FIS 301L are typically reserved for Forensic Examiner majors. Seating is extremely restricted, but if there is a seat available, it will be open to Forensic Biology majors.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115 & 115L (GEF 2) | 4 | BIOL 117 & 117L (GEF 8 course 2) | 4 |
| CHEM 115 & 115L (GEF 8 course 1) | 4 | CHEM 116 & 116L (GEF 8 course 3) | 4 |
| FIS 191 | 1 | ENGL 101 (GEF 1 Course 1) | 3 |
| FIS 201 | 3 | MATH 156 | 4 |
| MATH 155 (GEF 3) | 4 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 219 & 219L | 4 | CHEM 234 & 234L | 4 |
| CHEM 233 & 233L | 4 | ENGL 102 (GEF 1 Course 2) | 3 |
| PHYS 101 & 101L | 4 | FIS 202 | 3 |
| STAT 215 | 3 | PHYS 102 & 102L | 4 |
| | | GEF 4 | 3 |
| | 15 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| FIS 305 & 305L | 3 | ARSC 380 (EDG 5) | 3 | FIS 386 (EDG 6) | 3-6 |
| FIS 324 & 324L | 4 | AGBI 410 & 410L | 4 | | |
| FIS 385 | 1 | FIS 312 & 312L | 3 | | |
| FIS 480 | 2 | FIS 432 & 432L | 4 | | |
| EDG 1: Data and Society | 3 | | | | |
| | 13 | | 14 | | 3 |

| Fourth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| FIS 404 | 3 | FIS 485 (EDG 3) | 3 |
| FIS 406L (Capstone (EDG 2)) | 3 | EDG 4: Global and Regional Perspectives | 3 |
| Forensic Biology Elective 1 | 3 | GEF 7 | 3 |
| GEF 5 | 3 | Forensic Biology Elective 2 | 3 |
| GEF 6 | 3 | | |
| | 15 | | 12 |

Total credit hours: 120

## Degree Progress

- All majors must meet with a FIS adviser each semester.
- By the start of the third regular semester (Fall or Spring) in the major, students must be enrolled in or have successfully completed  and with a C-.
- Beyond the fifth regular semester, all students must maintain a minimum GPA of 2.5 in all courses applied to major requirements with a minimum grade requirement of C- in all courses applied to major requirements.
- If students do not begin upper-level FIS courses in their third year, they must complete the foundational courses listed below by the end of their sixth regular semester.
- Students who do not meet major benchmarks may be removed from the major.

### UPPER LEVEL QUALIFICATION

During their first four semesters, students are expected to complete their foundational biology, chemistry, math, and physics courses. These fundamentals must be completed prior to taking upper-level FIS courses.  Many of these courses will satisfy the GEF 1, 2, 3, 4, and 8 requirements, as well as the College B.S. requirements. Students interested in the forensic chemistry major are strongly encouraged to take PHYS 111 (http://catalog.wvu.edu/search/?P=PHYS%20111)/PHYS 112 (http://catalog.wvu.edu/search/?P=PHYS%20112) if they qualify.

To begin taking upper-level FIS courses, typically in the fifth semester/fall of the junior year, students must have completed the courses listed below with a grade of C- or better. If students are deficient in a single course requirement but can complete it in the fall semester, they may be permitted to enroll in upper-division FIS courses alongside the deficient course, based on availability of seats and compatibility of scheduling.

- BIOL 117 & BIOL 117L
- CHEM 234 & CHEM 234L
- MATH 154 or MATH 155  (Forensic Biology and Forensic Examiner) or MATH 156 (Forensic Chemistry)
- PHYS 102 & PHYS 102L or PHYS 112 & PHYS 112L
- STAT 215 or STAT 312

### CALCULATION OF GPA

All students must maintain a minimum GPA of 2.5 in all courses applied to major requirements with a minimum grade requirement of C- in selected courses. Selected courses are: all courses applied to major requirements.

## Major Learning Outcomes

### FORENSIC BIOLOGY

Upon graduation from the Forensic Biology major, students will be able to:

1. Apply scientific methodology and evaluate techniques in the collection, processing, analysis, and evaluation of forensic evidence.
2. Assess and defend data generated during forensic investigations
3. Present scientific data in written, verbal, and visual formats.
4. Demonstrate the professionalism and high ethical standards demanded by the justice system and the forensic science community.

# Forensic Chemistry, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Department of  Forensic and Investigative Science (FIS)  offers a Bachelor of Science degree in three major areas: Forensic Biology, Forensic Chemistry, and Forensic Examiner.  All of these majors provide students with a strong background in the fundamental science and applied practice associated with forensic science.  The Program is accredited by the Forensic Education Programs Accreditation Commission (http://fepac-edu.org/) (FEPAC).

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Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; click the following link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

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## Admissions for 2026-2027

- First Time Freshmen with a MATH ACT of 22 or a MATH SAT of 540 or with a 3.75 cumulative high school GPA are admitted directly to the major. A minimum ALEKS score of 45 is recommended for the timely completion of the degree.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA must meet the following requirements: MATH ACT of 22 or a MATH SAT of 540 or a 3.75 cumulative high school GPA.
- Students transferring from another WVU major or from another institution with 24 hours or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major:  CHEM 115 (http://catalog.wvu.edu/search/?P=CHEM%20115) or higher with a C-.

Major Code 14C6

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Departmental Requirements for the B.S. in Forensic Chemistry

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

- **Calculation of the GPA in the Major**: A minimum grade of C- or better in all courses applied to major requirements, including the STEM Foundations. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement**: The Forensic Chemistry Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Capstone Requirement:** The university requires the successful completion of a Capstone course.  Forensic Chemistry majors must complete FIS 406L.
- **Internship Requirement**: All students are required to successfully complete the FIS 386 internship course for a minimum of 3 hours of credit.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 24 |
| Eberly Edge Requirements | | 9 |

| | |
|---|---|
| Forensic Chemistry Major Requirements | 87 |
| Total Hours | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| FIS 191 | First-Year Seminar | 1 |
| General Electives | | 5 |
| Total Hours | | 24 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1 : Data and Society | | 3 |
| EDG 2 : Effective and Civil Communication (FIS 406L) | | |
| EDG 3 :Ethics and Civil Responsibility (FIS 485) | | |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5 : Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6 : EEDG High Impact Experience (FIS 386) | | |
| Total Hours | | 9 |

## Forensic Chemistry Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **27** |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| MATH 155 | Calculus 1 | |
| MATH 156 | Calculus 2 | |
| PHYS 101<br>& 101L<br>& PHYS 102<br>& PHYS 102L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory<br>and Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| or PHYS 111<br>& 111L<br>& PHYS 112<br>& PHYS 112L | General Physics 1<br>and General Physics 1 Laboratory<br>and General Physics 2<br>and General Physics 2 Laboratory | |
| STAT 215 | Introduction to Probability and Statistics | |
| **CORE CHEMISTRY COURSES** | | **24** |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | |
| CHEM 341<br>& 341L | Physical Chemistry: Brief Course<br>and Physical Chemistry: Brief Course Laboratory | |
| or CHEM 348<br>& 348L | Physical Chemistry 2<br>and Physical Chemistry 2 Laboratory | |

| | | |
|---|---|---|
| **CORE FORENSIC AND INVESTIGATIVE SCIENCE COURSES** | | **29** |
| FIS 201 | Introduction to Forensic Identification | |
| FIS 202 | Crime Scene Investigation Overview | |
| FIS 314<br>& 314L | Introduction to Microscopy<br>and Introduction to Microscopy Laboratory | |
| FIS 340<br>& 340L | Forensic Chemical Analysis<br>and Forensic Chemical Analysis Laboratory | |
| FIS 385 | Professional Internship Preparation | |
| FIS 386 | Forensic Identification Internship | |
| FIS 404 | Law and Evidence | |
| FIS 460<br>& 460L | Analysis of Seized Drugs<br>and Analysis of Seized Drugs Laboratory | |
| FIS 480 | Forensic Quality Assurance | |
| FIS 485 | Professional Ethics in Forensic Science | |
| **UPPER-DIVISION ELECTIVES** | | **4** |
| Select two of the following sequences: | | |
| FIS 414<br>& 414L | Trace Evidence Examination<br>and Trace Evidence Examination Laboratory | |
| FIS 451<br>& 451L | Arson and Explosives Analysis<br>and Arson and Explosives Analysis Laboratory | |
| FIS 470<br>& 470L | Analytical Forensic Toxicology<br>and Analytical Forensic Toxicology Laboratory | |
| **CAPSTONE EXPERIENCE** | | **3** |
| FIS 406L | Capstone: Courtroom Testimony and Laboratory | |
| Total Hours | | 87 |

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STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FIS 191 | 1 | BIOL 117<br>& 117L (GEF 8 course 2) | 4 |
| BIOL 115<br>& 115L (GEF 2) | 4 | CHEM 116<br>& 116L (GEF 8 course 3) | 4 |
| CHEM 115<br>& 115L (GEF 8 course 1) | 4 | General Elective | 3 |
| FIS 201 | 3 | MATH 156 | 4 |
| MATH 155 (GEF 3) | 4 | EDG 4: Global and Regional Perspectives | 3 |
| | 16 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 233<br>& 233L | 4 | ENGL 102 (GEF 1 course 2) | 3 |
| ENGL 101 (GEF 1 course 1) | 3 | CHEM 234<br>& 234L | 4 |
| PHYS 101<br>& 101L | 4 | FIS 202 | 3 |
| STAT 215 | 3 | PHYS 102<br>& 102L | 4 |

| | | | | | |
|---|---|---|---|---|---|
| EDG 1: Data and Society | 3 | | | | |
| | 17 | | 14 | | |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| CHEM 215 & 215L | 4 | ARSC 380 (EDG 5) | 3 | FIS 386 (EDG 6) | 3 |
| FIS 314 & 314L | 3 | CHEM 341 & 341L | 4 | | |
| FIS 340 & 340L | 4 | FIS 460 & 460L | 4 | | |
| FIS 385 | 1 | GEF 4 | 3 | | |
| FIS 480 | 2 | | | | |
| | 14 | | 14 | | 3 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FIS 404 | 3 | FIS 485 (EDG 3) | 3 |
| FIS 406L (EDG 2) | 3 | FIS Chemistry Elective | 4 |
| GEF 5 | 3 | GEF 7 | 3 |
| GEF 6 | 3 | General Elective | 2 |
| | 12 | | 12 |

Total credit hours: 120

# Degree Progress

- All majors must meet with a FIS adviser each semester.
- By the start of the third regular semester (Fall or Spring) in the major, students must be enrolled in or have successfully completed  and with a C-.
- Beyond the fifth regular semester, all students must maintain a minimum GPA of 2.5 in all courses applied to major requirements with a minimum grade requirement of C- in all courses applied to major requirements.
- If students do not begin upper-level FIS courses in their third year, they must complete the foundational courses listed below by the end of their sixth regular semester.
- Students who do not meet major benchmarks may be removed from the major.

## UPPER LEVEL QUALIFICATION

During their first four semesters, students are expected to complete their foundational biology, chemistry, math, and physics courses. These fundamentals must be completed prior to taking upper-level FIS courses.  Many of these courses will satisfy the GEF 1, 2, 3, 4, and 8 requirements, as well as the College B.S. requirements. Students interested in the forensic chemistry major are strongly encouraged to take PHYS 111 (http://catalog.wvu.edu/search/?P=PHYS%20111)/PHYS 112 (http://catalog.wvu.edu/search/?P=PHYS%20112) if they qualify.

To begin taking upper-level FIS courses, typically in the fifth semester/fall of the junior year, students must have completed the courses listed below with a grade of C- or better. If students are deficient in a single course requirement but can complete it in the fall semester, they may be permitted to enroll in upper-division FIS courses alongside the deficient course, based on availability of seats and compatibility of scheduling.

- BIOL 117 & BIOL 117L
- CHEM 234 & CHEM 234L
- MATH 154 or MATH 155  (Forensic Biology and Forensic Examiner) or MATH 156 (Forensic Chemistry)
- PHYS 102 & PHYS 102L or PHYS 112 & PHYS 112L
- STAT 215 or STAT 312

## CALCULATION OF GPA

All students must maintain a minimum GPA of 2.5 in all courses applied to major requirements with a minimum grade requirement of C- in selected courses. Selected courses are: all courses applied to major requirements.

## Major Learning Outcomes

### FORENSIC CHEMISTRY

Upon graduation from the Forensic Chemistry major, students will be able to:

1. Apply scientific methodology and evaluate techniques in the collection, processing, analysis, and evaluation of forensic evidence.
2. Assess and defend data generated during forensic investigations
3. Present scientific data in written, verbal, and visual formats.
4. Demonstrate the professionalism and high ethical standards demanded by the justice system and the forensic science community.

# Forensic Examiner, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Department of  Forensic and Investigative Science (FIS)  offers a Bachelor of Science degree in three major areas: Forensic Biology, Forensic Chemistry, and Forensic Examiner.  All of these majors provide students with a strong background in the fundamental science and applied practice associated with forensic science.  The Program is accredited by the Forensic Education Programs Accreditation Commission (http://fepac-edu.org/) (FEPAC).

Because of the unique nature of the profession of forensic science, students are forewarned that a record of criminal, unethical, or other socially unacceptable behavior (such as illicit drug use or alcohol offenses) could negatively affect their ability to pass a background check, which may in turn make it difficult or impossible and complete the degree.  Department guidelines are available from departmental advisers.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; click the following link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

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## FACULTY

### CHAIR

- Casper Venter - Ph.D. (University of South Africa)

### DIRECTOR OF GRADUATE STUDIES

- Tina Moroose - M.S. (Marshall University)

### DIRECTOR OF UNDERGRADUATE STUDIES

- Rachel Mohr - Ph.D. (Texas A&M University)

### PROFESSORS

- Glen Jackson - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Ming Hsieh Distinguished Professor, Forensic Chemistry, Mass Spectrometry
- Keith Morris - Ph.D. (University of Port Elizabeth)
  Regular Graduate Faculty, Ming Hsieh Distinguished Professor, Impression Evidence, Evidence Interpretation

### ASSOCIATE PROFESSORS

- Luis Arroyo - Ph.D. (Florida International University)
  Regular Graduate Faculty, Toxicology, Environmental Forensics
- Tina Moroose - M.S. (Marshall University)
  Regular Graduate Faculty, Forensic Biology, Quality Assurance
- Jacqueline Speir - Ph.D. (Rochester Institute of Technology)
  Regular Graduate Faculty, Forensic Informatics, Microscopy

- Tatiana Trejos - Ph.D. (Florida International University)
  Regular Graduate Faculty, Trace Evidence, Elemental Analysis

### ASSISTANT PROFESSORS

- Robin Bowen - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Ethics, Bloodstain Pattern Analysis
- Tiffany Edwards - M.S. (University of Central Oklahoma)
  Criminalistics, Death Investigation
- Arati Iyengar - Ph.D. (University of Southampton)
  Regular Graduate Faculty, DNA, Forensic Genetics
- Roger Jefferys - M.S. (West Virginia University)
  Criminalistics
- Lisa Licata - M.S. (University of North Texas Health Science Center)
  Criminalistics, DNA
- Rachel Mohr - Ph.D. (Texas A&M University)
  Associate Graduate Faculty, Forensic Entomology
- Robert O'Brien - M.S. (St. Joseph's College)
  Associate Graduate Faculty, Crime Scene Investigation

## Admissions for 2026-2027

- First Time Freshmen with a MATH ACT of 22 or a MATH SAT of 540 or with a 3.75 cumulative high school GPA are admitted directly to the major. A minimum ALEKS score of 45 is recommended for the timely completion of the degree.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA must meet the following requirements: MATH ACT of 22 or a MATH SAT of 540 or with a 3.75 cumulative high school GPA.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: CHEM 115 (http://catalog.wvu.edu/search/?P=CHEM%20115) or higher with a C-.

Major Code 14E1

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Progra requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.S. in Forensic Examiner

- **Calculation of the GPA in the Major**: A minimum grade of C- or better in all courses applied to major requirements, including the STEM Foundations. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement**: The Forensic Examiner Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Internship Requirement**: All students are required to successfully complete the FIS 386 for at least 3 hours of credit.
- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Forensic Examiner majors must complete FIS 406L.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 20 |
| Eberly Edge Requirements | | 9 |
| Forensic Examiner Major Requirements | | 91 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| FIS 191 | First-Year Seminar | 1 |
| General Electives | | 1 |
| Total Hours | | 20 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication (FIS 406L) | | |
| EDG 3: Ethics and Civil Responsibility (FIS 485) | | |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (FIS 386) | | |
| Total Hours | | 9 |

## Forensic Examiner Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **28** |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| MATH 155 | Calculus 1 | |
| PHYS 101<br>& 101L<br>& PHYS 102<br>& PHYS 102L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory<br>and Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |

| | | |
|---|---|---|
| or PHYS 111 | General Physics 1 | |
| & 111L | and General Physics 1 Laboratory | |
| & PHYS 112 | and General Physics 2 | |
| & PHYS 112L | and General Physics 2 Laboratory | |
| **QUANTITATIVE REQUIREMENT** | | **6** |
| Select one of the following pairs: | | |
| MATH 156 | Calculus 2 | |
| & STAT 215 | and Introduction to Probability and Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| & STAT 312 | and Intermediate Statistical Methods | |
| **ADVANCE SCIENCE REQUIREMENT** | | **16** |
| CHEM 233 | Organic Chemistry 1 | |
| & 233L | and Organic Chemistry 1 Laboratory | |
| CHEM 234 | Organic Chemistry 2 | |
| & 234L | and Organic Chemistry 2 Laboratory | |
| Select one of the following pairs | | |
| BIOL 219 | Cellular and Molecular Biology | |
| & 219L | and Cellular & Molecular Biology Laboratory | |
| CHEM 215 | Introductory Analytical Chemistry | |
| & 215L | and Introductory Analytical Chemistry Laboratory | |
| Select 4 credits from the following list: | | |
| AGBI 410 | Introductory Biochemistry | |
| or BMM 339 | Introduction to Human Biochemistry | |
| AGBI 410L | Introduction to Biochemistry Laboratory † | |
| BIOL 310 | Advanced Cellular/Molecular Biology | |
| BIOL 324 | Molecular Genetics | |
| CHEM 341 | Physical Chemistry: Brief Course | |
| CHEM 341L | Physical Chemistry: Brief Course Laboratory | |
| **CORE FORENSIC AND INVESTIGATIVE SCIENCE COURSES** | | **35** |
| FIS 201 | Introduction to Forensic Identification | |
| FIS 301 | Science/Technology of Fingerprint Identification | |
| & 301L | and Science/Technology of Fingerprint Identification Laboratory | |
| FIS 302 | Crime Scene Investigation 1 | |
| FIS 302L | Crime Scene Investigation 1 Laboratory | |
| FIS 312 | Applied Forensic Microscopy | |
| & 312L | and Applied Forensic Microscopy Laboratory | |
| or FIS 314 | Introduction to Microscopy | |
| & 314L | and Introduction to Microscopy Laboratory | |
| FIS 335 | Forensic Photography | |
| & 335L | and Forensic Photography Laboratory | |
| FIS 385 | Professional Internship Preparation | |
| FIS 386 | Forensic Identification Internship | |
| FIS 402 | Crime Scene Investigation 2 | |
| & 402L | and Crime Scene Investigation 2 Laboratory | |
| FIS 404 | Law and Evidence | |
| FIS 405 | Latent Fingerprint Examination and Comparison | |
| & 405L | and Latent Fingerprint Laboratory | |
| FIS 480 | Forensic Quality Assurance | |
| FIS 485 | Professional Ethics in Forensic Science | |
| **UPPER-DIVISION ELECTIVES** * | | **3** |
| FIS 305 | Biological Evidence | |
| & 305L | and Biological Evidence Laboratory | |
| FIS 320 | Science and Culture of Illicit Drugs | |
| FIS 393 | Special Topics | |
| FIS 401 | Professional Forensic Communication | |

| | | |
|---|---|---|
| FIS 407 & 407L | Gravesite Forensics and Gravesite Forensics Laboratory | |
| FIS 409 & 409L | Blood Stain Pattern Analysis and Bloodstain Pattern Analysis Laboratory | |
| FIS 414 & 414L | Trace Evidence Examination and Trace Evidence Examination Laboratory | |
| FIS 421 & 421L | Introduction to Firearms Examination and Introduction to Firearms Examination Laboratory | |
| FIS 427 & 427L | Medicolegal Forensics and Medicolegal Forensics Laboratory | |
| FIS 435 | Advanced Forensic Photography | |
| FIS 495 | Independent Study | |
| FIS 497 | Research | |
| **CAPSTONE EXPERIENCE** | | **3** |
| FIS 406L | Capstone: Courtroom Testimony and Laboratory | |
| Total Hours | | 91 |

*

STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses

**

A maximum of 3 credits combined can come from FIS 495 or FIS 497. FIS 498C may not be used to fulfill this requirement

†

Enrollment in AGBI 410L is strictly limited, with FIS students able to enroll only after all Biochemistry majors have enrolled. Spaces in this course are not guaranteed.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FIS 191 | 1 | BIOL 117 & 117L (GEF 8 course 2) | 4 |
| BIOL 115 & 115L (GEF 2) | 4 | CHEM 116 & 116L (GEF 8 course 3) | 4 |
| CHEM 115 & 115L (GEF 8 Course 1) | 4 | MATH 156 (Math & Stats Elective 1) | 4 |
| FIS 201 | 3 | EDG 4: Global and Regional Perspectives | 3 |
| MATH 155 (GEF 3) | 4 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 219 & 219L | 4 | CHEM 234 & 234L | 4 |
| CHEM 233 & 233L | 4 | PHYS 102 & 102L (B.S. Third Area 2) | 4 |
| PHYS 101 & 101L | 4 | GEF 4 | 3 |
| EDG 1: Data and Society | 3 | STAT 215 | 3 |
| | | General Elective | 1 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| FIS 301 & 301L | 3 | ARSC 380 (EDG 5) | 3 | FIS 386 (EDG 6) | 3-6 |
| FIS 335 & 335L | 3 | FIS 302 & 302L | 4 | | |
| FIS 385 | 1 | FIS 312 & 312L | 3 | | |
| GEF 5 | 3 | FIS 405 & 405L | 4 | | |
| Advanced Sci Elective 2 | 4 | | | | |
| | 14 | | 14 | | 3 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FIS 402 & 402L | 3 | FIS 406L (EDG 2) | 3 |
| FIS 404 | 3 | FIS 485 (EDG 3) | 3 |
| FIS 480 | 2 | GEF 7 | 3 |
| Forensic Science Elective | 3 | General Elective | 2 |
| GEF 6 | 3 | General Elective | 3 |
| | 14 | | 14 |

Total credit hours: 120

# Degree Progress

- All majors must meet with a FIS adviser each semester.
- By the start of the third regular semester (Fall or Spring) in the major, students must be enrolled in or have successfully completed  and with a C-.
- Beyond the fifth regular semester, all students must maintain a minimum GPA of 2.5 in all courses applied to major requirements with a minimum grade requirement of C- in all courses applied to major requirements.
- If students do not begin upper-level FIS courses in their third year, they must complete the foundational courses listed below by the end of their sixth regular semester.
- Students who do not meet major benchmarks may be removed from the major.

## UPPER LEVEL QUALIFICATION

During their first four semesters, students are expected to complete their foundational biology, chemistry, math, and physics courses. These fundamentals must be completed prior to taking upper-level FIS courses.  Many of these courses will satisfy the GEF 1, 2, 3, 4, and 8 requirements, as well as the College B.S. requirements. Students interested in the forensic chemistry major are strongly encouraged to take PHYS 111 (http://catalog.wvu.edu/search/?P=PHYS%20111)/PHYS 112 (http://catalog.wvu.edu/search/?P=PHYS%20112) if they qualify.

To begin taking upper-level FIS courses, typically in the fifth semester/fall of the junior year, students must have completed the courses listed below with a grade of C- or better. If students are deficient in a single course requirement but can complete it in the fall semester, they may be permitted to enroll in upper-division FIS courses alongside the deficient course, based on availability of seats and compatibility of scheduling.

- BIOL 117 & BIOL 117L
- CHEM 234 & CHEM 234L
- MATH 154 or MATH 155  (Forensic Biology and Forensic Examiner) or MATH 156 (Forensic Chemistry)
- PHYS 102 & PHYS 102L or PHYS 112 & PHYS 112L
- STAT 215 or STAT 312

## CALCULATION OF GPA

All students must maintain a minimum GPA of 2.5 in all courses applied to major requirements with a minimum grade requirement of C- in selected courses. Selected courses are: all courses applied to major requirements.

## Major Learning Outcomes

### FORENSIC EXAMINER

Upon graduation from the Forensic Examiner major, students will be able to:

1. Apply scientific methodology and evaluate techniques in the collection, processing, analysis, and evaluation of forensic evidence.
2. Assess and defend data generated during forensic investigations.
3. Present scientific data in written, verbal,and visual formats.
4. Demonstrate the professionalism and high ethical standards demanded by the justice system and the forensic science community.

# History, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Department of History offers courses focusing on a variety of world regions and time periods.  Degree requirements insure that majors obtain an acquaintance with the history of several such regions and periods and develop skills in research and writing.  Majors and non-majors may qualify for membership in Phi Alpha Theta, the national history honorary.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

## Career Prospects

The bachelor of arts with a major in history is designed to prepare students for careers in teaching, business, and government, and for graduate work in history, law, and related social sciences and humanities.

## 3+3 Program

The Department of History participates in the 3+3 Program with WVU's College of Law, which is an opportunity for qualified undergraduate students to earn their bachelor's degree and law degree in six years instead of seven years. Students accepted into the 3+3 program begin taking classes at WVU Law in what would be their fourth year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

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## FACULTY

### CHAIR

- Kate Staples - Ph.D. (University of Minnesota)

### ASSOCIATE CHAIR

- Matthew Vester - Ph.D. (University of California)

### PROFESSORS

- Joseph Hodge - Ph.D. (Queen’s University at Kingston)
  Modern Britian, British Empire, decolonization, international development, Africa
- Brian Luskey - Ph.D. (Emory University)
  19th-century U.S., social and cultural
- Jason Phillips - Ph.D. (Rice University)
  Eberly Professor of Civil War Studies, Civil war and reconstruction, southern history, 19th-century U.S.
- James Siekmeier - Ph.D. (Cornell University)
  U.S. diplomatic, modern Latin America

- Matthew A. Vester - Ph.D. (University of California)
  Early modern Europe, Italy, France

### ASSOCIATE PROFESSORS

- Melissa Bingmann - Ph.D. (Arizona State University)
  Public history, 20th-century U.S.
- William Gorby - Ph.D. (West Virginia University)
  West Virginia, Appalachia, Immigration
- Tamba E. M'bayo - Ph.D. (Michigan State University)
  West Africa, colonial and postcolonial, African diaspora and Pan-Africanism
- Kate Staples - Ph.D. (University of Minnesota)
  Medieval, gender, England, material culture
- Jessica Wilkerson - Ph.D. (University of North Carolina-Chapel Hill)
  Joyce and Stuart Robbins Chair, Appalachia and the South, Women, Gender, and Sexuality, 20th-c U.S., Labor and Working Class History

### ASSISTANT PROFESSORS

- Max Flomen - Ph.D. (UCLA)
  Early American History, Native American History
- Sean Lawrence - Ph.D. (University of California, Santa Cruz)
  Germany, colonialism, Middle East, environment, political economy
- Austin McCoy - Ph.D. (University of Michigan)
  20th-Century U.S., African-American, labor, social movements
- Betsy DiSalvo Osborne - Ph.D. (West Virginia University)
  Social Studies Education, Education
- Devin Smart - Ph.D. (University of Illinois-Urbana Champaign)
  Africa, World/Global, environmental

### EMERITUS FACULTY

- William S. Arnett - Ph.D. (Ohio State University)
- Robert E. Blobaum - Ph.D. (University of Nebraska)
- William I. Brustein - Ph.D. (University of Washinton)
- Elizabeth Fones-Wolf - Ph.D. (University of Massachusetts)
- Kenneth Fones-Wolf - Ph.D. (Temple University)
- Jack Hammersmith - Ph.D. (University of Virginia)
- Barbara J. Howe - Ph.D. (Temple University)
- Elizabeth K. Hudson - Ph.D. (Indiana University)
- Ronald L. Lewis - Ph.D. (University of Akron)
- Mary Lou Lustig - Ph.D. (Syracuse University)
- Robert M. Maxon - Ph.D. (Syracuse University)
- Stephen C. McCluskey - Ph.D. (University of Wisconsin)
- A. Michal McMahon - Ph.D. (University of Texas)
- John C. Super - Ph.D. (University of California, Los Angeles)
- Mark B. Tauger - Ph.D. (University of California, Los Angeles)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with a 2.0 overall GPA are admitted directly to the major.

Major Code: 1449

Click here to view the Suggested Plan of Study (p. 287)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in History

- **Calculation of the GPA in the Major**: A minimum grade of C- is required in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Requirement:** The History Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Secondary Concentration**: Students must complete a minor outside of History or a second major.
- **Residence Requirement**: Students must complete a minimum of 18 credits at WVU; a minimum of 6 of those 18 credits must be at the upper-division level (courses numbered 300 or above).
- **Capstone Requirement**: The university requires the successful completion of a Capstone course. Students majoring in History will complete HIST 484 to satisfy this requirement.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 57 |
| Eberly Edge Requirements | | 15 |
| History Major Requirements | | 48 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 6, and 5 or 7 | | 22 |
| HIST 191 | First-Year Seminar | 1 |
| General Electives | | 34 |
| Total Hours | | 57 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (fulfilled by the Africa, Asia, and Latin America Major Requirement) | | |
| EDG 5 Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 15 |

## History Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Introductory History Courses** | | **12** |
| HIST 302 | Practicing History | |
| Select three courses: | | |
| HIST 101 | European History: Antiquity to 1600 | |
| HIST 102 | European History since 1600 | |
| HIST 104 | Latin America: Past and Present | |
| HIST 105 | The Middle East | |
| HIST 106 | East Asia: An Introduction | |
| HIST 152 | Growth of the American Nation to 1865 | |
| HIST 153 | Making of Modern America: 1865 to the Present | |
| HIST 179 | World History to 1500 | |
| HIST 180 | World History Since 1500 | |
| **History Concentration** | | **18** |
| Take at least one course in all three of the following regions, with twelve of the total 18 hours at the 300 or 400 level. | | |
| **United States** | | |
| HIST 210 | Modern Military History | |
| HIST 215 | History Through Public History Sites | |
| HIST 224 | Climate Change: A Global History | |
| HIST 250 | West Virginia | |
| HIST 256 | History of the American Revolution: 1763-1790 | |
| HIST 257 | Rise and Fall of the US Republic | |
| HIST 259 | The United States: 1865-1918 | |
| HIST 261 | Recent America: The United States since 1918 | |
| HIST 264 | American Indian History | |
| HIST 358 | United States Cultural History: 1819-1893 | |
| HIST 360 | America in the 1960's | |
| HIST 365 | The Vietnam War | |
| HIST 375 | Film and History | |
| HIST 409 | Field Methods in Historic Preservation | |
| HIST 412 | Introduction to Public History | |
| HIST 442 | Eighteenth Century America | |
| HIST 445 | History of American Women | |
| HIST 451 | African-American History-1900 | |
| HIST 452 | African-American Since 1900 | |
| HIST 453 | Civil War and Reconstruction | |
| HIST 454 | The Coming of the United States Civil War | |
| HIST 456 | The Gilded Age in US History | |
| HIST 459 | United States History: New Deal to Great Society | |
| HIST 460 | World War II in America | |

| | |
|---|---|
| HIST 463 | American Foreign Relations to 1941 |
| HIST 464 | American Foreign Relations 1941 to Present |
| HIST 468 | The Old South |
| HIST 470 | United States Civil Rights Movement |
| HIST 473 | Appalachian Regional History |
| HIST 477 | Working Class America |
| HIST 478 | American Immigration History |
| **Europe** | |
| HIST 201 | History of Ancient Times: Stone Age to the Fall of Rome |
| HIST 203 | Introduction to Medieval Europe |
| HIST 204 | Renaissance and Reformation |
| HIST 205 | Absolutism & Enlightenment |
| HIST 207 | Revolutionary Europe |
| HIST 209 | Twentieth Century Europe |
| HIST 210 | Modern Military History |
| HIST 211 | The Mediterranean 1200-1800 |
| HIST 215 | History Through Public History Sites |
| HIST 217 | History of Russia to 1917 |
| HIST 218 | History of Russia: 1900-Present |
| HIST 220 | The Holocaust (The Holocaust) |
| HIST 221 | History of Modern Germany |
| HIST 224 | Climate Change: A Global History |
| HIST 313 | France from 1450 to 1750 |
| HIST 314 | France Since 1815 |
| HIST 317 | German Central Europe, 1648-1900 |
| HIST 318 | Twentieth Century German Central Europe |
| HIST 330 | History of Italy, 1200-1800 |
| HIST 346 | Women, Gender, and Kinship in Premodern Europe |
| HIST 414 | The Great War, 1914-1918 |
| HIST 415 | Early Modern Law & Society |
| HIST 416 | The French Wars of Religion |
| HIST 417 | World War II in Europe |
| HIST 419 | Revolutionary Russia: 1900-1953 |
| HIST 420 | USSR and After: 1953 to Present |
| HIST 421 | Hitler and the Third Reich |
| HIST 422 | Twentieth-Century Germany from Weimar to Bonn |
| HIST 424 | Britain 1455-1603 |
| HIST 430 | Living and Dying in Medieval Europe |
| HIST 432 | Eighteenth Century Britain: 1715-1832 |
| **Africa, Asia, and Latin America** | |
| HIST 201 | History of Ancient Times: Stone Age to the Fall of Rome |
| HIST 215 | History Through Public History Sites |
| HIST 224 | Climate Change: A Global History |
| HIST 241 | Latin America: Culture, Conquest, Colonization |
| HIST 242 | Latin America: Reform and Revolution |
| HIST 319 | Myth and Culture in Pre-colonial Africa |
| HIST 320 | Pre-Colonial Africa |
| HIST 321 | Colonial Africa and Independence |
| HIST 325 | Modern China |
| HIST 348 | The International Middle East |
| HIST 350 | The Aztec, Maya, and Inca |
| HIST 365 | The Vietnam War |

| | | |
|---|---|---|
| HIST 370 | Latin America and the World | |
| HIST 428 | East Africa Since 1895 | |
| HIST 433 | West Africa to 1885 | |
| HIST 434 | West Africa from 1885 | |
| HIST 435 | History of Chinese Thought | |
| HIST 437 | Africa in World History | |
| HIST 439 | History of Modern Mexico | |
| HIST 440 | Mexican Law from Montezuma to El Chapo | |
| **Capstone Experience** | | **3** |
| HIST 484 | Historical Research-Capstone | |
| **Secondary Concentration/ Minor (fulfills the F8 requirement)** | | **15** |
| Students must complete a minor, double major, or dual degree | | |
| Total Hours | | 48 |

## Suggested Plan of Study

The plan below illustrates a plan of study with a minor.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIST 191 | 1 | ENGL 101 (GEF 1) | 3 |
| HIST Intro Course 1 | 3 | HIST Intro Course 2 | 3 |
| F2B | 4 | EDG 1: Data and Society | 3 |
| F5 | 3 | F3 | 3 |
| General Elective | 4 | F4 | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | HIST Concentration Area 1 | 3 |
| HIST 302 | 3 | HIST intro Course 4 | 3 |
| HIST Intro Course 3 | 3 | F6 | 3 |
| EDG 2: Effective and Civil Communication | 3 | EDG 3: Ethics and Civil Responsibility | 3 |
| F7 | 3 | Minor Course 1 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIST Concentration Area 2 | 3 | HIST 3/400-level | 3 |
| HIST Concentration Area 3 at 3/400-level (EDG 4) | 3 | HIST 3/400-level | 3 |
| ARSC 380 (EDG 5) | 3 | Minor Course 3 | 3 |
| Minor Course 2 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIST 3/400-level | 3 | HIST 484 (Capstone and Writing) | 3 |
| Minor Course 4 | 3 | EDG 6: High Impact Experience | 3 |
| General Elective | 3 | Minor Course 5 | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Suggested 3+3 Program Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIST 191 | 1 | ENGL 101 (GEF 1) | 3 |
| HIST 302 | 3 | Foreign Language 102 | 3 |
| Foreign Language 101 | 3 | HIST Intro Course 1 (GEF 5) | 3 |
| General Elective | 2 | HIST Intro Course 2 | 3 |
| GEF 2 | 3 | GEF 3 | 3 |
| GEF 4 | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | ECAS Fine Arts Requirement (GEF 6) | 3 |
| Foreign Language 203 | 3 | Foreign Language 204 | 3 |
| HIST Intro Course 3 (GEF 7) (Non-western and ECAS GI. St. and Div. Req.) | 3 | HIST Concentration Area 1 | 3 |
| Minor Course 1 | 3 | HIST Concentration Course Area 1 | 3 |
| GEF 2 | 3 | Minor Course | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIST Concentration Area 1 | 3 | HIST 484 (Capstone) | 3 |
| HIST Concentration Area 2 | 3 | HIST Concentration Area 2 | 3 |
| Minor Course 3 | 3 | HIST Concentration Area 3 | 3 |
| Minor Course 4 | 3 | Minor Course 5 | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| LAW 641 | 1 | LAW 675 | 1 |
| LAW 686 | 4 | LAW 703 | 4 |
| LAW 700 | 3 | LAW 707 | 4 |
| LAW 705 | 3 | LAW 711 | 2 |
| LAW 709 | 4 | LAW 725 | 4 |
| | 15 | | 15 |

Total credit hours: 120

## Degree Progress

- Students must maintain a 2.0 GPA overall and a minimum of a 2.00 GPA in History every semester (with a 2.0 in HIST required for graduation).
- All majors must meet with their History adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### HISTORY

Upon successful completion of their undergraduate degree in **History**, students will demonstrate competence in the following ways and areas:

1. Students will be able to explain and analyze the histories of a variety of geographical and chronological contexts.
2. Students will be able to identify and analyze primary sources, based on familiarity with the historiography and methodologies covered in their courses.
3. Students will be able to evaluate and analyze secondary sources, based on familiarity with the historiography and methodologies covered in their courses.

4. Students will be able to produce analytically-driven written and oral work based on the critical evaluation of evidence.
5. Students will be able to research and write scholarly papers that develop an argument on a defined historical topic, based on primary and secondary sources and that relates their work to the historical literature.

# Integrated Studies, B.I.S.

## Degree Offered

- Bachelor of Integrated Studies

## Nature of the Program

The Bachelor of Integrated Studies allows flexible learning options to complete an undergraduate degree. The required coursework in the major provides integrative skills to connect student learning to their personal and professional goals after graduation. Students in this degree program may receive F-forgiveness as well as credit for prior learning.

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## FACULTY

### DIRECTOR

- Scott Davidson - Ph.D. (Duquesne University)

### ASSOCIATE PROFESSORS

- Louis Slimak - Ph.D. (Purdue University)
- Carol Zwickel - Ph.D. (West Virginia University)

### ASSISTANT PROFESSORS

- Thaddeus Herman - Ph.D. (University of Illinois)
- Jayme Scally - Ph.D. (University of York)
- Andrea Soccorsi - M.A. (West Virginia University)
- Nevena Stojanovic - Ph.D. (West Virginia University)

### PROFESSOR EMERITA

- Renee K. Nicholson - M.F.A. (West Virginia University)

## Admissions for 2026-2027

- First Time Freshmen are **not** admitted to the major unless they are at least two years beyond high school graduation.
- Students transferring from another WVU major or from another institution must have at least 12 in progress credit hours or be two years beyond high school graduation to be admitted. Students should have an overall GPA of at least 2.0 after F-Forgiveness has been applied. Students who believe they may qualify for F-Forgiveness should meet with an adviser.

Major Code: 14E8

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |

| | |
|---|---|
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Student must complete the WVU General Education Foundations requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the Bachelor of Integrated Studies

- **Capstone Requirement:** The university requires the successful completion of a Capstone course. BIS majors must complete MDS 401.
- **Writing and Communication Skills Requirements:** Students in the BIS fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses™.**
- **Calculation of Major GPA:** A minimum GPA of a 2.0 is required in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Academic Policies:** The BIS degree offers special academic policies, as approved by the University. Please see the Admissions and Performance Standards tabs.
- **Credit for Prior Learning:** Eligible students may acquire college credit for professional, volunteer, and military experiences in select areas via the many credit for prior learning options available to BIS majors. These opportunities provide many students with a time efficient and cost effective avenue to obtain a degree. The BIS program allows adult learners to earn College Equivalent Credits (CECs) for work/career, life, and other academic experiences. If successful, awarded credits could help meet graduation requirements while reducing the overall costs of their college experience. Students are not being given credits for the years of service in their respective fields. Rather, they are being given credits based on their ability to articulate how their varied career experiences may have helped them to acquire equivalent or similar knowledge that they would have otherwise acquired in the classroom.
- **Second Degree**: Students who are completing another degree may not complete the BIS. Similarly, second-degree seeking students will not be accepted in the BIS program.
- **Minors:** Although the completion of a minor is not required, students may use their General Elective hours to complete one or more minors.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| **GEF Requirements** | | **37** |
| GEF Requirements: credits may vary depending on overlap | | |
| **Core Coursework** | | **6** |
| MDS 289 | Foundations of Integrated Studies | |
| MDS 301 | Integrative Writing | |
| **Additional Upper-Division Courses** | | **21** |
| Select any courses at the 300 or 400 level. | | |
| **Capstone** | | **3** |
| MDS 401 | Capstone | |
| **General Electives** | | **53** |
| Number of electives will vary based on GEF. | | |
| Total Hours | | 120 |

## Policies

### F-FORGIVENESS

The B.I.S. degree offers unique opportunities not available through traditional degree programs. F-forgiveness is available to students for failing grades that were obtained prior to admission to the B.I.S. major. This policy applies to grades earned at WVU and those that have been transferred from another institution.

F-Forgiveness benefits students only as long as they are enrolled in the B.I.S. program. Thus, if students benefit from F-Forgiveness but later elect to transfer to another major, then all Fs that were forgiven will be re-instituted.

### CREDIT FOR PRIOR LEARNING

Students may obtain college credit for previous professional and military experiences via several credit for prior learning options in the B.I.S. degree. For information about these options, students should consult the university's policies on credit for prior learning: https://registrar.wvu.edu/transfer/prior-learning-credit (https://registrar.wvu.edu/transfer/prior-learning-credit/)

For any additional questions about how to submit documentation for prior learning credits, please speak with your B.I.S. academic adviser following your admission to the program.

## Degree Progress

- B.I.S. students are expected to make satisfactory progress toward degree completion as determined in consultation with their advisor.
- B.I.S. students are expected to complete all coursework with a D- or higher and maintain a minimum 2.0 GPA. These expectations ensure that students remain in good academic standing (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probationsuspensiontext) and remain on track for graduation.
- Students must meet with their B.I.S. advisor at least once a semester.

  Students who do not meet those benchmarks may be removed from the major.

## Major Learning Outcomes

### INTEGRATED STUDIES

As a result of completing the Bachelor of Integrated Studies students will be able to:

1. Connect experience that occurs outside the classroom with academic studies to explain, present, and write about complex issues.

2. Ask meaningful questions about complex topics, as well as evaluate multiple sources of knowledge relevant to complex topics.

3. Develop intellectual and practical skills, including inquiry and analysis as well as critical and creative thinking, to develop foundations and skills for employment, graduate-level coursework and lifelong learning.

4. Write and present orally adaptable to a variety of contexts with a clear sense of purpose, audience, and conventions.

5. Engage in reflection and self-assessment by building on prior experiences to respond to new and challenging contexts.

# International Studies, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The international studies major is composed of internationally oriented courses drawn from several disciplinary and interdisciplinary study areas. Students take courses from departments such as economics, geography, history, political science, sociology/anthropology, and world languages.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; a list of all available minors and their requirements is available at http://catalog.wvu.edu/undergraduate/minors/. Please note that students may not earn a minor in their major field.

## Study Abroad, Internships, and Other Experiential Education Opportunities

Students are strongly encouraged to take advantage of opportunities for professional internships and study abroad, which may be undertaken for academic credit (often fulfilling specific course requirements for the major) with the approval of students' designated international studies advisers. Through internships, students gain first-hand knowledge of organizations engaged in international social, economic, and governmental affairs. To experience another society and in many cases to improve their foreign language capabilities, students may also study abroad for a summer, one semester, or an entire academic year. Interested students should consult their international studies adviser. Additional experiential education opportunities available to international studies majors include academic simulation programs and global service-learning.

## Second Majors, Minors, and Other Coursework

Students are encouraged to work closely with their international studies advisor and faculty in the program to select relevant courses, second majors, and/or minors that will complement their work in international studies and lead to meaningful career options.

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## FACULTY

### DIRECTOR

- Clarissa Estep - Ph.D. (West Virginia University)
  Department of Political Science

### PROFESSORS

- Clarissa Estep - Ph.D. (West Virginia University)
  Department of Political Science, International Relations
- Christina Fattore - Ph.D. (Florida State University)
  Regular Graduate Faculty, Department
- Joe D. Hagan - Ph.D (University of Kentucky)
  Regular Graduate Faculty, Barnette Professor in Political Science, International Relations and World Politics, Comparative Foreign Policy Analysis
- Daniel Renfrew - Ph.D. (Binghamton University, State University of New York)
  Regular Graduate Faculty, Department of Sociology and Anthropology, Environmental and political anthropology, Social movements, Latin American cultures

### ASSOCIATE PROFESSORS

- R. Scott Crichlow - Ph.D. (Louisiana State University)
  Regular Graduate Faculty, Department of Political Science, International Relations, Foreign Policy Decision-making, Middle East Politics
- Karen Culcasi - Ph.D. (Syracuse University)
  Regular Graduate Faculty, Department of Geology and Geography, Political Geography, Middle East
- William Hal Gorby - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Department of History, West Virginia, Appalachia, Immigration
- David M. Hauser - Ph.D. (University of Pittsburgh)
  Department of Political Science, International Conflict, National Security Analysis
- Mason W. Mosley - Ph.D. (Vanderbilt University)
  Regular Graduate Faculty, Department of Political Science, Comparative Politics, Latin American Politics, Comparative Political Institutions

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with at least a 2.0 overall GPA are admitted directly to the major.

Major Code: 1453

Click here to view the Suggested Plan of Study (p. 295)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |

| | |
|---|---|
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in International Studies

- **Calculation of the Major GPA:** A minimum GPA of a 2.0 is required in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Requirement:** International Studies Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and any two additional **SpeakWrite Certified Courses™** selected from: ANTH 350, ANTH 458, CHIN 301, CHIN 303, COMM 309 FCLT 310, FLIT 217, FLIT 239, FLIT 266, FRCH 301, FRCH 302, FRCH 303, FRCH 304, GEOG 243, GEOG 302, GEOG 415, GEOG 443, GEOG 455, HIST 180, HIST 209, HIST 221, HIST 225, HIST 242, HIST 318, HIST 325, HIST 439, HIST 464, INTS 300, INTS 488 (3 credit hour),POLS 230, POLS 240, POLS 250, POLS 300, POLS 355, POLS 491A, RELG 230, RELG 231, RELG 301, SPAN 312.
- **Area of Emphasis:** A minimum GPA of a 2.0 is required in all courses applied to the Area of Emphasis. Students must declare an Area of Emphasis.
- **Minor Requirement:** Students must select a minor (or second majors) approved by their INTS academic adviser.
- **Capstone Requirement:** The university requires the successful completion of a Capstone course. For International Studies majors, INTS 488 will fulfill this requirement.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 46 |
| Eberly Edge Requirements | | 15 |
| International Studies Major Requirements | | 59 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4 and 5 | | 19 |
| INTS 191 | First-Year Seminar | 1 |
| General Electives | | 26 |
| Total Hours | | 46 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society * | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (POLS 260) | | |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 15 |

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International Studies majors who complete INTS 300 satisfactorily may use the course to fulfill EDG 1.

## International Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES** | | **11** |
| INTS 288 | Professional Development: Success After International Studies | |
| INTS 388 | Professional Development: The Job Search | |
| POLS 260 | Introduction to International Relations | |
| ECON 200 | Survey of Economics | |
| or ECON 201 | Principles of Microeconomics | |
| & ECON 202 | and Principles of Macroeconomics | |
| INTS 300 | Social Inquiry in International Studies | |
| or POLS 300 | Empirical Political Analysis | |
| or SUST 302 | Research for Sustainable Development | |
| **REGIONAL AND LANGUAGE CONCENTRATION** | | **15** |
| Select a regional and language concentration (15 hours) from Arabic, Chinese, French, or Spanish | | |
| **Arabic** | | |
| ARBC 101 | Elementary Modern Standard Arabic 1 | |
| & ARBC 102 | and Elementary Modern Standard Arabic 2 | |
| & ARBC 203 | and Intermediate Modern Standard Arabic 1 | |
| & ARBC 204 | and Intermediate Modern Standard Arabic 2 | |
| Select one of the following: | | |
| FLIT 315 | Modern Arabic Literature | |
| or FLIT 316 | Arab Women Writers | |
| or HIST 348 | The International Middle East | |
| or POLS 356 | Politics of the Middle East | |
| or RELG 232 | History and Practice of Islam | |
| or any ARBC course at the 300-level or above | | |
| **Chinese** | | |
| CHIN 101 | First Year Chinese 1 | |
| & CHIN 102 | and First Year Chinese 2 | |
| & CHIN 203 | and Second Year Chinese 1 | |
| & CHIN 204 | and Second Year Chinese 2 | |
| Select one of the following: | | |
| or any CHIN course at the 300-level or above | | |
| **French** | | |
| FRCH 101 | Elementary French 1 | |
| & FRCH 102 | and Elementary French 2 | |
| & FRCH 203 | and Intermediate French 1 | |
| & FRCH 204 | and Intermediate French 2 | |
| Select one of the following: | | |
| or any FRCH course at the 300 or 400 level | | |
| **Spanish** | | |
| SPAN 101 | Elementary Spanish 1 | |
| & SPAN 102 | and Elementary Spanish 2 | |
| & SPAN 203 | and Intermediate Spanish 1 | |
| & SPAN 204 | and Intermediate Spanish 2 | |
| Select one of the following: | | |
| ANTH 350 | Latin American Culture | |
| or FCLT 360 | Latin American Cinema | |
| or FLIT 266 | Latin American Literature | |
| or HIST 209 | Twentieth Century Europe | |
| or HIST 370 | Latin America and the World | |

| | | |
|---|---|---|
| or INTS 360 | The European Union and Contemporary European Affairs | |
| or INTS 361 | European Identity and French-German Cooperation along the Rhine | |
| or POLS 352 | Politics of the European Union | |
| or POLS 353 | Western Democratic Governments | |
| or POLS 452 | European Union Law/Legal Systems | |
| or POLS 453 | European Union Law/Institutions | |
| or any SPAN course at the 300 or 400 level | | |
| **AREA OF EMPHASIS** | | **15** |
| Global Connections | | |
| Or Security and Diplomacy | | |
| **REQUIRED MINOR** | | **15** |
| **CAPSTONE EXPERIENCE** | | **3** |
| INTS 488 | Capstone International Studies | |
| Total Hours | | 59 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| INTS 191 | 1 | ENGL 101 (GEF 1) | 3 |
| GEF 2 and Lab | 4 | EDG 2: Effective and Civil Communication | 3 |
| Language 101 (GEF 8) | 3 | GEF 3 | 3 |
| EDG 1: Data and Society | 3 | GEF 5 | 3 |
| POLS 260 (EDG 4; GEF 7) | 3 | Language 102 (GEF 8) | 3 |
| General Elective | 1 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | AoE Course 1 | 3 |
| INTS 288 | 1 | Minor Course 1 | 3 |
| EDG 3: Ethics and Civic Responsibility | 3 | Language 204 | 3 |
| ECON 200 or ECON 201 & ECON 202 | 3 | GEF 4 | 3 |
| Language 203 (GEF 8) | 3 | GEF 6 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Minor Course 2 | 3 | Minor Course 3 | 3 |
| AoE Course 2 | 3 | AoE Course 3 | 3 |
| Regional Concentration Course | 3 | AoE Course 4 | 3 |
| INTS 300 or POLS 300 or SUST 302 | 3 | ARSC 380 (EDG 5) | 3 |
| INTS 388 | 1 | General Elective | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AoE Course 5 | 3 | INTS 488 | 3 |
| Minor Course 4 | 3 | Minor Course 5 | 3 |
| EDG 6: High Impact Experience | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |

| | | |
|---|---|---|
| General Elective | 3 General Elective | 3 |
| | 15 | 15 |

Total credit hours: 120

*

Students completing a second minor, a second major or a dual degree already meet F8.

## Areas of Emphasis Offered:

Majors are required to select an area of emphasis for specialized advanced study.

### GLOBAL AFFAIRS

- Global Connections (p. 296)
- Security and Diplomacy (p. 296)

## GLOBAL CONNECTIONS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| Select five of the following courses from at least two disciplines: | | 15 |
| ANTH 458 | Environmental Anthropology | |
| ECON 451 | International Economics | |
| ECON 455 | Economic Development | |
| GEOG 309 | Introduction to International Development | |
| GEOG 312 | Migration and Human Rights | |
| GEOG 409 | Applied International Development | |
| GEOG 415 | Global Environmental Change | |
| HIST 464 | American Foreign Relations 1941 to Present | |
| POLS 338 | Environmental Policy | |
| POLS 360 | International Political Economy | |
| POLS 361 | International Law and Institutions | |
| POLS 362 | Comparative Foreign Policy | |
| POLS 363 | International Law | |
| POLS 364 | American Foreign Relations | |
| POLS 376 | Contentious Politics | |
| POLS 460 | Gender and International Relations | |
| SOC 417 | Sociology of Globalization | |
| SUST 202 | Just Sustainable Development | |
| SUST 305 | Sustainable Governance | |
| SUST 402 | Climate and Environmental Justice | |
| SUST 403 | Sustainability, Planning and Development | |
| Total Hours | | 15 |

## SECURITY AND DIPLOMACY AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Select five of the following courses from at least two disciplines: | | 15 |
| CRIM 345 | Terrorism | |
| GEOG 302 | Political Geography | |
| GEOG 312 | Migration and Human Rights | |
| GEOG 350 | Geospatial Problem Solving | |
| HIST 463 | American Foreign Relations to 1941 | |
| HIST 464 | American Foreign Relations 1941 to Present | |
| POLS 261 | Introduction to National Security | |
| POLS 301 | Introduction to Intelligence Analysis | |
| POLS 302 | Intelligence Analysis Methods | |

| | |
|---|---|
| POLS 339 | National Security Law & Policy |
| POLS 359 | Politics of Terrorism |
| POLS 360 | International Political Economy |
| POLS 361 | International Law and Institutions |
| POLS 362 | Comparative Foreign Policy |
| POLS 363 | International Law |
| POLS 364 | American Foreign Relations |
| POLS 365 | Foreign Policy Decision-Making |
| POLS 368 | Politics of War and Peace |
| POLS 376 | Contentious Politics |
| POLS 460 | Gender and International Relations |
| POLS 461 | Transformation of War |
| POLS 462 | Intelligence Failures |
| Total Hours | 15 |

## Degree Progress

### BENCHMARK EXPECTATIONS

By the third semester in the program, students should have:

- Completed or be registered for: POLS 260, ECON 200 or ECON 201, and one additional course from the core list.
- Made progress toward the world language requirement.

All majors must meet with an INTS adviser each semester (double majors should meet with both advisers).

Students who do not meet these requirements may be removed from their major.

## Major Learning Outcomes

### INTERNATIONAL STUDIES

**Knowledge**

- Students will apply theories and concepts drawn from appropriate disciplines such as political science, history, economics, geography, and sociology to international affairs.
- Students will display substantive knowledge of global and/or regional challenges through synthesis of the history, culture, society, geography, politics, and economy of a major world region.

**Skills**

- Students will demonstrate basic receptive and productive proficiency (four or more semesters) in a language appropriate for their chosen regional focus.
- Students will apply interdisciplinary social science research methods, including using library databases to find relevant literature, evaluating the strengths and weaknesses of academic arguments, and applying basic quantitative and qualitative methods to make solid, evidence-based decisions.

**Attitudes**

- Students will exhibit the intellectual and ethical responsibilities of active global citizenship.

# Mathematics, B.S.

## Degrees Offered

- Bachelor of Science

## Nature of the Program

The School of Mathematical and Data Sciences provides a curriculum for:

- Students wishing to earn an undergraduate major in mathematics or minors in actuarial science, applied mathematics, and pure mathematics
- Students interested in the applications of mathematics to the fields of computer science, statistics, engineering, physical, natural and social science, and business and economics
- Non-science majors, to educate them in the ideals and objectives of mathematics, fostering quantitative reasoning and problem-solving skills

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field. An undergraduate student majoring in mathematics may choose to minor in actuarial science, statistics or data science.

## Mathematics Learning Center

The Mathematics Learning Center (https://mathanddata.wvu.edu/academic-support/math-learning-center-tutors/) (MLC) is a free walk-in tutoring center open 5-days a week that employs students who are proficient in mathematics. It is located at ARM 301, and the hours are posted on the door or on the School of Mathematical and Data Sciences' webpage. The MLC tutors help with all undergraduate Mathematics courses through Calculus, except MATH 124 and MATH 150. Students in these courses can receive help at the STEM Learning Center (https://stemcollab.wvu.edu/stem-learning-center/). The MLC also employs students who are proficient in Mathematics. For more information about the center, call (304)293-2011 or contact Dr. Renee LaRue at reneelarue@math.wvu.edu.

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## FACULTY

### DIRECTOR OF THE SCHOOL OF MATHEMATICAL AND DATA SCIENCES

- Jessica Deshler - Ph.D. (University of New Mexico)
  Regular Graduate Faculty, Undergraduate Mathematics Education, Graduate Student Development

### ASSOCIATE DIRECTOR OF THE INSTITUTE OF MATH LEARNING

- Lori Ogden - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Undergraduate Mathematics Education

### ASSOCIATE DIRECTOR FOR GRADUATE PROGRAMS

- Kevin Milans - Ph.D. (University of Illinois)
  Regular Graduate Faculty, Combinatorics, Graph Theory, and Partially Ordered Sets

### ASSOCIATE DIRECTOR FOR UNDERGRADUATE PROGRAMS

- Charis Tsikkou - Ph.D. (Brown University)
  Regular Graduate Faculty, Hyperbolic and Mixed Type Partial Differential Equations, Conservation Laws

### ASSOCIATE DIRECTOR OF THE SCHOOL OF MATHEMATICAL AND DATA SCIENCES

- Adrian Tudorascu - Ph.D. (Carnegie Mellon University)
  Regular Graduate Faculty, Partial Differential Equations, Optimal Transport

### PROFESSORS

- Krzysztof Ciesielski - Ph.D. (Warsaw University)
  Regular Graduate Faculty, Analysis, Topology, Set theory, MRI imaging
- Marjorie Darrah - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Applied Mathematics, Mathematics Education
- Jessica Deshler - Ph.D. (University of New Mexico)
  Regular Graduate Faculty, Undergraduate Mathematics Education, Graduate Student Development
- Harvey Diamond - Ph.D. (Massachusetts Institute of Technology)
  Regular Graduate Faculty, Approximation theory, Applied mathematics
- Harry Gingold - D.Sc. (Israel Institute of Technology)
  Regular Graduate Faculty, Discrete Finite Difference systems of Equations, Factorization of Power Series, Foundation (Geometry), Mathematical Cryptography, Optimization, Compactification, Ordinary Differential Systems of Equations, Asymptotics, Approximations, Turning point theory, Celestial Mechanics
- Erin Goodykoontz - Ed.D. (West Virginia University)
  Introductory Concepts of Mathematics
- Ádám M. Halász - Ph.D. (State University of New York at Stony Brook)
  Regular Graduate Faculty, Molecular systems biology, Monte Carlo methods, Mathematical Physics

- Rong Luo - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Graph Theory, Discrete Math
- David Miller - Ph.D. (Oklahoma State University)
  Regular Graduate Faculty, Undergraduate Math Education, Cognitive Science, STEM Education
- Robert Mnatsakanov - Ph.D. (Moscow Institute of Electronics and Mathematics)
  Regular Graduate Faculty, Applied probability, Approximation of functions from moments, Risk models
- Laura Pyzdrowski - Ed.D. (West Virginia University)
  Regular Graduate Faculty, Undergraduate Math Education, STEM Education, K-12 Outreach, Distance Learning, Instructional Technology
- Kenneth Ryan - Ph.D. (Iowa State University)
  Regular Graduate Faculty, Semi-supervised learning and design of experiments
- Adrian Tudorascu - Ph.D. (Carnegie Mellon University)
  Regular Graduate Faculty, Partial Differential Equations, Optimal Transport
- Jerzy Wojciechowski - Ph.D. (University of Cambridge)
  Regular Graduate Faculty, Combinatorics, Graph theory

## ASSOCIATE PROFESSORS

- Olgur Celikbas - Ph.D. (University of Nebraska)
  Regular Graduate Faculty, Commutative Algebra, Homologic Algebra
- Vito D'Orazio - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Data Sciences
- Renee LaRue - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Undergraduate Mathematics Education
- Kevin Milans - Ph.D. (University of Illinois)
  Regular Graduate Faculty, Combinatorics, Graph Theory, and Partially Ordered Sets
- Lori Ogden - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Undergraduate Mathematics Education, Associate Director for the Institute for Math Learning
- Casian Pantea - Ph.D. (University of Wisconsin-Madison)
  Regular Graduate Faculty, Mathematical biology, dynamical systems
- Vicki Sealey - Ph.D. (Arizona State University)
  Regular Graduate Faculty, Calculus Coordinator, Undergraduate Math Education, Calculus Student Learning
- Charis Tsikkou - Ph.D. (Brown University)
  Regular Graduate Faculty, Hyperbolic and Mixed Type Partial Differential Equations, Conservation Laws

## ASSISTANT PROFESSORS

- Krista Bresock - Ph.D. (West Virginia University)
  Undergraduate Mathematics Education
- Ela Celikbas - Ph.D. (University of Nebraska)
  Regular Graduate Faculty, Commutative Algebra, Representation Theory
- Srinjoy Das - Ph.D. (University of California, San Diego)
  Regular Graduate Faculty, Data Sciences
- Ryan Hansen - Ph.D. (West Virginia University)
  Combinatorics
- Cody Hood - Ph.D. (West Virginia University)
  Undergraduate Mathematics Education
- Josh Karr - Ph.D. (West Virginia University)
  Mathematics Education
- Jennifer Kearns - M.S. (West Virginia University)
  Undergraduate Mathematics Education
- Mihyun Kim - Ph.D. (Colorado State University)
  Regular Graduate Faculty, Functional Data Analysis, Extreme Value Analysis, and Time Series Analysis
- Clark Metz - Ph.D. (West Virginia University)
  Higher Education
- Matthew Schraeder - Ph.D. (West Virginia University)
  Undergraduate Mathematics Education
- Ignacio Segovia Dominguez - Ph.D. (Center for Research in Mathematics, A.C.)
  Regular Graduate Faculty, Applied Mathematics, Statistical Modeling and Computer Science
- Youngseok Song - Ph.D. (Colorado State University)

Regular Graduate Faculty, High-dimensional Statistic, Graphical Model, Large-scale Inferences, Network Analysis

- Iwona Wojciechowska - Ph.D. (West Virginia University)

### INSTRUCTORS

- Joelleen Bidwell - M.A. (West Virginia University)
- Gabriel Tapia - M.S. (West Virginia University)
- Galyna Voitiuk - Ph.D. (West Virginia University)
- Sylvanus Waibogha - M.S. (West Virginia University)

### PROFESSORS EMERITI

- Anthony A. Billings - M.S. (West Virginia University, A.B.D. (Carnegie Mellon University))
  Statistical Computing, Statistical Modeling, Robust Estimation, Nonlinear Dynamic Systems, Statistical Education
- Gary Ganser - Ph.D. (Rensselaer Polytechnic Institute)
  Modeling, Data Analysis
- John Goldwasser - Ph.D. (University of Wisconsin-Madison)
  Combinatorics, Graph Theory
- Jack T. Goodykoontz Jr. - Ph.D. (University of Kentucky)
  Topology
- Henry W. Gould - M. A. (University of Virginia)
  Number Theory, Combinatorics, Special Functions
- Erdogan Gunel - Ph.D. (State University of New York at Buffalo)
  Bayesian Inference, Biostatistics, Categorical Data Analysis
- Harumi Hattori - Ph.D. (Rensselaer Polytechnic Institute)
  Differential Equations, Continuum Mechanics
- Gerald R. Hobbs - Ph.D. (Kansas State University)
  Biostatistics, Nonparametric Statistics, Regression Analysis
- Hong-Jian Lai - Ph.D. (Wayne State University)
  Graph Theory, Matroid Theory
- Dening Li - Ph.D. (Fudan University)
  Partial Differential Equations
- Michael E. Mays - Ph.D. (Pennsylvania State University)
  Number Theory
- James E. Miller - Ph.D. (University of Kentucky)
  Complex Analysis
- Sherman D. Riemenschneider - Ph.D. (Syracuse University)
  Approximation Theory, Wavelets, Signal Processing
- Cun-Quan Zhang - Ph.D. (Simon Fraser University)
  Graph theory, Combinatorics, Algorithms, Bioinformatics, Data Mining

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: completion of  MATH 155 (http://catalog.wvu.edu/search/?P=MATH%20155) with C-.

Major Code: 1457

## Degree Progress

- By the end of their second semester (excluding summer) in the major, at minimum, students must have completed MATH 126 with a minimum grade of C-.
- By their 5th semester in the major, students should have completed calculus courses through MATH 261 with a minimum grade of C- and have satisfactorily completed or be enrolled in MATH 303.

- A minimum cumulative and major GPA of a 2.0 must be maintained. Students who do not meet this benchmark will be removed from the major.
- All majors must meet with a department advisor working in mathematics or statistics each semester.

## Major Learning Outcomes

### MATHEMATICS

Upon successful completion of the B.S. degree, **Mathematics** majors will demonstrate the following competencies:

1. Demonstrate a comprehensive understanding of rigorous mathematical proofs by constructing clear, well-organized, logical-mathematical arguments, accurately replicating essential assumptions, definitions, examples, and statements of important theorems, and describing the logical structure of standard proof formats.
2. Recognize valid arguments, identify logical gaps and flaws, break down complex problems into simpler components, use existing techniques and known results to solve each component, and construct original proofs.
3. Identify, formulate, and abstract mathematical problems using critical thinking skills in key mathematical areas, including calculus, algebra, applied analysis, differential equations, optimization, numerical analysis, and probability.
4. Utilize various advanced mathematical techniques to solve problems and construct effective models. Apply these methods to devise practical solutions and develop strategies for real-world applications across diverse fields such as biology, physics, social sciences, and engineering in both public and private sectors.
5. Ask pertinent questions and perform suitable quantitative analysis, demonstrating basic proficiency in fundamental computer programming techniques and algorithmic thinking necessary for quantitative analysis, validation, and mathematical modeling.
6. Perform numerical and symbolic calculations, simplify expressions, and effectively communicate complex mathematical concepts through written, oral, visual, and symbolic forms.
7. Engage in self-directed learning by independently exploring and mastering new mathematical concepts, techniques, or tools, demonstrating initiative and adaptability in unfamiliar contexts.

# Multidisciplinary Studies, B.MdS.

## Degree Offered

- Bachelor of Multidisciplinary Studies (BMDS)

## Nature of the Program

The Bachelor of Multidisciplinary Studies degree (BMDS) comprises a core of MDS courses and three related minors. The program stresses the importance of broad learning and thinking across disciplines. Students will learn to integrate specialized knowledge from their minors to analyze complex problems from divergent perspectives.

MDS students choose three minor areas and must demonstrate how these fields of study work together to further their educational and/or career goals. For example, a student could choose minors in communications, data science, and leadership studies with the goal of leading a company. Or a student could choose minors in history, philosophy, and political science to prepare for a career in law. Or a student could choose minors in addiction studies, psychology, and sociology to work in the social service sector or become a counselor. The possibilities are truly limitless. MDS faculty and advisers guide students in designing the right program to suit their individual interests and goals.

The breadth of learning available to Multidisciplinary students empowers them to be successful in any path they choose. MDS alummi are flourishing in business, education, entrepreneurship, health professions, and the public sector. They are earning advanced degrees in social work, business administration, and law. The flexibility of the degree prepares students for success in today's complex and rapidly changing workforce.

## Minors

MDS students may add a fourth minor to complement their three core minors, but students may not earn a minor in their own major field of study. View a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here.

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## FACULTY

### DIRECTOR

- Scott Davidson - Ph.D. (Duquesne University)

### ASSOCIATE PROFESSORS

- Louis Slimak - Ph.D. (Purdue University)
- Carol Zwickel - Ph.D. (West Virginia University)

### ASSISTANT PROFESSORS

- Thaddeus Herman - Ph.D. (University of Illinois)
- Jayme Scally - Ph.D. (University of York)
- Andrea Soccorsi - M.A. (West Virginia University)
- Nevena Stojanovic - Ph.D. (West Virginia University)

### ASSOCIATE PROFESSORS EMERITI

- Renee K. Nicholson - M.F.A. (West Virginia University)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 hours or more and at least a 2.0 overall GPA are admitted directly to the major.

Major Code: 1496

Click here to view the Suggested Plan of Study (p. 303)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students in the Bachelor of Multidisciplinary Studies (B.MdS.) must complete the WVU General Education Foundations requirements, programmatic requirements, and electives to total a minimum of 120 hours.

- **Calculation of the GPA in the Major:** A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of a C- in MDS 101, MDS 279, and MDS 489. Students must meet individual requirements associated with their chosen minors. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement:** Multidisciplinary Studies students fulfill the requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses**$^{TM}$ : MDS 101 and MDS 489.
- **Capstone Requirement:** The university requires the successful completion of a Capstone course. Students in the MDS program must complete MDS 489 (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/multidisciplinarystudiesdegreeprogram/) with a grade of C- or better during their final year.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 48 |
| Eberly Edge Requirements | | 15 |
| Multidisciplinary Studies Requirements | | 57 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2 or 5, 3, 4, 6 or 7, and 8 | | 30 |
| MDS 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 48 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication (MDS 279) | | |
| EDG 3: Ethics and Civil Responsibility (GEF 2 or 5) | | 3 |
| EDG 4: Global and Regional Perspectives (GEF 6 or 7) | | 3 |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: EDG High Impact Experience | | 3 |
| Total Hours | | 15 |

### Multidisciplinary Studies Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE REQUIREMENTS:** | | **9** |
| MDS 101 | Introduction to Multidisciplinary Studies | |
| MDS 279 | Multidisciplinary Theories and Methods | |
| Any Upper-Division MDS Course * | | |
| **CONCENTRATION:** | | **45** |
| Minor One | | |
| Minor Two | | |
| Minor Three | | |
| **CAPSTONE REQUIREMENT:** | | **3** |
| MDS 489 | Capstone | |
| Total Hours | | 57 |

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Except MDS 301, 302 and 303.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MDS 101 | 3 | ENGL 101 | 3 |
| MDS 191 | 1 | EDG 3: Ethics and Civil Responsibility (GEF 2A or 5) | 3 |
| EDG 1: Data and Society | 3 | GEF 2A | 3 |
| GEF 2A or 5 | 3 | GEF 6 or 7 | 3 |
| GEF 3 | 3 | General Elective | 3 |
| GEF 4 | 3 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 | | 3 GEF 8 Course 1 | 3 |
| MDS 279 (EDG 2) | | 3 Minor II - 1 | 3 |
| Minor I - 1 | | 3 Minor III - 1 | 3 |
| General Elective | | 3 EDG 4: Global and Regional Perspectives (GEF 6 or 7) | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MDS 300-Level Course or Above | | 3 GEF 8 Course 2 | 3 |
| ARSC 380 (EDG 5) | | 3 GEF 8 Course 3 | 3 |
| Minor I - 2 | | 3 Minor I -3 | 3 |
| Minor II - 2 | | 3 Minor II - 3 | 3 |
| Minor III - 2 | | 3 Minor III - 3 | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Minor I - 4 | | 3 EDG 6: High Impact Experience | 3 |
| Minor II - 4 | | 3 Minor I - 5 | 3 |
| Minor III - 4 | | 3 Minor II - 5 | 3 |
| General Elective | | 3 Minor III - 5 | 3 |
| General Elective | | 2 MDS 489 | 3 |
| | | 14 | 15 |

Total credit hours: 120

*

Students earning a fourth minor, a second major or a dual degree already fulfill F 8.

## Degree Progress

- Students in the MDS program must maintain a 2.0 GPA.
- MDS 101 must be completed by the 2nd semester in the program.
- All majors must meet with an MDS program adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### MULTIDISCIPLINARY STUDIES

Upon completion of the MDS program, students will:

1. Acquire range of knowledge and the agility to traverse multiple perspectives and disciplines.

2. Be able to apply interdisciplinary tools and methods to address complex 21st century problems.

3. Develop teamwork and leadership skills as a member of an interdisciplinary problem-solving team (in person and/or remotely).

4. Articulate the value of interdisciplinary thinking persuasively and reflect on its relevance in one’s own learning.

# Neuroscience, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The demand for basic and applied neuroscience researchers and clinicians continues to grow. The rigorous and interdisciplinary training that defines the BS program in Neuroscience prepares students to address a wide range of health and societal issues relating to brain function. Students graduating with the Neuroscience major at West Virginia University are uniquely prepared for admission into advanced degree programs in neuroscience, medicine, biomedical engineering, and biomedical sciences at WVU or other institutions. These graduates also are prepared to serve in academic and technical positions in private industry, as well as the broader healthcare industry.

## Areas of Emphasis

- Behavioral Neuroscience
- Cellular, Molecular, and Systems Neuroscience

## Minors

All students have the possibility of earning one or more minors; a list of all available minors and their requirements is available at http://catalog.wvu.edu/undergraduate/minors/. Please note that students may not earn a minor in their major field.

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# FACULTY

### PROGRAM DIRECTOR

- Becca Coltogirone - Ph.D. (West Virginia University)
  Undergraduate Program in Neuroscience Director. Undergraduate Neuroscience Advisor. Teaching of Neuroscience, Developmental Neuroscience, Neurodevelopmental Disorders, Molecular Biology

### PROFESSORS

- Kevin C. Daly - Ph.D. (University of Arizona)
  Regular Graduate Faculty. Sensory Neurobiology, Neural Coding, Brain-Behavior Interactions, Comparative Psychobiology
- Kevin T. Larkin - Ph.D. (University of Pittsburgh)
  Regular Graduate Faculty. Clinical Health Psychology, Applied Psychophysiology, Cardiovascular Behavioral Medicine
- Randy Nelson - Ph.D. (Psychology; University of California - Berkeley), Ph.D. (Endocrinology; University of California - Berkeley)
  Hazel Ruby McQuain Chair for Neurological Research. WVU Center for Foundational Neuroscience Research & Education Director. Executive Director of Basic & Foundational Neuroscience Research at Rockefeller Neuroscience Institute. Disrupted Circadian Rhythms on Immune Functioning, Neuroinflammation, Metabolism, Sleep & Mood, Behavioral Neuroendocrinology

### ASSOCIATE PROFESSORS

- Karen Anderson - Ph.D. (University of Florida)
  Psychology Associate Department Chair. Regular Graduate Faculty. Behavioral Pharmacology, Self-Control & Impulsivity
- Sadie Bergeron - Ph.D. (University of Massachusetts - Amherst)
  Regular Graduate Faculty. Developmental Neurobiology
- Melissa Blank - Ph.D. (Virginia Commonwealth University)
  Behavioral Neuroscience Program Coordinator. Regular Graduate Faculty. Behavioral Neuroscience, Tobacco Use, Tobacco-Related Health Risks, Genetics of Substance Use
- Andrew Dacks - Ph.D. (University of Arizona)
  Biology Associate Chair for Graduate Studies. Regular Graduate Faculty. Neurobiology, Sensory Processing
- Sarah M. Farris - Ph.D. (University of Illinois - Urbana-Champaign)
  Evolution & Development of the Insect Brain, Neuroanatomy
- Gary Marsat - Ph.D. (McGill University)
  Regular Graduate Faculty. Systems Neuroscience, Sensory Processing and Neural Coding of Communication Signals
- Sharon Tenenholz - Ph.D. (University of California, Los Angeles)
  Psychology Director of Undergraduate Studies. Curriculum Design, Teaching of Psychology, Visual Perception

### ASSISTANT PROFESSORS

- Mariya Cherkasova - Ph.D. (McGill University)
  Regular Graduate Faculty. Behavioral Neuroscience, Addiction, Reward-Related Behavior
- Becca Coltogirone - Ph.D. (West Virginia University)
  Undergraduate Program in Neuroscience Director. Undergraduate Neuroscience Advisor. Teaching of Neuroscience, Developmental Neuroscience, Neurodevelopmental Disorders, Molecular Biology
- Eric Horstick - Ph.D. (University of Michigan)

Regular Graduate Faculty, Molecular Neuroscience, Functional Lateralization

- Kathleen Morrison - Ph.D. (University of Tennessee - Knoxville)
  Regular Graduate Faculty. Behavioral Neuroscience, Stress, Development, Neuropsychiatric Disease
- Kate Karelina Weil - Ph.D. (Ohio State University)
  Traumatic Brain Injury, Stroke, Behavioral Neuroscience
- James Cole - Ph.D. (University of Virginia Medical School)
  Undergraduate Neuroscience Advisor. Sensory and Developmental Neuroscience, History of Neuroscience, Neuroaesthetics

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 20, a MATH SAT of 520, or an ALEKS score of 40.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 20, a MATH SAT of 520, or an ALEKS score of 40.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: completion of BIOL 115 (http://catalog.wvu.edu/search/?P=BIOL%20115) & BIOL 115L (http://catalog.wvu.edu/search/?P=BIOL%20115L) and CHEM 115 (http://catalog.wvu.edu/search/?P=CHEM%20115) & CHEM 115L (http://catalog.wvu.edu/search/?P=CHEM%20115L) with a C-.

Major Code: 14C9

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge requirements, major requirements, and electives with a minimum of 120 hours.

## Departmental Requirements for the B.S. in Neuroscience

- **Calculation of Major GPA:** A minimum GPA of 2.0 is required in all courses applied to major requirements, with a minimum grade of C- in all courses included in the STEM Foundations and in the Neuroscience Core, except for BIOL 349. If a course is repeated, all attempts will be used to calculate the GPA in the Neuroscience major, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement**: Students in the Neuroscience Bachelor of Science complete this requirement by completing ENGL 101 and ENGL 102, or ENGL 103 and BIOL 115, BIOL 117, BIOL 219, and NRSC 201.

- **Area of Emphasis (AOE):** Students must select an area of emphasis and complete all requirements for the selected AoE.
- **Capstone Requirement**: The university requires the successful completion of NRSC 485L or NRSC 489.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 31 |
| Eberly Edge Requirements | | 15 |
| Neuroscience Major Requirements | | 74 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| NRSC 191 | First-Year Seminar | 1 |
| General Electives | | 15 |
| Total Hours | | 31 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences | | 3 |
| EDG 6: High Impact Experience (NRSC 485L or NRSC 489) | | |
| Total Hours | | 15 |

## Neuroscience Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATION COURSES:** * | | **20** |
| MATH 150 | Applied Calculus | |
| or MATH 155 | Calculus 1 | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| **CORE COURSES:** | | **20** |
| BIOL 219<br>& 219L | Cellular and Molecular Biology<br>and Cellular & Molecular Biology Laboratory (minimum grade of C-) | |
| BIOL 348 | Neuroscience 1 (minimum grade of C-) | |
| BIOL 349 | Neuroscience 2 | |
| NRSC 101 | Introduction to Neuroscience (minimum grade of C-) | |
| NRSC 201<br>& 201L | Biological Foundations of Behavior<br>and Biological Foundations of Behavior Laboratory (minimum grade of C-) | |
| PSYC 101 | Introduction to Psychology (minimum grade of C-) | |
| **RESEARCH METHODS:** | | **6** |
| Select one option: | | |

| | | |
|---|---|---|
| PSYC 203<br>& 203L<br>& PSYC 204<br>& PSYC 204L | Research Methods and Analysis 1<br>and Research Methods and Analysis 1 Laboratory<br>and Research Methods and Analysis 2<br>and Research Methods and Analysis 2 Laboratory | |
| STAT 211<br>& BIOL 302 | Elementary Statistical Inference<br>and Biometry | |
| STAT 211<br>& STAT 312 | Elementary Statistical Inference<br>and Intermediate Statistical Methods | |
| **ADVANCED CHEMISTRY:** | | **4** |
| Select one course: | | |
| CHEM 231<br>& 231L | Organic Chemistry: Brief Course<br>and Organic Chemistry: Brief Course Laboratory | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | |
| **AREA OF EMPHASIS: **** | | **12** |
| Select one Area of Emphasis: | | |
| Behavioral Neuroscience | | |
| Cellular, Molecular, & Systems Neuroscience | | |
| **NEUROSCIENCE ELECTIVES:** | | **9** |
| Complete 6 credits in the alternate AOE | | |
| Behavioral Neuroscience AoE: | | |
| BIOL 339 | Animal Communication & Behavior | |
| BIOL 439 | Neuroethology | |
| PSYC 302 | Behavior Principles | |
| PSYC 423 | Cognition and Memory | |
| PSYC 425 | Perception | |
| PSYC 426 | Physiological Psychology | |
| PSYC 427 | Neuroscience of Sleep | |
| PSYC 428 | Hormones and Behavior | |
| PSYC 429 | Clinical Neuroscience | |
| Cellular, Molecular, and Systems Neuroscience AoE: | | |
| BIOL 339 | Animal Communication & Behavior | |
| BIOL 439 | Neuroethology | |
| BIOL 472 | Neurodevelopmental Disorders | |
| BIOL 474 | Neurogenetics and Behavior | |
| BIOL 475 | Neurobiological Diseases | |
| BIOL 476 | Computational Neuroscience | |
| BIOL 477 | Evolution of the Human Brain | |
| BIOL 478 | Sensory Neural Systems and Behavior | |
| BIOL 479 | Principles of Systems Neuroscience | |
| Complete 3 credits in either AoE or upper-division NRSC course* (except NRSC 490, NRSC 491) | | |
| **CAPSTONE:** | | **3** |
| Select one course: | | |
| NRSC 485L | Neuroscience Research Laboratory Capstone | |
| NRSC 489 | Independent Research Capstone | |
| Total Hours | | 74 |

*****

STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses.

******

If choosing a course in selected AoE, it must be in addition to the requirements to complete the AoE. NRSC 490, NRSC 491 are excluded from the NRSC upper-division electives.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115 & 115L (F2B) | 4 | BIOL 117 & 117L (F8 Course 2) | 4 |
| CHEM 115 & 115L (F8 Course 1) | 4 | CHEM 116 & 116L (F8 Course 3) | 4 |
| MATH 155 (F3) | 4 | PSYC 101 (GEF 4) | 3 |
| NRSC 101 | 3 | EDG 1: Data and Society | 3 |
| NRSC 191 | 1 | | |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 219 & 219L | 4 | BIOL 348 | 3 |
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF 1) | 3 |
| EDG 2: Effective and Civil Communication | 3 | EDG 3: Ethics and Civil Responsibility | 3 |
| NRSC 201 & 201L | 4 | Research Methods 2 | 3 |
| Research Methods 1 | 3 | F5 | 3 |
| | 17 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 349 | 3 | AoE Course 2 | 3 |
| Advanced Chemistry | 4 | NRSC Elective 1 | 3 |
| AoE Course 1 | 3 | EDG 5: Practicing Arts & Sciences | 3 |
| EDG 4: Global and Regional Perspectives | 3 | F6 | 3 |
| General Elective | 3 | F7 | 3 |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AoE Course 3 | 3 | AoE Course 4 | 3 |
| NRSC Capstone (EDG 6) | 3 | NRSC Elective 3 | 3 |
| NRSC Elective 2 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 15 | | 12 |

Total credit hours: 120

## Areas of Emphasis Offered:

- Behavioral Neuroscience (p. 309)
- Cellular, Molecular, & Systems Neuroscience (p. 310)

## BEHAVIORAL NEUROSCIENCE AOE REQUIREMENTS:

This focused training will prepare the graduate for careers from basic research to translational or clinical settings. Students interested in medicine or other healthcare-related fields should consider this option.

| Code | Title | Hours |
|---|---|---|
| **Behavior Neuroscience Courses:** | | **12** |
| Select a minimum of 12 credits from the following options: | | |
| BIOL 339 | Animal Communication & Behavior | |
| BIOL 439 | Neuroethology | |
| PSYC 302 | Behavior Principles | |

| | |
|---|---|
| PSYC 423 | Cognition and Memory |
| PSYC 425 | Perception |
| PSYC 426 | Physiological Psychology |
| PSYC 427 | Neuroscience of Sleep |
| PSYC 428 | Hormones and Behavior |
| PSYC 429 | Clinical Neuroscience |
| Total Hours | 12 |

## CELLULAR, MOLECULAR, & SYSTEMS NEUROSCIENCE AOE REQUIREMENTS:

This focused training will prepare the graduate for careers from basic research to translational or clinical settings. Students interested in medicine or other healthcare-related fields should consider this option.

| Code | Title | Hours |
|---|---|---|
| **Cellular, Molecular, & Systems Neuroscience Courses:** | | **12** |
| Select a minimum of 12 credits from the following options: | | |
| BIOL 339 | Animal Communication & Behavior | |
| BIOL 439 | Neuroethology | |
| BIOL 472 | Neurodevelopmental Disorders | |
| BIOL 474 | Neurogenetics and Behavior | |
| BIOL 475 | Neurobiological Diseases | |
| BIOL 476 | Computational Neuroscience | |
| BIOL 477 | Evolution of the Human Brain | |
| BIOL 478 | Sensory Neural Systems and Behavior | |
| BIOL 479 | Principles of Systems Neuroscience | |
| Total Hours | | 12 |

# Degree Progress

- By the end of their second semester in the major (excluding summer), students should have completed the following classes with a minimum grade of C-:
  - BIOL 115 & BIOL 115L
  - BIOL 117 & BIOL 117L
  - MATH 124 or MATH 126 (or higher-level math course)
  - NRSC 101
  - PSYC 101
- By the end of their fourth semester in the major (excluding summer), students should also have completed the following classes with a minimum grade of C-:
  - BIOL 219 & BIOL 219L
  - CHEM 115 & CHEM 115L
  - CHEM 116 & CHEM 116L
- Students must meet with their neuroscience adviser at least once per semester.

Students who do not meet their benchmarks may be removed from the major.

# Major Learning Outcomes

## NEUROSCIENCE

This B.S. curriculum will provide a comprehensive introduction to the field of neuroscience and many of the professional skills needed for post-graduation career options.

Upon completion of the B.S. in Neuroscience program at WVU, the graduate will be able to:

1. Describe the structure and function of the nervous system at the molecular, cellular, and behavioral/organismal levels.
2. Apply fundamental principles underlying the organization and function of the nervous system across sub-systems and species.
3. Synthesize information from across the field of neuroscience to:
   a. Read and comprehend basic neuroscience literature
   b. Critically evaluate new neuroscience research and emerging techniques

   c. Establish testable hypotheses
   d. Design approaches to test hypotheses about nervous system function
4. Collect, analyze, and interpret basic neuroscience research data
5. Communicate research via a variety of venues including:
   a. Written reports
   b. Oral presentation of journal articles
   c. Poster-based oral presentations of their research

# Philosophy, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Department of Philosophy is a small, academically vibrant, student-centered, undergraduate program. Our mission is to provide an outstanding liberal arts education with all the advantages of a large research university.

Philosophy students are trained to understand and to respond both critically and creatively to philosophical problems, theories, and arguments. Philosophy students investigate fundamental questions that have puzzled human beings for ages. Philosophy deals with questions such as: What do we know and how do we know it? What is morally right and how should we live? What is the nature of the human mind and self? Is there a God and how might human beings know about God? What is the ideal form of government? What is the ultimate nature of reality? Are human beings responsible for their actions, and if so, why? Philosophy also deals with gripping issues in contemporary society, such as questions about social justice, race and racism; sex and gender; research ethics; appropriate uses of science, medicine, and technology; privacy; access to affordable healthcare; environmental and animal welfare; quality of life; and much more.

The areas in which students receive instruction include logic, ethics, social-political philosophy, philosophy of law, theory of knowledge, philosophy of science, continental philosophy, metaphysics, history of philosophy, philosophy of sex and gender, philosophy of race, philosophy of language, and philosophy of religion.

Because of the vigorous critical thinking students enjoy in a philosophy class, the study of philosophy provides an ideal preparation for a wide range of interesting careers including law, business, medicine, higher education, library science, and journalism. Those who desire a career teaching philosophy in college will need the Ph.D. degree.

Philosophy is an especially strong major for students going to law school. We offer a pre-law area of emphasis within the philosophy major.

Along with coursework in the natural sciences, philosophy is an outstanding major for students going to medical school.

For students without any definite career plans, philosophy is an excellent major in that it provides skills essential for any career that requires clear communication, analytical thinking, problem solving, strong writing, evaluation and/or creation of policies and procedures, comfort with complexity and disagreement, attention to logical detail, imagination, and careful and creative thinking.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Nature of the Program

The study of the humanities is the study of our effort to understand ourselves through history, literature, religion, philosophy, and fine arts. It is also the study of our effort to comprehend the masterpieces of the past and present as we seek to deepen our understanding of ourselves and our culture: what we are, why we are, and what our options for a significant life are.

Although we do not offer a major or a minor in the humanities, many students enjoy our courses as part of their General Education Foundations.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field.

## 3+3 Program

The Department of Philosophy participates in the 3+3 Program with WVU's College of Law, which is an opportunity for qualified undergraduate students to earn their bachelor's degree and law degree in six years instead of seven years. Students accepted into the 3+3 program begin taking classes

at WVU Law in what would be their senior year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

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## FACULTY

### CHAIR

- Sharon Ryan - Ph.D. (University of Rochester)

### PROFESSORS

- David Cerbone - Ph.D. (University of California, Berkeley)
  Regular Graduate Faculty; Continental Philosophy (esp. Heidegger), Wittgenstein, History of Analytic Philosophy
- Scott Davidson - Ph.D. (Duquesne University)
  Regular Graduate Faculty; Continental Philosophy, Social and Political Philosophy
- Sharon Ryan - Ph.D. (University of Rochester)
  Regular Graduate Faculty; Epistemology, Philosophy of Religion, Metaphysics
- Matthew Talbert - Ph.D. (University of California, Riverside)
  Regular Graduate Faculty; Moral Psychology, Ethics

### ASSOCIATE PROFESSORS

- Aaron Gale - Ph.D. (Northwestern University)
  Regular Graduate Faculty; Introduction to World Religions, History of Christianity, Studies in Christian Scriptures, God and Evil in the Biblical World, Biblical History and Archaeology
- Geoff Georgi - Ph.D. (University of Southern California)
  Regular Graduate Faculty; Philosophy of Language, Metaphysics, Logic
- David Hoinski - Ph.D. (Duquesne University)
  History of Philosophy
- Alex Snow - Ph.D. (Syracuse University)
  Asian Religion and Philosophy

### ASSISTANT PROFESSORS

- Alyssa Beall - Ph.D. (Syracuse University)
  Religion and Popular Culture
- Devin Curry - Ph.D. (University of Pennsylvania)
  Philosophy of Mind, Philosophy of Science, Philosophy of Race, History of Philosophy
- Daniel Miller - Ph.D. (Florida State University)
  Regular Graduate Faculty; Normative and Applied Ethics
- Ariane Nommikos - Ph.D. (University at Buffalo)
  Regular Graduate Faculty; Aesthetics, Ethics, Environmental Philosophy

### PROFESSORS EMERITI

- Ralph W. Clark - Ph.D. (University of Colorado)
- Theodore M. Drange - Ph.D. (Cornell University)
- Henry Ruf - Ph.D. (Emory University)
- Daniel Shapiro - Ph.D. (University of Minnesota)
- Mark Wicclair - Ph.D. (Columbia University)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from other majors or another institution with at least a 2.0 overall GPA are admitted directly to the major.

Major Code: 1461

Click here to view the Suggested Plan of Study (p. 315)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, the Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in Philosophy

A degree in philosophy requires thirty hours in Philosophy, including three credits at any level, and 18 hours of work at the 300 level or above. All students wishing to obtain a degree in Philosophy must comply with the following:

- **Calculation of the Major GPA**: A minimum grade of a C- is required in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement:** The Philosophy Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Optional Area of Emphasis**: Students in the Philosophy program have the option of completing the area of emphasis in Pre-Law. A minimum grade of C- is required in all courses applied to the Area of Emphasis.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course. Students in Philosophy usually take PHIL 480. In some instances, with special permission from the department, students can write a thesis to fulfill the Capstone requirements. These students must take PHIL 496, and should make arrangements with a faculty member during the semester preceding the one in which they plan to write the thesis. Only students who have a 3.7 average or higher in Philosophy courses are eligible to write the senior thesis. Ability to enroll in PHIL 496 will depend upon the availability of a faculty member who is able to work with the student, the student's level of preparation for successful completion of a thesis, and the student's submission of an appropriate proposal for the thesis.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 72 |
| Eberly Edge Requirements | | 18 |
| Philosophy Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 4, 6, 7 and 8 | | 27 |
| PHIL 191 | First-Year Seminar | 1 |

| | |
|---|---|
| General Electives | 44 |
| Total Hours | 72 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data in Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Awareness | | 3 |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG: 6: High Impact Experience | | 3 |
| Total Hours | | 18 |

## Philosophy Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES** | | **9** |
| PHIL 244 | History of Ancient Philosophy | |
| PHIL 248 | History of Modern Philosophy | |
| PHIL 260 | Introduction to Symbolic Logic | |
| **ETHICS, LAW and VALUE** | | **6** |
| Select two of the following: | | |
| PHIL 313 | Philosophy of Race | |
| PHIL 314 | Philosophy of Sex and Gender | |
| PHIL 315 | Free Will and Moral Responsibility | |
| PHIL 320 | Aesthetics and Philosophy of Art | |
| PHIL 321 | Ethical Theory | |
| PHIL 323 | Social and Political Philosophy | |
| PHIL 325 | Philosophy of Law | |
| PHIL 331 | Health Care Ethics | |
| PHIL 332 | Environmental Ethics | |
| PHIL 355 | Existentialism | |
| **MIND, LANGUAGE and REALITY** | | **6** |
| Select two of the following: | | |
| PHIL 301 | Metaphysics | |
| PHIL 302 | Theory of Knowledge | |
| PHIL 303 | Brains, Minds, and Experiments | |
| PHIL 306 | Philosophy of Mind | |
| PHIL 308 | Philosophy of Religion | |
| PHIL 309 | Asian Philosophy | |
| PHIL 310 | Philosophy of Science | |
| PHIL 312 | Philosophy of Language | |
| PHIL 341 | Philosophy and Death | |
| PHIL 354 | Themes in Continental Philosophy | |
| PHIL 360 | Truth, Proof, and Possibility | |
| **PHILOSOPHY ELECTIVES:** | | **6** |
| One PHIL course at the 100-level or above | | |
| One PHIL course at the 300-level or above | | |
| **CAPSTONE EXPERIENCE:** | | **3** |
| Select one of the following: | | |
| PHIL 480 | Capstone Seminar | |

| | | |
|---|---|---|
| PHIL 496 | Senior Thesis | |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHIL 191 | | 1 ENGL 101 (GEF 1) | 3 |
| GEF 2 | | 3 GEF 2 | 3 |
| Philosophy General Elective | | 3 PHIL 244 (GEF 5) | 3 |
| EDG 1: Data and Society | | 3 PHIL 260 (GEF 3) | 3 |
| General Elective | | 3 EDG 2: Effective and Civil Communication | 3 |
| General Elective | | 2 | |
| | | 15 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHIL 248 (GEF 8) | | 3 EDG 4: Global and Regional Perspectives | 3 |
| ENGL 102 (GEF 1) | | 3 PHIL 301 | 3 |
| EDG 3: Ethics and Civic Responsibility | | 3 PHIL 321 | 3 |
| GEF 4 | | 3 GEF 7 | 3 |
| General Elective | | 3 GEF 8 (course 2) | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 6 | | 3 PHIL Upper Division Elective | 3 |
| GEF 8 (course 3) | | 3 ARSC 380 (EDG 5) | 3 |
| General Elective | | 3 General Elective | 3 |
| PHIL 306 | | 3 General Elective | 3 |
| PHIL 323 | | 3 General Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| General Elective | | 3 PHIL 480 | 3 |
| General Elective | | 3 EDG 6: High Impact Experience | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## 3+3 Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHIL 191 | | 1 ENGL 101 (GEF 1) | 3 |
| PHIL 130 (GEF 8; AoE Course 1) | | 3 PHIL 260 (GEF 3) | 3 |
| PHIL 244 (GEF 5) | | 3 Foreign Language 102 | 3 |
| Foreign Language 101 | | 3 General Elective | 3 |
| General Elective | | 3 GEF 2A | 3 |
| General Elective | | 2 | |
| | | 15 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHIL 248 (GEF 8) | 3 | ENGL 102 (GEF 1) | 3 |
| PHIL 321 or 346 (GEF 8) | 3 | PHIL 301 or 302 (GEF 8) | 3 |
| GEF 2A | 3 | ECAS Gl. St. and Div. Requirement (GEF 7) | 3 |
| GEF 4 | 3 | Foreign Language 204 | 3 |
| Foreign Language 203 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHIL 323 (Upper Div. Ele. 1; AoE Course 2) | 3 | PHIL 480 or 496 (Capstone & Writing) | 3 |
| PHIL 325 (Upper-Div Ele. 2; AoE Course 3) | 3 | PHIL Upper Division Elective 3 | 3 |
| ECAS Fine Arts Requirement (GEF 6) | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| LAW 641 | 1 | LAW 675 | 1 |
| LAW 686 | 4 | LAW 703 | 4 |
| LAW 700 | 3 | LAW 707 | 4 |
| LAW 705 | 3 | LAW 711 | 2 |
| LAW 709 | 4 | LAW 725 | 4 |
| | 15 | | 15 |

Total credit hours: 120

## Degree Progress

- By the third semester into the major, students should have completed 3 classes in the major with the requisite grade.
- All majors must meet with a Philosophy department adviser each semester.

Students who do not meet these benchmarks may be removed from the major.

## Major Learning Outcomes

### PHILOSOPHY

Upon successful completion of the B.A. degree, **Philosophy** majors will be able to meet learning outcomes for each of the following categories:

1. History of Philosophy: Students will be able to trace the development of major themes in the history of philosophy and will be familiar with the positions of major figures within this history.
2. Logical Reasoning: Students will be able to distinguish valid and invalid forms of reasoning and will be able to formally analyze arguments.
3. Practical Philosophy: Students will be familiar with debates at the center of contemporary ethics, jurisprudence, political philosophy, social philosophy, and aesthetics.
4. Theoretical Philosophy: Students will be familiar with debates at the center of contemporary metaphysics, epistemology, philosophy of mind, philosophy of language, and philosophy of science.
5. Integrative Philosophical Analysis: Students will be able to decipher and criticize complicated philosophical texts and arguments, and will be able to construct cogent arguments of their own in clear prose.

# Physics and Astronomy

## Degrees Offered

- Bachelor of Arts
- Bachelor of Science

Students may not earn both a B.A. and a B.S. in Physics.

## Nature of the Program

There are two degree options for students in physics. The bachelor of science degree is designed for students committed to a career in research. It can be followed by graduate work in physics, chemistry, materials science, optical sciences, astrophysics, engineering, or in other physical sciences such as meteorology, oceanography, etc. Some students instead pursue positions in industry, high school teaching, or in a government laboratory immediately after completing the B.S. This degree program provides a comprehensive grounding in the fundamentals of physics and is usually accompanied by participation in one of the active research programs within the department.

The bachelor of arts degree is designed to prepare students for a career that utilizes physics preparation in conjunction with an applied emphasis. By allowing more free elective choices, it prepares a student for a career that combines a science background with subsequent professional training. Typical career paths for this degree program include teaching, medicine, dental school, medical school, patent law, forensics, health physics, environmental engineering, science journalism, government policy, and business management.

The courses in physics provide a mix of theoretical concepts and practical examples. Each course within a degree plan builds upon the knowledge base acquired in previous courses and, together, these courses allow a student to acquire the combination of physical insight and mathematical skill needed for success in today's demanding job markets.

The department also offers introductory survey courses in physics and astronomy that are of interest to a broad range of students in the social sciences, fine arts, humanities, health sciences, and education. These courses use a minimum of mathematics to introduce the principles of physics and they provide many examples from the "real world" of the environment, energy, space, communications, transportation, and medicine.

For the B.S. degree, an Area of Emphasis is required. The Professional Preparation Area of Emphasis is the typical plan of study for graduate study in physics. Each Area of Emphasis is designed to allow some room for customization in consultation with your physics advisor within the required number of credits to degree. Recommendations for the other areas of emphasis include:

### COMPUTATIONAL PHYSICS

Computational models sometimes help solve difficult problems in physics. Students in this area of emphasis learn statistical modeling and other related skills to help analyze various concepts in physics.

### MEDICAL PHYSICS

Students in the Medical Physics area of emphasis learn applications of physics that can lead to an exciting range of careers in the medical field. From researching and designing new medical equipment to helping plan radiation treatment for cancer patients, this area of physics is broad but important.

### SPACE PHYSICS

Students in this area of emphasis learn skills that help address fundamental questions about our place in the universe, the history of our solar system and more. The challenges of understanding space exploration have led to fascinating expansions in technology, new industries and unprecedented relationships with other nations.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field.

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## FACULTY

### CHAIR

- Maura McLaughlin - PhD (Cornell University)

### ASSOCIATE CHAIR FOR GRADUATE STUDIES

- Alan Bristow - Ph.D. (University of Sheffield)

### ASSOCIATE CHAIR FOR UNDERGRADUATE STUDIES

- Paul M. Miller - Ph.D. (West Virginia University)

### PROFESSORS

- Wathiq Abdul-Razzaq - Ph.D. (University of Illinois - Chicago)
  Regular Graduate Faculty, Physics Education
- Loren Anderson - Ph.D. (Boston University)

Regular Graduate Faculty, Astrophysics/Astronomy

- Alan Bristow - Ph.D. (University of Sheffield)
  Regular Graduate Faculty, Experimental Condensed Matter Physics
- Paul Cassak - Ph.D. (University of Maryland)
  Regular Graduate Faculty, Woodburn Fellow, Plasma Physics
- Matthew Johnson - Ph.D. (California Institute of Technology)
  Regular Graduate Faculty, Experimental Condensed Matter Physics
- Mark E. Koepke - Ph.D. (University of Maryland)
  Regular Graduate Faculty, Robert C. Byrd Professor, Experimental Plasma Physics
- Lian Li - Ph.D. (University of Arizona)
  Regular Graduate Faculty, Robert L. Carroll Professor, Experimental Condensed Matter Physics
- Duncan R. Lorimer - Ph.D. (University of Manchester)
  Regular Graduate Faculty, Eberly College Associate Dean for Research
- Maura McLaughlin - Ph.D. (Cornell University)
  Regular Graduate Faculty, Eberly Distinguished Professor, Astrophysics/Astronomy
- Paul M. Miller - Ph.D (West Virginia University)
  Associate Graduate Faculty, Physics Education Research
- Sheena Murphy - Ph.D.(Cornell University)
  Regular Graduate Faculty, Associate VP for Research Development
- D.J. Pisano - Ph.D. (University of Wisconsin - Madison)
  Regular Graduate Faculty, Astrophysics/Astronomy
- Aldo Romero - Ph.D. (University of California - San Diego)
  Regular Graduate Faculty, Eberly Distinguished Professor, Condensed Matter Theory and Computation
- Earl E. Scime - Ph.D. (University of Wisconsin - Madison)
  Regular Graduate Faculty, Oleg D. Jefimenko Professor, Experimental Plasma Physics
- Tudor Stanescu - Ph.D. (University of Illinois - Urbana Champaign)
  Regular Graduate Faculty, Theoretical Condensed Matter Physics
- Gay Stewart - Ph.D. (University of Illinois - Urbana Champaign)
  Regular Graduate Faculty, Eberly Professor of STEM Education
- John Stewart - Ph.D. (University of Illinois - Urbana Champaign)
  Regular Graduate Faculty, Physics Education Research

## ASSOCIATE PROFESSORS

- Sarah Burke-Spoloar - Ph.D (Swinburne University of Technology)
  Regular Graduate Faculty, Astrophysics/Astronomy
- Edward Flagg - Ph.D. (University of Texas - Austin)
  Regular Graduate Faculty, Experimental Condensed Matter Physics
- Mikel Holcomb - Ph.D. (University of California - Berkeley)
  Regular Graduate Faculty, Experimental Condensed Matter Physics
- Sean McWilliams - Ph.D. (University of Maryland)
  Regular Graduate Faculty, Astrophysics/Astronomy
- Weichao Tu - Ph.D. (University of Colorado - Boulder)
  Regular Graduate Faculty, Space Plasma Physics

## ASSISTANT PROFESSORS

- Emmanuel Fonseca - Ph.D. (University of British Columbia)
  Regular Graduate Faculty, Astronomy
- Chris Fowler - Ph.D. (University of Colorado - Boulder)
  Regular Graduate Faculty, Plasma Physics, Space Plasmas
- Katherine Goodrich - Ph.D. (University of Colorado - Boulder)
  Regular Graduate Faculty, Space Physics
- Joonhee Lee - Ph.D. (Seoul National University)
  Regular Graduate Faculty, Experimental Biophysics
- Subhasish Mandal - Ph.D. (Michigan Technological University)
  Regular Graduate Faculty, Condensed Matter Theory and Simulation
- Thomas Steinberger - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Plasma and Space Physics

- Jason E. Ybarra - Ph.D. (University of Florida)
  Director of the WVU Planetarium & Observatory

### PROFESSORS EMERITI

- Larry E. Halliburton - Ph.D. (University of Missouri - Columbia)
- Arthur S. Pavlovic - Ph.D. (Columbia University)
- Mohindar S. Seehra - Ph.D. (University of Rochester)
- Richard Treat - Ph.D. (University of California – Riverside)
- H. Arthur Weldon - Ph.D. (Massachusetts Institute of Technology)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: minimum GPA of 2.0 in math and physics courses with at least one math and physics course completed.

Major Code: 1463

## Degree Progress

- By the end of their the second semester (excluding summer) in the major, at minimum, students must have completed MATH 126 with a minimum grade of C-.
- **GPA in the major**:
  - Students must have a cumulative GPA in the major requirements of 2.0 or better after completing two physics courses, or they will be placed on probation.
  - Students who do not raise their GPA in the major requirements above 2.0 after one semester on probation will be removed from the Major.
- **Repeated MATH and PHYS courses:**
  - Students not able to attain better than a D/F/W by the second attempt in a mathematics or physics course will be placed on probation.
  - A student with three grades of D/F/W in the same physics or mathematics course will be removed from the Major.

# Physics B.A.

Click here to view the Suggested Plan of Study (p. 321)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in Physics

Students may not earn both a B.A. and a B.S. in Physics. All students wishing to obtain a B.A. degree in Physics must comply with the following:

- **Calculation of the GPA in the Major:** A minimum grade point average of a 2.0 is required in all courses applied to major requirements, including the STEM Foundations. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement:** Physics Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two of the following **SpeakWrite Certified Courses**™: PHYS 341L, PHYS 496, ASTR 469.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course. Students majoring in Physics must complete PHYS 496.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 49 |
| Eberly Edge Requirements | | 15 |
| Physics Major Requirements | | 56 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, 7 | | 18 |
| PHYS 191 | First-Year Seminar | 1 |
| General Electives | | 30 |
| Total Hours | | 49 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (PHYS 341L) | | |
| Total Hours | | 15 |

## Physics Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **12** |
| MATH 155 | Calculus 1 | |
| Select 1 pair of courses | | |

| | | |
|---|---|---|
| BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| & BIOL 117 | and Introductory Physiology | |
| & BIOL 117L | and Introductory Physiology Laboratory | |
| CHEM 111 | Survey of General, Organic, and Biological Chemistry 1 | |
| & 111L | and Survey of Chemistry 1 Laboratory | |
| & CHEM 112 | and Survey of General Organic Biological Chemistry 2 | |
| & CHEM 112L | and Survey of Chemistry 2 Laboratory | |
| CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| CS 110 | Introduction to Computer Science | |
| & CS 111 | and Introduction to Data Structures | |
| SUST 101 | Sustainable Earth | |
| & 101L | and Sustainable Earth Laboratory | |
| & SUST 201 | and Earth System Science | |
| & SUST 201L | and Earth System Science Laboratory | |
| **FOUNDATION COURSES** | | **23** |
| MATH 156 | Calculus 2 | |
| MATH 251 | Multivariable Calculus | |
| MATH 261 | Elementary Differential Equations (or any upper-division MATH course) ** | |
| PHYS 111 | General Physics 1 | |
| & 111L | and General Physics 1 Laboratory | |
| PHYS 112 | General Physics 2 | |
| & 112L | and General Physics 2 Laboratory | |
| PHYS 312 | Oscillations and Thermal Physics | |
| **CORE COURSES** | | **7** |
| PHYS 314 | Introductory Modern Physics | |
| PHYS 341L | Advanced Physics 1 Laboratory | |
| or PHYS 376L | Research Methods Laboratory | |
| **UPPER-DIVISION ELECTIVES** | | **11** |
| Additional Physics or Astronomy Courses at the 300 or 400-level *** | | |
| **CAPSTONE EXPERIENCE** | | **3** |
| PHYS 496 | Senior Thesis | |
| Total Hours | | 56 |

*****

STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division course

******

Exclusive of PHYS 490, 494, 495 and 497.

*******

No more than 3 hours may be chosen from PHYS 490, 491, 494, 495, or 497

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 191 (First Year Seminar) | 1 | MATH 156 (GEF 8) | 4 |
| MATH 155 (GEF 3) | 4 | PHYS 111 & 111L (GEF 2) | 4 |
| Science Elective 1 (GEF 8) | 4 | Science Elective 2 | 4 |
| EDG 1 : Data and Society | 3 | EDG 2 : Effective and Civil Communication (COMM104) | 3 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 251 | 4 | PHYS 312 | 3 |
| PHYS 112 & 112L (GEF 8) | 4 | PHYS 314 | 4 |
| EDG 3 : Ethics and Civil Responsibility (PHIL 130) | 3 | EDG 4: Global and Regional Perspectives (SUST102) | 3 |
| F4 | 3 | General Elective | 4 |
| General Elective | 1 | General Elective | 1 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARSC 380 (EDG 5) | 3 | ENGL 102 (GEF 1) | 3 |
| ENGL 101 (F1) | 3 | MATH 261 (or 300- or 400-level MATH class) | 4 |
| F5 | 3 | PHYS 341L (EDG 6) | 3 |
| PHYS Elective 1 | 4 | F7 | 3 |
| General Elective | 3 | General Elective | 1 |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| F6 | 3 | PHYS 496 | 3 |
| PHYS Elective 2 | 4 | General Elective | 4 |
| PHYS Elective 3 | 3 | General Elective | 4 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 16 | | 14 |

Total credit hours: 120

## Major Learning Outcomes

### PHYSICS B.A.

Upon successful completion of the B.A. degree, **Physics** majors will demonstrate:

1. An understanding of and ability to solve basic conceptual and quantitative problems in foundational physics areas and to apply complex reasoning and problem solving skills developed in physics across disciplines, with focus on such application in a cognate area.
2. A range of effective strategies, both written and oral, to communicate physics theories, processes, and results.
3. An ability to develop experiments to test basic or applied research questions, to perform accurate experimental measurements, and to critically evaluate others' answers to research questions.

# Physics B.S.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |

| | |
|---|---|
| F5 - Human Inquiry & the Past | 3 |
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.S. in Physics

Students may not earn both a B.A. and a B.S. in Physics.  All students wishing to obtain a degree in Physics must comply with the following:

- **Calculation of the GPA in the Major:** A minimum grade point average of a 2.0 is required in all courses applied to major requirements, including the STEM Foundations and the AoE selected. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement:** Physics Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two of the following **SpeakWrite Certified Courses** ™: PHYS 191, PHYS 341L, PHYS 376L PHYS 496, ASTR 496.
- **Area of Emphasis**: Students completing a Bachelor of Science in Physics must complete an Area of Emphasis selected from Computational Physics, Medical Physics, Professional Preparation, or Space Physics. **The Professional Preparation Area of Emphasis is the typical plan of study for a B.S. degree in physics.**
- **Course Requirement**: Physics students completing the Professional Preparation or Space Physics Areas of Emphasis are required to complete two semesters of advanced lab (PHYS 341L and PHYS 342L) . Students completing the Computational Physics Areas of Emphasis only need to complete one semester of PHYS 341L. Students completing the Physics Teaching Area of Emphasis are required to complete PHYS 376L in place of PHYS 341L.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course.  Students majoring in Physics must complete PHYS 496 (other options maybe available depending on AoE selected).

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 38 |
| Eberly Edge Requirements | | 15 |
| Physics Major Requirements | | 67 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| PHYS 191 | First-Year Seminar | 1 |
| General Electives | | 19 |
| Total Hours | | 38 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences | | 3 |

| | |
|---|---|
| EDG 6: High Impact Experience (PHYS 341L) | |
| Total Hours | 15 |

## Physics Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATION COURSES** * | | **20** |
| MATH 155 | Calculus 1 | |
| MATH 156 | Calculus 2 | |
| MATH 251 | Multivariable Calculus | |
| Select one pair | | |
| BIOL 115<br>& 115<br>& BIOL 117<br>& BIOL 117L | Principles of Biology<br>and Principles of Biology<br>and Introductory Physiology<br>and Introductory Physiology Laboratory | |
| CHEM 111<br>& 111L<br>& CHEM 112<br>& CHEM 112L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory<br>and Survey of General Organic Biological Chemistry 2<br>and Survey of Chemistry 2 Laboratory | |
| CHEM 115<br>& 115L<br>& CHEM 116<br>& CHEM 116L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory<br>and Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| SUST 101<br>& 101L<br>& SUST 201<br>& SUST 201L | Sustainable Earth<br>and Sustainable Earth Laboratory<br>and Earth System Science<br>and Earth System Science Laboratory | |
| **CORE COURSES** | | **31** |
| MATH 261 | Elementary Differential Equations | |
| PHYS 111<br>& 111L<br>& PHYS 112<br>& PHYS 112L | General Physics 1<br>and General Physics 1 Laboratory<br>and General Physics 2<br>and General Physics 2 Laboratory | |
| PHYS 312 | Oscillations and Thermal Physics | |
| PHYS 314 | Introductory Modern Physics | |
| PHYS 331 | Theoretical Mechanics 1 | |
| PHYS 333 | Electricity and Magnetism 1 | |
| PHYS 451 | Introductory Quantum Mechanics | |
| Any additional ASTR or PHYS course at the 300 level or above | | |
| **AREA OF EMPHASIS** | | **13** |
| Select one area of Emphasis | | |
| **CAPSTONE EXPERIENCE** | | **3** |
| PHYS 496 | Senior Thesis | |
| Total Hours | | 67 |

*

STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division course.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (F3) | 4 | ENGL 101 (F1) | 3 |
| PHYS 191 | 1 | Science course 2 (F8 Course 1) | 4 |
| Science Course 1 (F2B) | 4 | MATH 156 | 4 |
| EDG 1: Data and Society | 3 | PHYS 111<br>& 111L (F8 Course 2) | 4 |

| | | | |
|---|---|---|---|
| F4 | | 3 | |
| | | 15 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 | | 3 MATH 261 | 4 |
| MATH 251 | | 4 PHYS 314 | 4 |
| PHYS 112 & 112L | | 4 EDG 4: Global and Regional Perspectives | 3 |
| EDG 2: Effective and Civil Communication | | 3 F6 | 3 |
| F5 | | 3 | |
| | | 17 | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 312 | | 3 PHYS 333 | 3 |
| PHYS 331 | | 3 ARSC 380 (EDG 5) | 3 |
| PHYS 341L (EDG 6 and AOE Course 1) | | 3 PHYS or ASTR Elective 1 | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 AOE Course 2 | 3 |
| F7 | | 3 General Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 451 | | 3 PHYS 496 | 3 |
| AOE Course 3 | | 4 General Elective | 4 |
| AOE Course 4 | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 | |
| | | 16 | 13 |

Total credit hours: 120

## Areas of Emphasis Offered:

- Computational Physics (p. 325)
- Medical Physics (p. 326)
- Professional Preparation (p. 327)
- Space Physics (p. 329)

## COMPUTATIONAL PHYSICS

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES:** | | **10** |
| PHYS 301 | Computational Physics | |
| PHYS 341L | Advanced Physics 1 Laboratory | |
| PHYS 342L | Advanced Physics Laboratory 2 (2 credits) * | |
| PHYS 461 | Thermodynamics and Statistical Mechanics | |
| **ELECTIVES:** | | **3** |
| Select one of the following courses: | | |
| CPE 271 | Introduction to Digital Logic Design | |
| CS 210 | File and Data Structures | |
| CS 220 | Discrete Mathematics | |
| CS 330 | Introduction to Software Engineering | |
| MATH 322 | Introduction to Programming and Computational Mathematics | |
| Total Hours | | 13 |

*

Students may substitute any ASTR or PHYS courses at the 300 level or above. Only 3 credits of PHYS 490, 491, 495 may be applied to major requirements.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 191 | 1 | ENGL 101 (F1) | 3 |
| F4 | 3 | CS 111 (B.S. First Area 2) | 3 |
| CS 110 (B.S. First Area 1) | 3 | MATH 156 (B.S. Second Area 1; F8) | 4 |
| MATH 155 (F3) | 4 | PHYS 111 & 111L (B.S. Third Area 1; F2) | 4 |
| General Elective | 3 | | |
| | 14 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (F1) | 3 | F6 | 3 |
| F5 | 3 | MATH 261 | 4 |
| MATH 251 (B.S. Second Area 2) | 4 | PHYS 314 | 4 |
| PHYS 112 & 112L (B.S. Third Area 2; F8) | 4 | General Elective | 3 |
| General Elective | 1 | General Elective | 3 |
| | 15 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 271 | 3 | CS 210 | 4 |
| PHYS 312 | 3 | PHYS 332 (or Elective) | 3 |
| PHYS 331 | 3 | PHYS 333 | 3 |
| PHYS 341L | 3 | F8 | 3 |
| ECAS Glo. Stu. & Div. Req. (F7) | 3 | General Elective | 2 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 220 | 3 | PHYS 461 | 3 |
| PHYS 301 | 3 | PHYS 496 or CS 481 | 3 |
| PHYS 334 (or Elective) | 3 | General Elective | 3 |
| PHYS 451 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

NOTE: Students in this AoE will need to have completed either (a) CHEM 231 (or CHEM 233 and CHEM 233L) as a prerequisite for AGBI 410 or (b) CHEM 233 and CHEM 233L as prerequisites for BIOC 339

## MEDICAL PHYSICS

| Code | Title | Hours |
|---|---|---|
| BMM 339 | Introduction to Human Biochemistry | 4 |
| or AGBI 410 | Introductory Biochemistry | |
| BIOL 115 & 115L | Principles of Biology and Principles of Biology Laboratory | 4 |
| PHYS 326 | Medical Imaging Physics | 3 |

| | | |
|---|---|---|
| PHYS 341L | Advanced Physics 1 Laboratory | 3 |
| Total Hours | | 14 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 191 | 1 | ENGL 101 (F1) | 3 |
| F4 | 3 | CHEM 116 & 116L (B.S. First Area 2; F8) | 4 |
| CHEM 115 & 115L (B.S. First Area 1; F2) | 4 | MATH 156 (B.S. Second Area 1; F8) | 4 |
| MATH 155 (F3) | 4 | PHYS 111 & 111L (B.S. Third Area; F8) | 4 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (F1) | 3 | F6 | 3 |
| F5 | 3 | F7 | |
| MATH 251 (B.S. Second Area 2) | 4 | MATH 261 | 4 |
| PHYS 112 & 112L (B.S. Third Area 2; F8) | 4 | PHYS 314 | 4 |
| General Elective | 1 | General Elective | 4 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115 & 115L | 4 | BIOL 117 & 117L | 4 |
| PHYS 312 | 3 | PHYS 332 (or Elective) | 3 |
| PHYS 331 | 3 | PHYS 333 | 3 |
| PHYS 341L | 3 | General Elective | 4 |
| General Elective | 3 | | |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 233 & 233L | 4 | PHYS 326 | 3 |
| PHYS 334 (or Elective) | 3 | PHYS 461 | 3 |
| PHYS 451 | 3 | PHYS 496 | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 2 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

## PROFESSIONAL PREPARATION AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES:** | | **10** |
| PHYS 332 | Theoretical Mechanics 2 | |
| or PHYS 334 | Electricity and Magnetism | |
| PHYS 341L | Advanced Physics 1 Laboratory | |
| PHYS 342L | Advanced Physics Laboratory 2 (2 credits) | |
| PHYS 461 | Thermodynamics and Statistical Mechanics | |

| | | |
|---|---|---|
| **ELECTIVES:** | | **3** |
| Select one course from the list: * | | |
| PHYS 301 | Computational Physics | |
| PHYS 321 | Optics | |
| PHYS 326 | Medical Imaging Physics | |
| PHYS 332 | Theoretical Mechanics 2 | |
| or PHYS 334 | Electricity and Magnetism | |
| PHYS 452 | Quantum Mechanics 2 | |
| PHYS 471 | Solid State Physics | |
| PHYS 481 | Plasma Physics | |
| PHYS 490 | Teaching Practicum | |
| ASTR 368 | Astrophysics 2 | |
| ASTR 467 | Stellar Structure and Evolution | |
| ASTR 469 | Observational Astronomy | |
| ASTR 470 | General Relativity | |
| Total Hours | | 13 |

*

No more than 6 hours combined of ASTR/PHYS 490, 491, 494, 495, or 497 may be used to fulfill major requirements (AoE and core requirements).

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 191 | 1 | ENGL 101 (F1) | 3 |
| F4 | 3 | B.S. First Area 2 | 4 |
| B.S. First Area 1; F2 | 4 | MATH 156 (B.S. Second Area 1; F8) | 4 |
| MATH 155 (F3) | 4 | PHYS 111 (Third Area 1; F8) | 4 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (F1) | 3 | F6 | 3 |
| F5 | 3 | MATH 261 | 4 |
| MATH 251 (B.S. Second Area 2) | 4 | PHYS 314 | 4 |
| PHYS 112 (B.S. Third Area 2; F8) | 4 | General Elective | 1 |
| General Elective | 3 | General Elective | 3 |
| | 17 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 331 | 3 | PHYS 332 (or Elective) | 3 |
| PHYS 341L | 3 | PHYS 333 | 3 |
| ECAS Glob. Stu. and Div. Req. (F7) | 3 | Physics or Astronomy Elective 1 | 3 |
| General Elective | 3 | General Elective | 3 |
| PHYS 312 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 334 (or Elective) | 3 | PHYS 461 | 3 |
| PHYS 451 | 3 | PHYS 496 | 3 |
| Math Elective | 3 | Physics or Astronomy Elective 3 | 3 |
| Physics or Astronomy Elective 2 | 3 | General Elective | 3 |

| | | | |
|---|---|---|---|
| General Elective | | 3 General Elective | 1 |
| | | 15 | 13 |

Total credit hours: 120

## SPACE PHYSICS

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES:** | | **9** |
| ASTR 467 | Stellar Structure and Evolution | |
| or PHYS 481 | Plasma Physics | |
| PHYS 341L | Advanced Physics 1 Laboratory | |
| PHYS 342L | Advanced Physics Laboratory 2 (1 credit) | |
| PHYS 461 | Thermodynamics and Statistical Mechanics | |
| **ELECTIVES:** * | | **4** |
| PHYS 342L | Advanced Physics Laboratory 2 (1 credit) | |
| PHYS 301 | Computational Physics | |
| PHYS 321 | Optics | |
| PHYS 332 | Theoretical Mechanics 2 | |
| PHYS 334 | Electricity and Magnetism | |
| PHYS 452 | Quantum Mechanics 2 | |
| ASTR 368 | Astrophysics 2 | |
| ASTR 469 | Observational Astronomy | |
| ASTR 470 | General Relativity | |
| EE 221 & 221L | Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory | |
| Total Hours | | 13 |

*

Only a total of 3 credits of PHYS 490, 491, 495 may count toward major requirements.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 191 | 1 | ENGL 101 (F1) | 3 |
| F4 | 3 | CS 111 & 111L (B.S. First Area 2) | 4 |
| CS 110 & 110L (B.S. First Area 1) | 4 | MATH 156 (F8) | 4 |
| MATH 155 (F3) | 4 | PHYS 111 (B.S. Third Area 1; F2) | 4 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (F1) | 3 | F6 | 3 |
| F5 | 3 | F7 | 3 |
| MATH 251 (B.S Second Area 1) | 4 | MATH 261 | 4 |
| PHYS 112 (B.S. Third Area 2; F8) | 4 | PHYS 314 | 4 |
| General Elective | 1 | General Elective | 1 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221 & 221L | 4 | PHYS 321 | 3 |

| | | | |
|---|---|---|---|
| PHYS 312 | | 3 PHYS 332 (or General Elective) | 3 |
| PHYS 331 | | 3 PHYS 333 | 3 |
| PHYS 341L | | 3 General Elective | 5 |
| F8 | | 3 | |
| | | 16 | 14 |

**Fourth Year**

| **Fall** | **Hours** | **Spring** | **Hours** |
|---|---|---|---|
| ASTR 467 | | 3 PHYS 461 | 3 |
| PHYS 334 (or General Elective) | | 3 PHYS 481 or ASTR 368 | 3 |
| PHYS 451 | | 3 PHYS 496 | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Major Learning Outcomes

### PHYSICS B.S.

Upon successful completion of the B.S. degree, **Physics** majors will demonstrate:

1. An understanding of and ability to solve basic conceptual and quantitative problems in theoretical mechanics, electricity and magnetism, quantum mechanics, and thermodynamics.
2. A range of effective strategies, both written and oral, to communicate physics theories, processes, and results.
3. An ability to develop experiments to test basic or applied research questions, to perform accurate experimental measurements, and to critically evaluate others' answers to research questions.

# Political Science, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The undergraduate curriculum in the Department of Political Science has five main objectives:

- To acquaint students with the nature and role of government in modern society, thus contributing to the general education of political science majors. In order to achieve this objective, the department offers the general political science emphasis. This emphasis is open to any student who has an interest in political science but who has not yet focused on a specific career goal.
- To impart a broad understanding of the American political system. Courses are offered on national institutions, political actors, and political behavior. Other courses focus on the policy making process and on various substantive policy issue-areas. Students who seek to work in politics and/or government should enroll in the American politics and policy area of emphasis.
- To provide a broad foundation of relevant courses for students who plan careers in law.
- To prepare students who wish to pursue future careers in international relations, comparative politics, and national security area.
- To provide pre-professional training for students who intend to pursue political science as a career. Those who intend to be teachers, researchers, or administrators should plan to enroll in graduate school after completing their bachelor's degrees, and our major is designed to provide a strong foundation for that.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Honors Program

The Department of Political Science, in cooperation with the University Honors College, offers courses that are open exclusively to honors students. These courses are listed in the University's Schedule of Courses each semester. Students who meet the standards of the University Honors Program may enroll in these courses.

## 3+3 Program

The Department of Political Science participates in the WVU College of Law 3+3 Program at WVU, which is an opportunity for qualified undergraduate students to earn their **bachelor's degree and law degree in six years** instead of seven years. Students accepted into the 3+3 program begin taking classes at WVU Law in what would be their senior year of college. Students participating in this program must meet certain eligibility criteria and progress benchmarks. For questions regarding your eligibility, please contact your department advisor.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field.

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# FACULTY

## CHAIR

- John C. Kilwein - Ph.D. (Ohio State University)

## DIRECTOR OF UNDERGRADUATE STUDIES

- John C. Kilwein - Ph.D. (Ohio State University)

## DIRECTOR OF GRADUATE STUDIES

- William Franko - Ph.D. (University of Iowa)

## PROFESSORS

- Clarissa Estep - Ph.D. (West Virginia University)
  Director of International Studies Program
- Joe D. Hagan - Ph.D. (University of Kentucky)
  Regular Graduate Faculty, Barnette Professor in Political Science, International Relations and World Politics, Comparative Foreign Policy Analysis
- Erik Herron - Ph.D. (Michigan State University)
  Regular Graduate Faculty, Eberly Family Professor, Political Institutions, Elections, Post-Communist Europe and Eurasia
- Samuel Workman - Ph.D. (University of Washington)
  Regular Graduate Faculty, Director Institute for Policy Research and Public Affairs John D. "Jay" Rockefeller School of Policy & Politics

## ASSOCIATE PROFESSORS

- R. Scott Crichlow - Ph.D. (Louisiana State University)
  Regular Graduate Faculty, International Relations, Foreign Policy Decision-making, Middle East Politics
- Vito D'Orazio - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Woodburn Associate Professor, International Relations, Data Sciences
- Christina Fattore - Ph.D. (Florida State University)
  Regular Graduate Faculty, International Political Economy, International Organization, European Union Politics
- William Franko - Ph.D. (University of Iowa)
  Regular Graduate Faculty, American Politics, State and Local Politics, Public Policy
- David Hauser - Ph.D. (University of Pittsburgh)
  International Conflict, National Security Analysis
- Matthew Jacobsmeier - Ph.D. (University of Rochester)
  Regular Graduate Faculty, American Politics, Political Behavior, Public Opinion, Research Methods
- John C. Kilwein - Ph.D. (Ohio State University)
  Regular Graduate Faculty, Public Law, Judicial Politics, Public Policy, Public Administration
- Jason MacDonald - Ph.D. (The George Washington University)
  Regular Graduate Faculty, American Politics, Congress, Research Methods
- Philip Michelbach - Ph.D. (University of California)
  Regular Graduate Faculty, Political Theory, American Political Thought, German Political Thought, Comparative Democratic Theory
- Mason Moseley - Ph.D. (Vanderbilt University)
  Regular Graduate Faculty, Comparative Politics, Latin American Politics, Comparative Political Institutions
- Trisha Phillips - Ph.D. (Rice University)
  Regular Graduate Faculty, Social and Political Philosophy, Moral Philosophy, Research Ethics

### ASSISTANT PROFESSORS

- Samantha Godbey - Ph.D. (West Virginia University)
  Director of Debate
- Jonathan M. King - Ph.D. (Michigan State University)
  Regular Graduate Faculty, Judicial Politics
- Shaniqua Williams - Ph.D. (Auburn University)
  Regular Graduate Faculty, Public Administration, State and Local Politics

### PROFESSORS EMERITI

- Richard Brisbin - Ph.D. (Johns Hopkins University)
- Robert E. DiClerico - Ph.D. (Indiana University)
- Allan S. Hammock - Ph.D. (University of Virginia)
- Susan Hunter - Ph.D. (Ohio State University)
- Sophia L. Peterson - Ph.D. (University of California, Los Angeles)
- James Whisker - Ph.D. (University of Maryland)
- Jeffrey S. Worsham - Ph.D. (University of Wisconsin)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from other majors or another institution with at least a 2.0 overall GPA are admitted directly to the major.

Major Code: 1464

Click here to view the Suggested Plan of Study (p. 334)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in Political Science

All students wishing to obtain a degree in Political Science must comply with the following:

- **Calculation of the Major GPA**: A minimum GPA of a 2.0 is required in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing Requirement:** The Department of Political Science is a SpeakWrite Affiliated Program, committed to fostering and assessing students' written, verbal, visual, and mediated communication skills. The Political Science major requires its Bachelor of Arts program graduates to complete ENGL 101 and ENGL 102 (or ENGL 103), and a minimum of four additional **SpeakWrite Certified Courses** ™ as a part of their programs of study.
- **Area of Emphasis:** Students may select an Area of Emphasis, depending on their academic or career interests. A minimum GPA of a 2.0 is required in all courses applied to the Area of Emphasis.
- **Capstone Requirement**: The General Education Foundations requires the successful completion of a Capstone course. Political Science majors must successfully complete one of the following: POLS 484, POLS 487, POLS 488, POLS 489.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 66 |
| Eberly Edge Requirements | | 15 |
| Political Science Major Requirements | | 39 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6 and 8 | | 27 |
| POLS 191 | First-Year Seminar | 1 |
| General Electives | | 38 |
| Total Hours | | 66 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (POLS 250) | | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 15 |

## Political Science Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE REQUIREMENT:** | | **21** |
| POLS 102 | Introduction to American Government | |
| Political Science Policy Analysis or Public Administration requirement: | | |
| POLS 230 | Introduction to Policy Analysis | |
| or POLS 240 | Introduction to Public Administration | |
| POLS 250 | Introduction to Comparative Politics | |
| Political Science International Requirement: | | |
| POLS 103 | Global Political Issues | |
| or POLS 260 | Introduction to International Relations | |
| POLS 270 | Concepts in Political Theory | |
| or POLS 271 | History of Political Thought 2 | |
| POLS 300 | Empirical Political Analysis | |
| Political Science Economics: | | |
| POLS 334 | Politics of Economic Policy | |

| | | |
|---|---|---|
| or POLS 360 | International Political Economy | |
| **POLITICAL SCIENCE ELECTIVES:** | | **15** |
| Select one option: | | |
| **Option 1: POLS Electives** | | |
| Complete 15 additional credit hours in POLS with a minimum of 12 credits at the 300 level or above the 300-level. | | |
| **Option 2: Area of Emphasis** | | |
| Select an Area of Emphasis from the following: | | |
| American Politics and Policy | | |
| Elections & Campaigns | | |
| International Relations, Comparative Politics, and National Security | | |
| Pre-Law and Legal Studies | | |
| **CAPSTONE EXPERIENCE:** | | **3** |
| Select one of the following: | | |
| POLS 484 | Capstone: Build a Politics Podcast | |
| POLS 487 | Capstone: Senior Paper | |
| POLS 488 | Capstone: Political Simulation | |
| POLS 489 | Capstone: Citizenship Seminar | |
| Total Hours | | 39 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 191 | 1 | ENGL 101 (GEF 1) | 3 |
| POLS 102 (F4) | 3 | POLS 270 or 271 | 3 |
| POLS 103 or 260 (F7) | 3 | EDG 2: Effective and Civil Communication | 3 |
| GEF 2A | 3 | F2A | 3 |
| EDG 1: Data and Society | 3 | F3 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | POLS 230 or 240 | 3 |
| POLS 250 (EDG 4) | 3 | POLS 300 | 3 |
| F8 Course 1 | 3 | EDG 3: Ethics and Civil Responsibility | 3 |
| General Elective | 3 | F5 | 3 |
| General Elective | 3 | F6 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 334 or 360 | 3 | POLS Elective/AoE course 3 | 3 |
| POLS Elective/AoE course 1 | 3 | POLS Elective/AoE course 4 | 3 |
| POLS Elective/AoE course 2 | 3 | ARSC 380 (EDG 5) | 3 |
| F8 Course 2 | 3 | General Elective | 3 |
| General Elective | 3 | F8 Course 3 | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS Elective/AoE course 5 | 3 | POLS Capstone | 3 |
| General Elective | 3 | EDG 6: High Impact Experience | |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |

| | | |
|---|---|---|
| | General Elective | 3 |
| | 15 | 15 |

Total credit hours: 120

*

Students completing a minor, a double major or a dual degree fulfill the GEF 8 requirement.

## Areas of Emphasis Offered:

- American Politics and Policy (p. 335)
- Elections & Campaigns (p. 335)
- International Relations, Comparative Politics, and National Security (p. 336)
- Pre-Law and Legal Studies (p. 337)

## AMERICAN POLITICS AND POLICY AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Select five of the following: | | 15 |
| POLS 261 | Introduction to National Security | |
| POLS 310 | American Presidency | |
| POLS 311 | Political Parties & Elections | |
| POLS 313 | American Constitutional Law | |
| POLS 314 | Civil Liberties in the United States | |
| POLS 315 | Law and Public Policy | |
| POLS 316 | Public Opinion and Politics | |
| POLS 317 | Interest Groups and Democracy | |
| POLS 318 | Legislative Process | |
| POLS 320 | American Federalism and Policy | |
| POLS 321 | West Virginia Government | |
| POLS 323 | Religion & Politics | |
| POLS 324 | Sexuality, Law, and Politics | |
| POLS 331 | Criminal Law Policy and Administration | |
| POLS 333 | Politics of Social Welfare | |
| POLS 334 | Politics of Economic Policy | |
| POLS 335 | Civil Rights, Policy, and Politics | |
| POLS 337 | Gender/Politics and Policy | |
| POLS 338 | Environmental Policy | |
| POLS 339 | National Security Law & Policy | |
| POLS 342 | Bureaucratic Politics | |
| POLS 373 | American Political Philosophy | |
| Total Hours | | 15 |

## ELECTIONS & CAMPAIGNS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| **FIELD RESEARCH REQUIREMENT:** | | **3** |
| POLS 348 | Field Research and Community Engagement in Elections and Campaigns | |
| **POLITICAL SCIENCE ELECTIVES:** | | **9** |
| Select 3 courses from the following list: | | |
| POLS 311 | Political Parties & Elections | |
| POLS 316 | Public Opinion and Politics | |
| POLS 317 | Interest Groups and Democracy | |
| POLS 323 | Religion & Politics | |
| POLS 335 | Civil Rights, Policy, and Politics | |

| | | |
|---|---|---|
| POLS 337 | Gender/Politics and Policy | |
| POLS 345 | Electoral Systems and Political Parties Around the World | |
| POLS 346 | The Electoral Process | |
| POLS 347 | Representation | |
| **SKILLS COURSE:** | | **3** |
| Select One from the Following: | | |
| ADV 215 | Principles of Advertising | |
| ADV 419 | Advertising Strategies | |
| COMM 104 | Fundamentals of Public Communication | |
| COMM 105 | Fundamentals of Mediated Communication | |
| WRIT 303 | Multimedia Writing | |
| WRIT 304 | Business and Professional Writing | |
| GEOG 302 | Political Geography | |
| LDR 201 | Principles of Leadership | |
| PSYC 251 | Introduction to Social Psychology | |
| SOC 207 | Social Problems in Contemporary America | |
| STAT 312 | Intermediate Statistical Methods | |
| Total Hours | | 15 |

## INTERNATIONAL RELATIONS, COMPARATIVE POLITICS, AND NATIONAL SECURITY AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| **Select five of the following:** | | **15** |
| POLS 261 | Introduction to National Security | |
| POLS 301 | Introduction to Intelligence Analysis | |
| POLS 302 | Intelligence Analysis Methods | |
| POLS 350 | Government of Japan | |
| POLS 351 | Russian and Post-Soviet Politics | |
| POLS 352 | Politics of the European Union | |
| POLS 353 | Western Democratic Governments | |
| POLS 354 | Government of China | |
| POLS 355 | Governments of Latin America | |
| POLS 356 | Politics of the Middle East | |
| POLS 357 | Comparative Law and Politics | |
| POLS 358 | Politics of Africa | |
| POLS 359 | Politics of Terrorism | |
| POLS 360 | International Political Economy | |
| POLS 361 | International Law and Institutions | |
| POLS 362 | Comparative Foreign Policy | |
| POLS 363 | International Law | |
| POLS 364 | American Foreign Relations | |
| POLS 365 | Foreign Policy Decision-Making | |
| POLS 368 | Politics of War and Peace | |
| POLS 369 | Far East International Affairs | |
| POLS 370 | Dictatorship and Democratization | |
| POLS 376 | Contentious Politics | |
| POLS 450 | Elections and Political Parties Around the World | |
| POLS 452 | European Union Law/Legal Systems | |
| POLS 453 | European Union Law/Institutions | |
| POLS 460 | Gender and International Relations | |
| POLS 461 | Transformation of War | |

| | |
|---|---|
| POLS 462 | Intelligence Failures |
| Total Hours | 15 |

## PRE-LAW AND LEGAL STUDIES AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES:** | | **6** |
| POLS 210 | Law and the Legal System | |
| POLS 313 | American Constitutional Law | |
| or POLS 314 | Civil Liberties in the United States | |
| **UPPER-DIVISION ELECTIVES:** | | **9** |
| Select three of the following: | | |
| POLS 313 | American Constitutional Law (alternate classes from above) | |
| or POLS 314 | Civil Liberties in the United States | |
| POLS 315 | Law and Public Policy | |
| POLS 324 | Sexuality, Law, and Politics | |
| POLS 331 | Criminal Law Policy and Administration | |
| POLS 357 | Comparative Law and Politics | |
| POLS 363 | International Law | |
| POLS 452 | European Union Law/Legal Systems | |
| POLS 453 | European Union Law/Institutions | |
| Total Hours | | 15 |

## Accelerated Program

- B.A. Political Science and M.A. Political Science (p. 337)

## Accelerated B.A. in Political Science and M.A. in Political Science

Students must fulfill all degree requirements for the B.A. in Political Science (http://catalog.wvu.edu/undergraduate/eberlycollegeofartsandsciences/politicalscience/) and all requirements for the M.A. in Political Science (http://catalog.wvu.edu/graduate/eberlycollegeofartsandsciences/politicalscience/ma/) with the exception of the minimum number of credit hours in M.A. in Political Science Electives and the minimum number of credit hour required for the M.A., as described below. Students must also meet all requirements for the A.B.M in Political Science.

**Credit Hours:** Students are required to complete a minimum of 31 credit hours in POLS at the graduate level. Up to 12 of those credits can be at the 400 level. The number of graduate credit hours may vary depending on number of semesters in residence.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 106 |
| Shared B.A./M.A. Coursework | | 14 |
| Graduate Coursework | | 24 |
| Total Hours | | 144 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| POLS 500 | Introduction to Political Research | 3 |
| POLS 501 | Quantitative Political Analysis | 3 |
| POLS 502 | Advanced Quantitative Methods | 3 |
| POLS 596 | Graduate Seminar | 2 |
| Any POLS course at the 400 level or above | | 3 |
| Total Hours | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 334 or 360 | 3 | POLS Elective/AoE course 3 | 3 |
| POLS Elective/AoE course 1 | 3 | POLS Elective/AoE course 4 | 3 |
| POLS Elective/AoE course 2 | 3 | POLS 501 | 3 |
| POLS 500 | 3 | POLS 596 | 1 |
| F8 Course 2 | 3 | ARSC 380 (EDG 5) | 3 |
| | | General Elective | 2 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS Elective/AoE course 5 | 3 | POLS Capstone | 3 |
| POLS 502 | 3 | EDG 6: EDG High Impact Experience | 3 |
| POLS 596 | 1 | POLS 400 level or above | 3 |
| F8 Course 3 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

Total credit hours: 60

## 3+3 Program Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 191 | 1 | ENGL 101 (GEF 1) | 3 |
| POLS 102 (GEF 4) | 3 | POLS 270 or 271 | 3 |
| POLS 103 or 260 | 3 | GEF 2A | 3 |
| GEF 2A | 3 | GEF 3 | 3 |
| Foreign Language 101 | 3 | Foreign Language 102 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | POLS 230 or 240 | 3 |
| POLS 210 | 3 | POLS 300 | 3 |
| POLS 250 | 3 | GEF 5 | 3 |
| POLS Law-Related Course 1 | 3 | ECAS Fine Arts Requirement (GEF 6) | 3 |
| Foreign Language 203 | 3 | Foreign Language 204 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 334 or 360 | 3 | Skills & Related Course 2 | 3 |
| POLS 313 or 314 | 3 | POLS Capstone | 3 |
| POLS Law-Related Course 2 | 3 | General Elective | 3 |
| POLS at the 200-Level or Above | 3 | General Elective | 3 |
| Skills & Related Course 1 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| LAW 641 | 1 | LAW 675 | 1 |
| LAW 686 | 4 | LAW 703 | 4 |
| LAW 700 | 3 | LAW 707 | 4 |
| LAW 705 | 3 | LAW 711 | 2 |

| | | |
|---|---|---|
| LAW 709 | 4 LAW 725 | 4 |
| | 15 | 15 |

Total credit hours: 120

## Degree Progress

Within four semesters in the POLS major, students must

- have completed four of the following courses: POLS 102, POLS 230 or POLS 240, POLS 250, POLS 260, POLS 270,
- maintain a 2.0 GPA overall and in the major,
- meet with their POLS adviser each semester.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### POLITICAL SCIENCE

Political Science Department Learning Outcomes

1. A command of basic substantive knowledge about the basic institutions, political actors, and relevant processes in state, national, and international political systems – in particular as they apply to the student's particular area of emphasis.
2. A knowledge of major policy issues in state, national, and international affairs and an appreciation of the complexity reflective of the uncertainties, trade-offs, and institutional/bureaucratic context of problems confronting governments.
3. An ability to think critically about political phenomena in a way that applies alternative explanatory perspectives across the major theoretical schools of thought in the political science literature.
4. A demonstrated capability to carry out systematic empirical research in political science, i.e. articulate a theoretical question, construct a rigorous research design, and analyze data or cases using appropriate methodological approaches.
5. An appreciation of the policy implications of different theoretical approaches and, more generally, how they relate to the larger ethical issues facing the West Virginia, national, and international communities.

# Professional Writing and Editing, B.A.

## Degree Offered

- Bachelor of Arts in Professional Writing and Editing
- Bachelor of Sciences in Scientific and Technical Writing

Students may not earn both a B.A. and a B.S. in Writing Studies.

## Nature of the Program

With a BA or BS degree in Writing Studies, you will learn to translate complex information into clear prose for diverse audiences and analyze how information flows through organizational structures. As you apply these skills in a capstone internship with a local business, non-profit, or government agency, you will see your writing come alive.

Regardless of what subjects you're interested in and what careers you're considering post-graduation, the BA degree in Professional Writing and Editing or the BS degree in Scientific and Technical Writing will improve the writing and communication skills that employers value.

When choosing between the BA degree in Professional Writing and Editing or the BS degree in Scientific and Technical Writing, individuals typically consider the path that most closely matches their future plans. The BA degree is well suited to students who are interested in the needs of an increasingly global society and want to make a difference as writers or editors for nonprofits, government agencies, and other professions. The BA's emphasis on rhetorical, cultural, and linguistic competencies also prepares students for advanced academic work in a range of fields, including the humanities and legal studies. The BS degree is well suited to students who have an interest in science, healthcare, or technology and want to pursue professional careers where they convey complex topics clearly to the public. The BS degree also prepares students for the writing and research skills they need for advanced academic work.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements. Both the BA in Professional Writing and Editing and the BS in Scientific and Technical Writing are SpeakWrite (https://speakwrite.wvu.edu/) certified programs.

## Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

## Publications

*Calliope*, a publication of WVU student writing, is sponsored by the Department of English and the English Honorary and Club.

*Mountaineer Undergraduate Research Review,* publishes outstanding research articles, literature reviews, and policy briefs principally authored by undergraduates of any major at West Virginia University. MURR is a student-led publication housed within the West Virginia University Office of Undergraduate Research.

*Resilience* is a digital, peer-reviewed journal of the Environmental Humanities. It provides a forum for scholars from across the humanities disciplines to speak to one another about their shared interest in environmental issues and to engage in an evolving conversation about what the humanities contributes to living and thinking sustainably in a world of dwindling resources.

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: a 2.0 GPA in all ENGL classes taken.

**Major Codes:**

B.S. Scientific and Technical Writing = **14F5**

B.A. Professional Writing and Editing = **14F4**

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum 120 hours.

## Departmental Requirements for the B.A. in Professional Writing & Editing

- **Calculation of GPA in the major**: Students must earn a grade of C- or better in all courses that are counted toward the PWE Major Requirements. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for D/F repeat.
- **Writing and Communication Requirement:** The Professional Writing & Editing Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses** ™.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course. Professional Writing & Editing (PWE) majors must complete WRIT 480 to meet this requirement.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 75 |
| Eberly Edge Requirements | | 15 |
| Professional Writing & Editing Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, and 8 | | 34 |
| WRIT 191 | First-Year Seminar | 1 |
| General Electives | | 40 |
| Total Hours | | 75 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences | | 3 |
| EDG 6: High Impact Experience (WRIT 480) | | |
| Total Hours | | 15 |

## Professional Writing & Editing Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES** | | **12** |
| WRIT 202 | Introduction to Writing Studies | |
| WRIT 301 | Writing Theory and Practice | |
| WRIT 302 | Editing | |
| WRIT 304 | Business and Professional Writing | |
| **TOPICAL AREA** | | **6** |
| Select two courses related to a specific topical area: | | |
| Editing and Publishing (choose 2 courses) | | |
| WRIT 303 | Multimedia Writing | |
| WRIT 306 | Topics in Digital Humanities | |
| WRIT 402 | Publishing | |
| Creative Writing & Narrative Strategies (choose 2 courses) | | |
| ENGL 214 | Creative Writing: Non-Fiction | |
| ENGL 312 | Creative Writing Workshop: Fiction | |
| ENGL 314 | Creative Writing Workshop: Non-Fiction | |
| Literacy and Language (choose 2 courses) | | |

| | | |
|---|---|---|
| ENGL 309 | Approaches to Teaching Composition | |
| ENGL 321 | History of the English Language | |
| WRIT 460 | Appalachian Englishes | |
| **UPPER-DIVISION ELECTIVES*** | | |
| Select three ENGL or WRIT courses at the 300 level not taken for the Core or Topical requirements | | 9 |
| WRIT 303 | Multimedia Writing | |
| WRIT 304 | Business and Professional Writing | |
| WRIT 306 | Topics in Digital Humanities | |
| ENGL 309 | Approaches to Teaching Composition | |
| ENGL 312 | Creative Writing Workshop: Fiction | |
| ENGL 314 | Creative Writing Workshop: Non-Fiction | |
| ENGL 321 | History of the English Language | |
| ENGL 329 | Topics in English Language | |
| ENGL 331 | Topics in Genre | |
| ENGL 338 | Environmental Criticism | |
| ENGL 383 | Introduction to Cultural Studies | |
| WRIT 407 | The Writing of Health and Medicine | |
| WRIT 408 | Rhetoric and Science | |
| WRIT 450 | Intro to Forensic Linguistics | |
| WRIT 460 | Appalachian Englishes | |
| **CAPSTONE** | | **3** |
| WRIT 480 | Capstone Internship | |
| Total Hours | | 30 |

*Students may select up to 6 credits outside ENGL or WRIT courses with permission from a WRIT Adviser.

## Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (F1 Course 1) | 3 | ENGL 102 (F1 Course 2) | 3 |
| WRIT 191 | 1 | EDG 2 : Effective and Civil Communication | 3 |
| EDG 1 : Data and Society | 3 | GEF 4 | 3 |
| GEF 2 | 4 | GEF 6 | 3 |
| General Electives | 4 | General Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WRIT 304 or 305 | 3 | WRIT 301 | 3 |
| WRIT 202 | 3 | WRIT 302 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | EDG 4: Global and Regional Perspectives | 3 |
| GEF 3 | 3 | GEF 7 | 3 |
| GEF 5 | 3 | GEF 8 (Course 1) | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Topical Area Course 1 | 3 | WRIT 480 (EDG 6) | 3 |
| Upper-Division Elective Course 1 | 3 | Topical Area Course 2 | 3 |
| ARSC 380 (EDG 6 ) | 3 | Upper-Division Elective Course 2 | 3 |
| General Elective | 3 | General Elective | 3 |
| GEF 8 (Course 2) | 3 | GEF 8 (Course 3) | 3 |
| | 15 | | 15 |

| Fourth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| Upper-Division Elective Course 3 | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Degree Progress

- At the end of their second semester in the program, students will have completed ENGL 101, 102, 199, WRIT 191 and 202.
- After three semesters students will have completed nine additional credits of WRIT courses above WRIT 202.
- After four semesters in the program, students will have completed 12 additional credits in WRIT.
- All majors must meet with an English department advisor each semester.
- All majors must meet with an English department advisor to select electives appropriate for their degree and career interests.

## Major Learning Outcomes

### PROFESSIONAL WRITING AND EDITING

Upon successful completion of the BA degree in Professional Writing and Editing, majors will be able to demonstrate the following learning outcomes.

- Students will identify, understand, and explain the major concepts of Professional Writing and Editing.
- Students will develop rhetorical literacies and apply these to linguistic structures and genre conventions across diverse cultures and contexts.
- Students will develop the functional literacies related to digital and print writing and editing and apply them to contexts and audiences appropriately.
- Students will locate, evaluate, and appropriately apply primary and secondary research materials from a variety of sources (e.g., scholarly and professional sources as well as informal print, visual, or digital sources).
- Students will demonstrate the critical literacies, problem-solving skills, and professional behaviors that make a strong writer and editor across contexts, genres, and media (print, visual, aural, digital).

# Psychology

## Degrees Offered

- Bachelor of Arts
- Bachelor of Sciences

Students may not earn both a B.A. and a B.S. in Psychology.

## Nature of the Program

Psychology is a science that emphasizes the principles, methods, and theories that are necessary for a better understanding of human and animal behavior. During their training, our undergraduate students not only acquire the essential knowledge and skills of psychology, but further engage in research, teaching, and/or community service through experiential opportunities.

The Psychology Department at WVU allows students to work toward either a B.A. or B.S. degree, which prepare them for an applied or STEM-focused career, respectively. With guidance from advisors and faculty, individuals tailor their degree choice and experiences for the career paths they choose. Thus, students completing the B.A. or B.S. program are prepared for admission to advanced degree programs in psychology, counseling, social work, medicine, education, business, and law, as well as to pursue immediately a range of service-oriented and science-focused careers.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements. Psychology major requirements include some required classes, but the program is structured to allow considerable flexibility and individualization.

## Our Mission

The mission of the Department of Psychology is to understand and improve psychological and behavioral health, with an emphasis on problems that affect the people of Appalachia.

We advance psychological science and its applications through innovative research, rigorous educational experiences for students, and impactful service to the community. These activities are guided by faculty who are leaders in their fields. At both undergraduate and doctoral levels, we prepare students for an array of careers by fostering critical thinking, effective communication, and an evidence-based understanding of complexity in psychological processes and behavior. We build these skills through coursework and hands-on experiences. Our scholarship and teaching activities integrate multiple perspectives to benefit our local, regional, and global communities.

## Honors Program

The Department of Psychology honors program is designed to provide special enrichment, attention, and recognition for exceptional psychology majors. Admission to the program requires completion of nine hours of psychology, a psychology GPA of 3.5, and an overall GPA of 3.4. Graduation with departmental honors in psychology requires the same GPAs and completion of an honors thesis (three to six hours of PSYC 498). Information about the program is available from the Director of Undergraduate Studies.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/.html) here. Please note that students may not earn a minor in their major field. Psychology majors can also pursue a certificate in Behavior Analysis (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/behavior_analysis/).

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# FACULTY

### CHAIR

- Claire St. Peter - Ph.D. (University of Florida)

### ASSOCIATE CHAIR

- Karen Anderson - Ph.D. (University of Florida)

### DIRECTOR OF GRADUATE STUDIES

- Melissa Blank - Ph.D. (Virginia Commonwealth University)

### DIRECTOR OF UNDERGRADUATE STUDIES

- Sharon Tenenholz - Ph.D. (University of California, Los Angeles)

### DIRECTOR OF RECRUITMENT, ADVISING, AND STUDENT SUCCESS

- Elizabeth Levelle - Ph.D. (West Virginia University)

### PROFESSORS

- Barry A. Edelstein - Ph.D. (University of Memphis)
  Eberly Family Distinguished Professor of Clinical Psychology; Burnout in Intergenerational Caregiving, Older Adult Decision Making
- Amy Fiske - Ph.D. (University of Southern California)
  Late Life Depression and Suicide
- Amy Gentzler - Ph.D. (Kent State University)
  Emotion Regulation and Adjustment in Children and Adolescents, Positive Psychology
- Kevin T. Larkin - Ph.D. (University of Pittsburgh)
  Clinical Health Psychology, Applied Psychophysiology, Cardiovascular Behavioral Medicine
- Kennon A. Lattal - Ph.D. (University of Alabama)
  Centennial Professor; Experimental Analysis of Behavior, History and Philosophy of Psychology, Human-Pet Interactions
- Tracy L. Morris - Ph.D. (University of Mississippi)
  Eberly Distinguished Professor for Outstanding Teaching; Leadership Studies
- Melanie C. Page - Ph.D. (Arizona State University)
  Assistant Vice President for Creative and Scholarly Activity, Quantitative/Developmental Psychology
- Julie Hicks Patrick - Ph.D. (University of Akron)
  Health Disparities, Cognitive Aging, Mid- and Late-Life, Methodology
- Michael Perone - Ph.D. (University of Wisconsin-Milwaukee)
  Positive and Negative Reinforcement, Animal and Human Operant Behavior, Research Methodology
- Claire St. Peter - Ph.D. (University of Florida)
  Eberly Family Professor for Outstanding Public Service; Procedural Fidelity, School-Based Behavior Supports, Observational Measurement

- JoNell Strough - Ph.D. (University of Utah)
  Life-Span Development, Decision Making, Everyday Problem Solving, Gender Development

### ASSOCIATE PROFESSORS

- Karen Anderson - Ph.D. (University of Florida)
  Behavioral Pharmacology, Self-Control and Impulsivity
- Melissa Blank - Ph.D. (Virginia Commonwealth University)
  Behavioral Pharmacology, Nicotine/Tobacco Addiction, Tobacco Use Disparities
- Elisa Krackow - Ph.D. (Binghamton University-SUNY)
  Children and Adults as Witnesses, Developmental Psychopathology
- Elizabeth Levelle - Ph.D. (West Virginia University)
  Lifespan Development, Teaching of Psychology, Academic Advising
- Sharon Tenenholz - Ph.D. (University of California, Los Angeles)
  Visual and Crossmodal Perception, Teaching of Psychology, Curriculum Design, Academic Advising
- Nicholas Turiano - Ph.D. (Purdue University)
  Personality, Health, and Aging

### ASSISTANT PROFESSORS

- Brennan Armshaw - Ph.D. (University of North Texas)
  Behavior Analysis, Behavioral Medicine and Neuromuscular Behavior, Behavior Analysis and Education, Advising and Mentorship
- Ryan Best - Ph.D. (Florida State University)
  Adult Development, Value-based Decision-making, Cognitive Aging
- Mariya Cherkasova - Ph.D. (McGill University)
  Addiction, Psychopharmacology, Reward-related Behavior
- James Cole - Ph.D. (University of Virginia Medical School)
  Sensory and Development Neuroscience, Neuroaesthetics
- P. Raymond Joslyn - Ph.D. (University of Florida)
  Applied Behavior Analysis, Behavioral Education, Crime and Deliquency
- Kathryn Kestner - Ph.D. (Western Michigan University)
  Behavior Analysis, Assessment and Treatment of Challenging Behavior
- Stephanie McWilliams - Ph.D. (West Virginia University)
  Youth Mentorship, Sport and Exercise Psychology, Health Psychology, Behavior Change and Weight Management
- Kathleen Morrison - Ph.D. (University of Tennessee)
  Stress and Neuropsychiatric Disease, Women's Health
- Michelle Roley-Roberts - Ph.D. (University of Toledo)
  Clinical Child/Adolescent Psychology, Childhood Traumatic Stress, Cultural Factors
- Kelly Smith - Ph.D. (West Virginia University)
  Teaching of Psychology, Life-Span Development, Decision Making, Gender Development

### PROFESSORS EMERITI

- Edward C. Caldwell - Ph.D. (Syracuse University)
- Stanley H. Cohen - Ph.D. (Michigan State University)
- Christina Duncan - Ph.D. (Louisiana State University)
- William J. Fremouw - Ph.D. (University of Massachusetts)
- Robert Hawkins - Ph.D. (University of Pittsburgh)
- Katherine Karraker - Ph.D. (Michigan State University)
- Daniel W. McNeil - Ph.D. (University of Alabama)
- Cheryl B. McNeil - Ph.D. (University of Florida)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 20, a MATH SAT of 520, or an ALEKS score of 40.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.  For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 20, a MATH SAT of 520, or an ALEKS score of 40.

- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: completion of PSYC 101 (http://catalog.wvu.edu/search/?P=PSYC%20101) with a C- or higher and eligibility to take PSYC 203 (http://catalog.wvu.edu/search/?P=PSYC%20203).

Major Code: 1466

## Degree Progress

- First-time Freshmen who enter Psychology directly:
  - By the end of their second semester in the major (excluding summer), students must have completed PSYC 101 with a minimum grade of C-, and be eligible to take PSYC 203.
  - By the end of their fourth semester in the program, students must have completed PSYC 203 (http://catalog.wvu.edu/search/?P=PSYC%20203) (with a C- or better) and PSYC 204 (http://catalog.wvu.edu/search/?P=PSYC%20204) (with a C- or better).
- Students who transfer from another major at WVU or another institution:
  - By the end of their third semester in the program, students must have completed PSYC 203 (http://catalog.wvu.edu/search/?P=PSYC%20203) (with a C- or better) and PSYC 204 (http://catalog.wvu.edu/search/?P=PSYC%20204) (with a C- or better).
- All students must maintain a GPA of at least 2.0 in the major and overall.
- All students must meet with their Psychology adviser each semester.

Students who do not meet these benchmarks will be reviewed for removal from the major.

# Psychology, B.A.

Click here to view the Suggested Plan of Study (p. 348)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, College B.A. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.A. Degrees tab on the Eberly College of Arts and Sciences page.

## Departmental Requirements for the B.A. in Psychology

Students may not earn both a B.A. and a B.S. in Psychology.  All students wishing to complete a B.A. must comply with the following:

- **Calculation of Major GPA**: A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of C- in PSYC 101, PSYC 203, and PSYC 204. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.

- **Writing and communication Skills Requirement**: The Psychology Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Residence requirement:**To graduate from WVU with a major in Psychology, a student must have successfully completed (with a passing grade) a minimum of 10 credit hours of 300- and 400-level psychology coursework at WVU. Completion of the following courses does NOT count towards the residency requirement: PSYC 304, PSYC 315, PSYC 490, PSYC 491, PSYC 495, PSYC 497, and PSYC 498.
- **Capstone Requirement**: : The university requires the successful completion of a Capstone course: PSYC 480, PSYC 481, PSYC 485, PSYC 486, PSYC 487, or PSYC 489.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 66 |
| Eberly Edge Requirements | | 15 |
| Psychology Major Requirements | | 39 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, and 8 | | 22 |
| PSYC 191 | First-Year Seminar | 1 |
| General Electives | | 43 |
| Total Hours | | 66 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communications | | 3 |
| EDG 3: Ethics and Civic Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (PSYC 480, PSYC 481, PSYC 485, PSYC 486, PSYC 487, PSYC 489) | | |
| Total Hours | | 15 |

## Psychology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES** | | **27** |
| PSYC 101 | Introduction to Psychology | |
| PSYC 201 | Psychology as a Profession | |
| PSYC 203<br>& 203L | Research Methods and Analysis 1<br>and Research Methods and Analysis 1 Laboratory | |
| PSYC 204<br>& 204L | Research Methods and Analysis 2<br>and Research Methods and Analysis 2 Laboratory | |
| PSYC 241 | Introduction to Human Development | |
| PSYC 251 | Introduction to Social Psychology | |
| PSYC 281 | Introduction to Psychological Disorders | |
| PSYC 301<br>& 301L | Biological Foundations of Behavior<br>and Biological Foundations of Behavior Laboratory | |
| PSYC 302<br>& 302L | Behavior Principles<br>and Behavior Principles Laboratory | |
| **SOCIOCULTURAL AWARENESS REQUIREMENT** | | **3** |
| Select one course from the following list: | | |
| PSYC 332 | Multiculturalism in Psychology | |
| PSYC 364 | Psychology of Adjustment | |

| | | |
|---|---|---|
| PSYC 368 | Ethics and Practice in Behavior Analysis | |
| PSYC 379 | Community Psychology | |
| PSYC 380 | Health Psychology | |
| PSYC 382 | Exceptional Children | |
| PSYC 445 | Health Disparities Across the Lifespan | |
| **UPPER-DIVISION PSYCHOLOGY ELECTIVES** | | **6** |
| Alternate 300 or 400-level PSYC courses [*] | | |
| **CAPSTONE EXPERIENCE** | | **3** |
| Select one of the following options: | | |
| PSYC 480 | Psychology Teaching Apprenticeship Capstone | |
| PSYC 481 | Psychology Field Experience Capstone | |
| PSYC 485 | Psychology Research Capstone | |
| PSYC 486 | Behavior Analysis Field Experience Capstone | |
| PSYC 487 | Behavior Analysis Research Experience | |
| PSYC 489 | Psychology Honors Thesis | |
| Total Hours | | 39 |

*****
Excluding PSYC 304, 315, 490, 491, 495, 497, or 498.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 191 | 1 | PSYC 241 (GEF 8) | 3 |
| PSYC 101 (GEF 4) | 3 | ENGL 101 (GEF 1) | 3 |
| EDG 1: Data and Society | 3 | EDG 2: Effective and Civil Communication | 3 |
| GEF 3 | 3 | GEF 2 | 4 |
| GEF 5 | 3 | General Elective | 2 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 203 & 203L | 3 | PSYC 204 & 204L | 3 |
| PSYC 251 (GEF 8) | 3 | PSYC 281 (GEF 7) | 3 |
| ENGL 102 (GEF 1) | 3 | PSYC 201 | 1 |
| EDG 3: Ethics and Civil Responsibility | 3 | GEF 8[*] | 3 |
| General Elective | 3 | EDG 4: Global and Regional Perspectives | 3 |
| | | General Elective | 2 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 302 & 302L | 4 | PSYC 301 & 301L | 4 |
| ARSC 380 (EDG 5) | 3 | General Elective[*] | 3 |
| GEF 6 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 2 | General Elective | 2 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Sociocultural Awareness Course | 3 | PSYC Capstone (EDG 6) | 3 |
| PSYC Upper-Division Elective | 3 | PSYC Upper-Division Elective | 3 |

| | | |
|---|---|---|
| General Elective | 3 General Elective | 3 |
| General Elective | 3 General Elective | 3 |
| General Elective | 3 General Elective | 3 |
| | 15 | 15 |

Total credit hours: 120

*

Students completing a minor, a second major, or dual degree already fulfill GEF 8.

## Major Learning Outcomes

### PSYCHOLOGY B.A.

Upon successful completion of the **B.A. in Psychology**, program majors will be able to:

1. Summarize key concepts, basic principles, theories, and methodologies of major areas of psychology, including:
   a. Developmental psychology
   b. Social Psychology
   c. Psychopathology
   d. Behavior analysis
   e. Behavioral neuroscience
2. Describe and discuss advanced principles and research findings in areas of psychology relevant to one's professional and personal goals.
3. Demonstrate critical thinking, by:
   a. applying scientific principles of psychology to analyze and solve basic and applied problems.
   b. critically evaluating primary source research in psychology.
4. Design, conduct, analyze, and interpret simple psychological research studies.
5. Employ ethical standards in psychological research, applied practice, and academic pursuits.
6. Communicate scientific information in writing for both professional audiences (using APA format) and general audiences.
7. Create and deliver effective oral presentations for both professional and general audiences.
8. Recognize and acknowledge the impact of individual and sociocultural diversity on human behavior and outcomes.
9. Develop a professional direction, and cultivate interpersonal, self-regulation, and leadership skills that will facilitate this direction.

# Psychology, B.S.

Click here to view the Suggested Plan of Study (p. 352)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, College B.S. requirements, major requirements, and electives to total a minimum of 120 hours. For complete details on these requirements, visit the B.S. Degrees tab on the Eberly College of Arts and Sciences page (p. 346).

## Departmental Requirements for the B.S. in Psychology

Students may not earn both a B.A. and a B.S. in Psychology.  Students wishing to graduate with a B.S. in Psychology must comply with the following:

- **Calculation of Major GPA:** A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of C- in PSYC 101, PSYC 203, PSYC 204, PSYC 301, and PSYC 302. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills requirement:** The Psychology Bachelor of Science is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Residence Requirement:** To graduate from WVU with a major in Psychology, a student must have successfully completed (with a passing grade) a minimum of 10 credit hours of 300- and 400-level psychology coursework at WVU. Completion of the following courses does NOT count towards the residency requirement: PSYC 304, PSYC 315, PSYC 490, PSYC 491, PSYC 495, PSYC 497, and PSYC 498.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course: PSYC 480, PSYC 481, PSYC 485, PSYC 486, PSYC 487, or PSYC 489.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 45 |
| Eberly Edge Requirements | | 15 |
| Psychology Major Requirements | | 60 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5 and 6 | | 12 |
| PSYC 191 | First-Year Seminar | 1 |
| General Electives | | 32 |
| Total Hours | | 45 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts and Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (PSYC 480, PSYC 481, PSYC 485, PSYC 486, PSYC 487, PSYC 489) | | |
| Total Hours | | 15 |

## Psychology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS** * | | **19** |
| MATH 150 | Applied Calculus | |
| or MATH 155 | Calculus 1 | |

Select 2 pairs of courses:

| | | |
|---|---|---|
| BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| & BIOL 117 | and Introductory Physiology | |
| & BIOL 117L | and Introductory Physiology Laboratory | |
| CHEM 111 | Survey of General, Organic, and Biological Chemistry 1 | |
| & 111L | and Survey of Chemistry 1 Laboratory | |
| & CHEM 112 | and Survey of General Organic Biological Chemistry 2 | |
| & CHEM 112L | and Survey of Chemistry 2 Laboratory | |
| CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| PHYS 101 | Introductory Physics 1 | |
| & 101L | and Introductory Physics 1 Laboratory | |
| & PHYS 102 | and Introductory Physics 2 | |
| & PHYS 102L | and Introductory Physics 2 Laboratory | |
| PHYS 111 | General Physics 1 | |
| & 111L | and General Physics 1 Laboratory | |
| & PHYS 112 | and General Physics 2 | |
| & PHYS 112L | and General Physics 2 Laboratory | |
| SUST 101 | Sustainable Earth | |
| & 101L | and Sustainable Earth Laboratory | |
| & SUST 201 | and Earth System Science | |
| & SUST 201L | and Earth System Science Laboratory | |
| SUST 101 | Sustainable Earth | |
| & 101L | and Sustainable Earth Laboratory | |
| & SUST 207 | and Climate System Science | |
| & SUST 207L | and Climate System Science Laboratory | |
| **CORE COURSES** | | **27** |
| PSYC 101 | Introduction to Psychology | |
| PSYC 201 | Psychology as a Profession | |
| PSYC 203 | Research Methods and Analysis 1 | |
| & 203L | and Research Methods and Analysis 1 Laboratory | |
| PSYC 204 | Research Methods and Analysis 2 | |
| & 204L | and Research Methods and Analysis 2 Laboratory | |
| PSYC 241 | Introduction to Human Development | |
| PSYC 251 | Introduction to Social Psychology | |
| PSYC 281 | Introduction to Psychological Disorders | |
| PSYC 301 | Biological Foundations of Behavior | |
| & 301L | and Biological Foundations of Behavior Laboratory | |
| PSYC 302 | Behavior Principles | |
| & 302L | and Behavior Principles Laboratory | |
| **EMPIRICAL PSYCHOLOGY REQUIREMENT** | | **3** |
| Select one course from the list below: | | |
| PSYC 402 | Advanced Behavior Principles | |
| PSYC 423 | Cognition and Memory | |
| PSYC 425 | Perception | |
| PSYC 426 | Physiological Psychology | |
| PSYC 427 | Neuroscience of Sleep | |
| PSYC 428 | Hormones and Behavior | |
| PSYC 429 | Clinical Neuroscience | |
| PSYC 474 | Applied Behavior Analysis | |
| **RESEARCH REQUIREMENT** | | **2** |
| Complete at least 2 credits of one of the following: | | |
| PSYC 215 | Research Exploration in Psychology | |

| | | |
|---|---|---|
| PSYC 495 | Independent Study | |
| PSYC 497 | Research | |
| **UPPER-DIVISION PSYCHOLOGY ELECTIVES** | | **6** |
| Alternate 300- or 400-level PSYC courses ** | | |
| **CAPSTONE EXPERIENCE** | | **3** |
| Select one option from the list below: | | |
| PSYC 480 | Psychology Teaching Apprenticeship Capstone | |
| PSYC 481 | Psychology Field Experience Capstone | |
| PSYC 485 | Psychology Research Capstone | |
| PSYC 486 | Behavior Analysis Field Experience Capstone | |
| PSYC 487 | Behavior Analysis Research Experience | |
| PSYC 489 | Psychology Honors Thesis | |
| Total Hours | | 60 |

*****

STEM Foundation courses are common to STEM majors and excluded from the 50% count of upper-division courses.

******

Excluding PSYC 304, 315, 490, 491, 495, 497, and 498.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 191 | 1 | PSYC 241 (GEF 8) | 3 |
| PSYC 101 (GEF 4) | 3 | EDG 2: Effective and Civil Communication | 3 |
| EDG 1: Data and Society | 3 | Science Course 2 (GEF 8) | 4 |
| MATH 150 (GEF 3) | 3 | ENGL 101 (GEF 1) | 3 |
| GEF 2 (Science Course 1) | 4 | General Elective | 3 |
| General Elective | 1 | | |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 203 & 203L | 3 | PSYC 204 & 204L | 3 |
| PSYC 281 (GEF 7) | 3 | PSYC 251 (GEF 8) | 3 |
| PSYC 201 | 1 | Science 2 Course 2 (GEF 8) | 4 |
| EDG 3: Ethics and Civil Responsibility | 3 | EDG 4: Global and Regional Perspectives | 3 |
| Science 2 Course 1 (GEF 8) | 4 | GEF 6 | 3 |
| | 14 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 301 & 301L | 4 | PSYC 302 & 302L | 4 |
| ENGL 102 (GEF 1) | 3 | ARSC 380 (EDG 5) | 3 |
| Research Requirement | 1 | Research Requirement | 1 |
| GEF 5 | 3 | General Elective | 3 |
| General Elective | 4 | General Elective | 3 |
| | 15 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Empirical Course | 3 | PSYC Upper-Division Elective | 3 |
| PSYC Upper-Division Elective | 3 | Capstone (EDG 6) | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |

| | | |
|---|---|---|
| General Elective | 3 General Elective | 3 |
| | 15 | 15 |

Total credit hours: 120

## Major Learning Outcomes

### PSYCHOLOGY B.S.

Upon successful completion of the **B.S. in Psychology**, program majors will be able to:

1. Summarize key concepts, basic principles, theories, and methodologies of major areas of psychology, including:
   a. Developmental psychology
   b. Social Psychology
   c. Psychopathology
   d. Behavior analysis
   e. Behavioral neuroscience
2. Describe and discuss advanced principles and research findings in areas of psychology relevant to one’s professional and personal goals.
3. Demonstrate critical thinking, by:
   a. applying scientific principles of psychology to analyze and solve basic and applied problems.
   b. critically evaluating primary source research in psychology.
4. Demonstrate research skills by:
   a. Designing, conducting, analyzing, and interpreting simple psychological research studies.
   b. Engaging with research design, analysis, and interpretation related to advanced principles in psychological science.
   c. Working both independently and collaboratively on research projects that contribute to the mission of the psychology department.
5. Employ ethical standards in psychological research, applied practice, and academic pursuits.
6. Communicate scientific information in writing for both professional audiences (using APA format) and general audiences.
7. Create and deliver effective oral presentations for both professional and general audiences.
8. Develop a professional direction, and cultivate interpersonal, self-regulation, and leadership skills that will facilitate this direction.

# Regents Bachelor of Arts

## Degree Offered

- Regents Bachelor of Arts (R.B.A.)

## Nature of the Program

West Virginia University offers the Regents Bachelor of Arts (R.B.A.) degree through the Multidisciplinary Studies program in the Eberly College of Arts and Sciences. R.B.A. is an innovative online degree designed to meet the unique needs of many working adults and non-traditional students. Specifically, the R.B.A. curriculum includes a set of general education requirements as well as an individualized curriculum that can fit the needs of each student. The flexibility of the R.B.A. curriculum allows it to be tailored to each student's goals and aspirations, whether they are preparing for a graduate degree, transitioning into a new career, a promotion in an established career, or fulfilling a life-long goal of completing an undergraduate degree.

R.B.A. students are eligible to pursue any Minors (http://catalog.wvu.edu/undergraduate/minors/#minorsofferedtext) offered at West Virginia University. Moreover, the Regents Bachelor of Arts (R.B.A.) offers unique opportunities not available through other traditional degree programs. This includes F-Forgiveness (https://rba.wvu.edu/degree-info/f-forgiveness-policy/) of failing grades received four years or more prior to admission/readmission to the program. Additionally, eligible students may receive college credit for prior professional and military experiences via our credit for prior learning options (https://rba.wvu.edu/credit-for-prior-learning/). Pursuing the R.B.A. program and utilizing the unique opportunities available through the program provides students with a flexible and cost-effective path to an undergraduate degree.

## Program Contact Information

**Regents Bachelor of Arts**

Phone: (304) 293-4722

E-mail: rba@mail.wvu.edu

Department Website: https://mds.wvu.edu/ (http://mds.wvu.edu/)

# FACULTY

## ASSOCIATE PROFESSORS

- Louis Slimak - Ph.D. (Purdue University)
- Carol Zwickel - Ph.D. (West Virginia University)

## ASSISTANT PROFESSORS

- Thaddeus Herman - Ph.D. (University of Illinois)
- Jayme Scally - Ph.D. (University of York)
- Andrea Soccorsi - M.A. (West Virginia University)
- Nevena Stojanovic - Ph.D. (West Virginia University)

## ASSOCIATE PROFESSORS EMERITI

- Renee K. Nicholson - M.F.A. (West Virginia University)

# Admissions for 2026-2027

The Regents BA program is designed for adult learners/non-traditional students. **All students must have graduated from high school at least three years prior to admission to the program**.

- First Time Freshmen are admitted directly into the Regents BA program.
- Students admitted from another major within the West Virginia University system are admitted directly into the Regents BA program. Students must have a GPA of 2.0 after F-Forgiveness (https://rba.wvu.edu/degree-info/f-forgiveness-policy/) has been applied. Students who think they may qualify for F-Forgiveness, should meet with an adviser.
- Transfer students from another institution are admitted directly into the Regents BA program. Students must have a GPA of 2.0 after F-Forgiveness (https://rba.wvu.edu/degree-info/f-forgiveness-policy/) has been applied. Students who think they may qualify for F-Forgiveness, should meet with an adviser.
- Students who have earned any Associate of Arts (AA), Associate of Science (AS), or Associate of Applied Science (AAS) degree are eligible for admission.
- Students who are concurrently earning another major or another degree are not admissible to the Regents B.A.
- Students who have completed a bachelor's degree from a regionally accredited institution are not eligible for admission into the Regents BA program. Students may not earn a Regents B.A. as a second degree.

**Note:**

- USDE Credits: Eligible students should inquire about the possibility of applying credit hours from institutions which are recognized by the United States Department of Education (USDE) but are not regionally accredited.
- Major Code: 14C8

# Degree Requirements

- **General Education:**
    - Communication Skills (6 hours) Outcome: Courses in this area must provide the student with skills and knowledge to be able to communicate effectively in a variety of formats.
    - Humanities (6 hours) Outcome: Courses in this area must demonstrate knowledge in the interdisciplinary study and philosophy of diverse cultures.
    - Social Science (6 hours) Outcome: Courses will demonstrate understanding of the development, diversity, and complexity of human behavior and institutions.
    - Natural or Physical Science (3 hours) Outcome: Courses in this area must provide an understanding of the physical world through the scientific method (understanding of the basic facts, principles, theories and methods of science).
    - Mathematics, Statistics, or Computer Science (3 hours)
    - Additional Mathematics, Computer Science, Statistics, or Science (3 hours)
- **Required Major Courses:** MDS 311 Professional Development (1 hour); MDS 411 Capstone (1 hour).
- **Residency:** Students must complete a residency requirement of 24 hours of coursework taken at one or more institutions within West Virginia's public higher education system. Six of the 24 hours must be taken at WVU.
- **Portfolios:** Students may earn credit through academic portfolios for prior learning and experiences.
- **Grade Point Average:** Students must have a minimum GPA of 2.0 to be eligible for graduation.

- **Grade Point Average in the Major:** A minimum GPA of a 2.0 is required in all courses applied to major requirements. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| **GENERAL EDUCATION:** | | |
| **Communication Skills** | | **6** |
| Select courses fulfilling GEF 1 or courses fulfilling this outcome and approved by an advisor. | | |
| **Humanities** | | **6** |
| Select courses fulfilling GEF 5 or 6, or courses fulfilling this outcome and approved by an advisor. | | |
| **Social Science** | | **6** |
| Select courses fulfilling GEF 4 or 7, or courses fulfilling this outcome and approved by an advisor. | | |
| **Natural or Physical Science** | | **3** |
| Select courses fulfilling GEF 2, or courses fulfilling this outcome and approved by an advisor. | | |
| **Mathematics, Statistics, or Computer Science** | | **3** |
| Select courses fulfilling GEF 3, or courses fulfilling this outcome and approved by an advisor. | | |
| **Additional Mathematics, Computer Science, Statistics, or Science (3 credits)** | | **3** |
| Select an additional course fulfilling GEF 2, GEF 3, or courses fulfilling this outcome approved by an advisor. | | |
| **UPPER-DIVISION COURSES** | | **30** |
| MDS 311 | RBA Professional Development | |
| MDS 411 | RBA Capstone | |
| Select 28 additional credits at the 300 or 400 level | | |
| **ELECTIVES** | | **63** |
| Select any courses at any level | | |
| Total Hours | | 120 |

## Degree Progress

- Regents BA students are expected to maintain satisfactory progress toward degree completion as determined in consultation with their advisor.
- Regents BA students are  expected to enroll in coursework which applies toward completing the degree requirements of the program.
- Regents BA students are expected to complete all coursework with a D- or higher and maintain a minimum 2.0 GPA each term. These expectations ensure that students remain in good academic standing (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#probationsuspensiontext) and remain on track for graduation.

## Policies

### F-FORGIVENESS

The R.B.A. degree offers unique opportunities not available through traditional degree programs. F-forgiveness is available to students for failing grades that were obtained four years or more prior to admission/readmission to the program.  This policy applies to grades earned at WVU and those that have been transferred from another institution.

F-Forgiveness benefits students only while they are enrolled in the R.B.A. program. Thus, if students benefit from F-Forgiveness but later elect to transfer to another major, then all Fs that were forgiven will be re-instituted.

### CREDIT FOR PRIOR LEARNING

Students may obtain college credit for previous professional and military experiences via several credit for prior learning options in the R.B.A. degree. Eligible options include credit for 1) work/career and other academic experiences by developing and submitting a portfolio for credit evaluation, 2) professional certifications submitted for credit evaluation, 3) JST and transcripts from non-regionally accredited institutions. These opportunities provide many students with an accelerated path to an undergraduate degree.

The program recognizes the fact that many students have accumulated a wealth of work and life experiences that may be comparable to the content of some courses offered at WVU. Thus we encourage our students to take advantage of this unique opportunity if they have already achieved similar learning outcomes through their work experience. Yet, it is important for students to understand that they do not receive credits based simply on years of service in their respective fields, instead they receive credits based on their ability to articulate how their varied career experiences has helped them to acquire knowledge that is equivalent or similar to a specific course.

For instructions on how to submit documentation for prior learning credits, please speak with your R.B.A. academic adviser following your admission to the university.

## Major Learning Outcomes

### REGENTS BACHELOR OF ARTS

Due to the unique nature of the Regents BA program, the learning outcomes for Regents BA students include four general education areas outlined below by the Association of American Colleges and Universities (AACU) LEAP Essential Learning Outcomes (https://registrar.wvu.edu/curriculum-catalog/general-education-foundations-gef/gef-transition/leap-essential-learning-outcomes/). In addition, the program has three more learning outcomes associated with its required coursework.

Upon completion of the RBA degree, students will demonstrate the following:

1. **Knowledge of Human Cultures and the Physical and Natural World** - *Measured by completion of Regents BA Natural/Physical Science, Mathematics, Social Science, and Humanities general education requirements*
2. **Intellectual and Practical Skills** - *Measured by completion of Regents BA Communication Skills, Natural/Physical Science, and Mathematics general education requirements*
3. **Personal and Social Responsibility** - *Measured by completion of Regents BA Social Science and Humanities general education requirements*
4. **Integrative and Applied Learning** - *Measured by completion of Regents BA Communication Skills, Natural/Physical Science, and Mathematics general education requirements*
5. Reflect on the relevance of prior learning experiences to their current academic pursuits.
6. Communicate their unique knowledge, strengths and skills acquired through the RBA degree.
7. Integrate their coursework with future goals and aspirations.

The Regents BA program assesses and measures these outcomes through completion of an e-portfolio.

# Scientific and Technical Writing, B.S.

## Degree Offered

- Bachelor of Arts in Professional Writing and Editing
- Bachelor of Sciences in Scientific and Technical Writing

Students may not earn both a B.A. and a B.S. in Writing Studies.

## Nature of the Program

With a BA or BS degree in Writing Studies, you will learn to translate complex information into clear prose for diverse audiences and analyze how information flows through organizational structures. As you apply these skills in a capstone internship with a local business, non-profit, or government agency, you will see your writing come alive.

Regardless of what subjects you're interested in and what careers you're considering post-graduation, the BA degree in Professional Writing and Editing or the BS degree in Scientific and Technical Writing will improve the writing and communication skills that employers value.

When choosing between the BA degree in Professional Writing and Editing or the BS degree in Scientific and Technical Writing, individuals typically consider the path that most closely matches their future plans. The BA degree is well suited to students who are interested in the needs of an increasingly global society and want to make a difference as writers or editors for nonprofits, government agencies, and other professions. The BA's emphasis on rhetorical, cultural, and linguistic competencies also prepares students for advanced academic work in a range of fields, including the humanities and legal studies. The BS degree is well suited to students who have an interest in science, healthcare, or technology and want to pursue professional careers where they convey complex topics clearly to the public. The BS degree also prepares students for the writing and research skills they need for advanced academic work.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements. Both the BA in Professional Writing and Editing and the BS in Scientific and Technical Writing are SpeakWrite (https://speakwrite.wvu.edu/) certified programs.

## Minors

All students have the possibility of earning one or more minors; follow the link for a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that students may not earn a minor in their major field.

## Publications

*Calliope*, a publication of WVU student writing, is sponsored by the Department of English and the English Honorary and Club.

*Mountaineer Undergraduate Research Review,* publishes outstanding research articles, literature reviews, and policy briefs principally authored by undergraduates of any major at West Virginia University. MURR is a student-led publication housed within the West Virginia University Office of Undergraduate Research.

*Resilience* is a digital, peer-reviewed journal of the Environmental Humanities. It provides a forum for scholars from across the humanities disciplines to speak to one another about their shared interest in environmental issues and to engage in an evolving conversation about what the humanities contributes to living and thinking sustainably in a world of dwindling resources.

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirement prior to being admitted to the major: a 2.0 GPA in all ENGL classes taken.

**Major Codes:**

B.S. Scientific and Technical Writing = **14F5**

B.A. Professional Writing and Editing = **14F4**

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum 120 hours.

## Departmental Requirements for the B.S. in Scientific and Technical Writing

- **Calculation of GPA in the major**:  Students must earn a grade of C- or better in all courses that are counted toward the STW Major Requirement plus. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Writing and Communication Requirement:** The Scientific and Technical Writing B.S. students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses** ™.

- **Capstone Requirement**: The university requires the successful completion of a Capstone course. Scientific and Technical Writing majors must complete three credits of WRIT 491A to meet this requirement.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 56 |
| Eberly Edge Requirements | | 15 |
| Scientific and Technical Writing Requirements | | 49 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6 and 7 | | 18 |
| WRIT 191 | | 1 |
| General Electives | | 37 |
| Total Hours | | 56 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: EEDG High Impact Experience (WRIT 480) | | |
| Total Hours | | 15 |

## Scientific and Technical Writing Major Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM FOUNDATIONS*** | | **19** |
| **Mathematics:** | | |
| MATH 150 | Applied Calculus | |
| or MATH 155 | Calculus 1 | |
| **Life and Natural Sciences:** | | |
| Select 2 pairs: | | |
| BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| & BIOL 117 | and Introductory Physiology | |
| & BIOL 117L | and Introductory Physiology Laboratory | |
| CHEM 111 | Survey of General, Organic, and Biological Chemistry 1 | |
| & 111L | and Survey of Chemistry 1 Laboratory | |
| & CHEM 112 | and Survey of General Organic Biological Chemistry 2 | |
| & CHEM 112L | and Survey of Chemistry 2 Laboratory | |
| or CHEM 115 | Fundamentals of Chemistry 1 | |
| & 115L | and Fundamentals of Chemistry 1 Laboratory | |
| & CHEM 116 | and Fundamentals of Chemistry 2 | |
| & CHEM 116L | and Fundamentals of Chemistry 2 Laboratory | |
| PHYS 101 | Introductory Physics 1 | |
| & 101L | and Introductory Physics 1 Laboratory | |
| & PHYS 102 | and Introductory Physics 2 | |
| & PHYS 102L | and Introductory Physics 2 Laboratory | |

| | | |
|---|---|---|
| or PHYS 111 | General Physics 1 | |
| & 111L | and General Physics 1 Laboratory | |
| & PHYS 112 | and General Physics 2 | |
| & PHYS 112L | and General Physics 2 Laboratory | |
| SUST 101 | Sustainable Earth | |
| & 101L | and Sustainable Earth Laboratory | |
| & SUST 201 | and Earth System Science | |
| & SUST 201L | and Earth System Science Laboratory | |
| or SUST 101L | Sustainable Earth Laboratory | |
| & SUST 207 | and Climate System Science | |
| & SUST 207L | and Climate System Science Laboratory | |
| **CORE COURSES** | | **12** |
| WRIT 202 | Introduction to Writing Studies | |
| WRIT 301 | Writing Theory and Practice | |
| WRIT 302 | Editing | |
| WRIT 304 | Business and Professional Writing | |
| or WRIT 305 | Technical Writing | |
| **TOPICAL AREA** | | **6** |
| Select one area | | |
| Science and Health | | |
| WRIT 407 | The Writing of Health and Medicine | |
| Public Writing | | |
| ENGL 403 | Proposal and Grant Writing | |
| & WRIT 450 | and Intro to Forensic Linguistics | |
| Personalized Topic | | |
| Select 2 ENGL or WRIT courses in consultation with an adviser | | |
| **UPPER-DIVISION ELECTIVES** * | | **9** |
| Select three ENGL or WRIT courses at the 300 level not taken for the Core or Topical requirements | | |
| WRIT 303 | Multimedia Writing | |
| WRIT 304 | Business and Professional Writing | |
| WRIT 305 | Technical Writing | |
| WRIT 306 | Topics in Digital Humanities | |
| ENGL 309 | Approaches to Teaching Composition | |
| ENGL 312 | Creative Writing Workshop: Fiction | |
| ENGL 314 | Creative Writing Workshop: Non-Fiction | |
| ENGL 321 | History of the English Language | |
| ENGL 329 | Topics in English Language | |
| ENGL 331 | Topics in Genre | |
| ENGL 338 | Environmental Criticism | |
| ENGL 383 | Introduction to Cultural Studies | |
| WRIT 407 | The Writing of Health and Medicine | |
| WRIT 408 | Rhetoric and Science | |
| WRIT 450 | Intro to Forensic Linguistics | |
| WRIT 460 | Appalachian Englishes | |
| **CAPSTONE** | | **3** |
| WRIT 480 | Capstone Internship | |
| Total Hours | | 49 |

*****

STEM foundation courses are common to most STEM majors and excluded from the calculation of the percentage of upper-division courses.

******

Students may select up to 3 credits outside ENGL or WRIT courses with permission from a WRIT adviser.

## Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (F1 Course 1) | 3 | ENGL 102 (F1 Course 2) | 3 |
| ENGL 191 | 1 | Science Course 2 | 4 |
| EDG 1: Data and Society | 3 | EDG 2: Effective and Civil Communication | 3 |
| SCIENCE COURSE 1 | 4 | MATH 150 (F3) | 3 |
| GEF 4 | 3 | General Elective | 2 |
| General Elective | 1 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WRIT 202 | 3 | WRIT 301 | 3 |
| WRIT 305 or 304 | 3 | WRIT 302 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | EDG 4: Global and Regional Perspectives | 3 |
| Science Course 3 | 4 | Science Course 4 | 4 |
| General Elective | 2 | General Elective | 2 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARSC 380 (EDG 5) | 3 | WRIT 480 ( EDG 6) | 3 |
| Topical Area Course 1 | 3 | Topical Area Course 2 | 3 |
| Upper-Division Elective Course 1 | 3 | Upper-Division Elective Course 3 | 3 |
| Upper-Division Elective Course 2 | 3 | GEF 6 | 3 |
| GEF 5 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| General Elective | 3 | GEF 7 | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Degree Progress

- At the end of their second semester in the program, students will have completed ENGL 101, 102, 191, 199, and WRIT 202.
- After three semesters students will have completed 9 additional credits of WRIT courses above WRIT 202.
- After four semesters in the program, students will have completed 12 additional credits in WRIT.
- All majors must meet with an English department adviser each semester
- All majors must meet with an English department adviser to select electives appropriate for their degree and career interests.

## Major Learning Outcomes

### SCIENTIFIC AND TECHNICAL WRITING

Upon successful completion of the BS degree in Scientific and Technical Writing, majors will be able to demonstrate the following learning outcomes.

- Students will identify, understand, and explain the major concepts of Scientific and Technical Writing.
- Students will develop rhetorical literacies and apply these to linguistic structures and genre conventions across diverse cultures and contexts.
- Students will develop the functional literacies related to digital and print writing and editing and apply them to contexts and audiences appropriately.

- Students will understand scientific principles relevant to the field as they locate, evaluate, and appropriately apply primary and secondary research materials from a variety of sources (e.g., scholarly and professional sources as well as informal print, visual, or digital sources).
- Students will demonstrate the critical literacies, problem-solving skills, and professional behaviors that make a strong scientific and technical writer across genres and media (print, visual, aural, digital).

# Social Studies/Secondary Education, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

Students who want to become secondary Social Studies teachers (grades 5-Adult) complete a series of Secondary Education courses, requirements for General Education Foundations (GEF) components that are related to the area of specialization, and courses specific to the area of specialization: Social Studies, Grade 5-Adult.

The program boasts a clear set of research-based program goals and carefully sequenced learning experiences. Students will learn to integrate what one teaches with how it is taught and will receive more than 1,000 hours of experience in public school classrooms. The program functions in close collaboration with exemplary local public schools and has selective and rigorous standards for admission and retention of students as well as rigorous performance requirements that are relevant to effective teaching practice. When students enter into their professional education coursework, they will be on track to complete a year-long residency placement.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field.

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24-60 hours must meet the following requirement: 2.5 overall GPA.
- Students transferring from another WVU major or from another institution with 61 or more hours or more must meet the following requirement: 2.75 overall GPA.

Major Code: 1491

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 credit hours.

## Departmental Requirements for the B.A. in Social Studies/Secondary Education

Students wishing to graduate with a degree in Social Studies/Secondary Education must abide by the following rules:

- **Calculation of the GPA in the major**: Students must earn a minimum grade of C- in all courses applied to major requirements, and a minimum cumulative grade point average of 2.75. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills**: The Social Studies/Secondary Education program is a **SpeakWrite Affiliated Program,** committed to fostering and assessing student's written, verbal, visual, and mediated communication skills. The Social Studies major requires its Bachelor of Arts program graduates to complete ENGL 101 and ENGL 102 (or ENGL 103), HIST 250, HIST 464, Hist 300/400 (social studies elective), Hist 300/400 level in the African, Asia, Latin American concentration (social studies elective).
- **WV State Certification Requirements**:
  - PRAXIS II #5081 Social Studies Content Knowledge (NOTE: Successful completion of this assessment is required prior to Residency 1; scores must be received prior to obtaining a residency teaching permit.)
  - edTPA Teacher Performance Assessment – a three-part performance exam during Residency 2. NOTE: Successful completion of this assessment is required for program completion.
  - Teacher candidates complete field experience hours in middle and high schools while completing professional education coursework. During the final year of the program, teacher candidates are placed in an appropriate school to complete their residency experience. The School of Education in the College of Applied Human Sciences coordinates the placement and supervision of teacher candidates as they engage in these professional experiences.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 15 |
| Eberly Edge Requirements | | 9 |
| Social Studies/Secondary Education Major Requirements | | 96 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 3, 6 | | 12 |
| HIST 191 | First-Year Seminar | 1 |
| General Electives | | 2 |
| Total Hours | | 15 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication (C&I 453) | | |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (SUST 102) | | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (C&I 491) | | |
| Total Hours | | 9 |

## Social Studies/Secondary Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| History Requirement: | | 18 |
| HIST 152 | Growth of the American Nation to 1865 | |
| HIST 153 | Making of Modern America: 1865 to the Present | |
| HIST 179 | World History to 1500 | |
| HIST 180 | World History Since 1500 | |
| HIST 250 | West Virginia | |
| HIST 464 | American Foreign Relations 1941 to Present | |
| Economics Requirement: | | 6 |
| ECON 201 | Principles of Microeconomics | |
| ECON 202 | Principles of Macroeconomics | |
| Geography Requirement: | | 7 |
| SUST 102 | Global Sustainability | |
| and: | | |
| SUST 250 | Digital Earth and GIS | |
| SUST 250L | Digital Earth and GIS Laboratory | |
| or: | | |
| SUST 207 | Climate System Science | |
| SUST 207L | Climate System Science Laboratory | |
| Political Science Requirement: | | 6 |
| POLS 102 | Introduction to American Government | |
| POLS 220 | State and Local Government | |
| Psychology Requirement: | | 3 |
| PSYC 101 | Introduction to Psychology | |
| Sociology and Anthropology Requirement: | | 6 |
| ANTH 105 | Introduction to Anthropology | |
| SOC 101 | Introduction to Sociology | |
| Social Studies Electives: | | 6 |
| HIST (Non-Western) at the 300-Level or above : | | |
| HIST 300 | Greece and Rome | |
| HIST 304 | History of Sacred Places | |
| HIST 319 | Myth and Culture in Pre-colonial Africa | |
| HIST 320 | Pre-Colonial Africa | |
| HIST 321 | Colonial Africa and Independence | |
| HIST 325 | Modern China | |
| HIST 326 | Modern Japan | |
| HIST 348 | The International Middle East | |
| HIST 350 | The Aztec, Maya, and Inca | |
| HIST 365 | The Vietnam War | |
| HIST 370 | Latin America and the World | |
| HIST 402 | Greece: From Troy to Alexander | |
| HIST 403 | Rome: From Romulus to Zenobia | |
| HIST 427 | East Africa to 1895 | |
| HIST 428 | East Africa Since 1895 | |
| HIST 433 | West Africa to 1885 | |
| HIST 434 | West Africa from 1885 | |
| HIST 435 | History of Chinese Thought | |
| HIST 437 | Africa in World History | |
| HIST 439 | History of Modern Mexico | |
| HIST 440 | Mexican Law from Montezuma to El Chapo | |
| HIST at the 300-Level or above | | |

| | | |
|---|---|---|
| **UNDERGRADUATE PROFESSIONAL EDUCATION REQUIREMENTS:** | | **41** |
| EDUC 200 | Professional Inquiry in Education | |
| EDP 301 | Learning in PreK-Adult Educational Settings | |
| C&I 324 | Teaching Language Arts: Secondary School | |
| C&I 453 | Disciplinary Foundations for Social Studies Teaching | |
| C&I 454 | Teaching Social Studies: Secondary School | |
| C&I 489 | Identity and Cultural Diversity in the Classroom | |
| SPED 404 | Special Education in Contemporary Society | |
| SPED 460 | Differentiation of Instruction | |
| C&I 490 | Teaching Practicum | |
| C&I 491 | Professional Field Experience (Residency 1) | |
| C&I 491 | Professional Field Experience (Residency 2) | |
| **CAPSTONE REQUIREMENT:** | | **3** |
| EDUC 485 | Residency/Technology Capstone in Secondary Education | |
| Total Hours | | 96 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | HIST 153 (GEF 8) | 3 |
| GEF 3 | 3 | HIST 179 (F 7) | 3 |
| SUST 102 (EDG 4) | 3 | POLS 102 (GEF 8) | 3 |
| HIST 152 (GEF 5) | 3 | PSYC 101 (GEF 4) | 3 |
| HIST 191 | 1 | EDG 3:Ethics and Civil Responsibility | 3 |
| EDG 1: Data and Society | 3 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 201 (GEF 8) | 3 | ECON 202 | 3 |
| ENGL 102 (GEF 1) | 3 | EDUC 200 | 3 |
| POLS 220 | 3 | HIST 180 | 3 |
| SUST 207 | 3 | HIST 250 | 3 |
| SUST 207L | 1 | SOC 101 | 3 |
| Elective | 2 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANTH 105 | 3 | F6 | 3 |
| ARSC 380 (EDG 5) | 3 | C&I 454 | 3 |
| C&I 453 (EDG 2) | 3 | C&I 490 | 1 |
| C&I 490 | 1 | HIST 464 | 3 |
| EDP 301 | 3 | HIST (Non-Western) at the 300-level or above | 3 |
| SPED 404 | 3 | HIST 300/400 (300-Level or Above) | 3 |
| | 16 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| C&I 491 (EDG 6 & Residency 1 ) | 6 | C&I 491 (Residency 2) | 9 |
| C&I 324 | 3 | EDUC 485 | 3 |
| C&I 489 | 3 | | |

| | | |
|---|---|---|
| SPED 460 | 3 | |
| | 15 | 12 |

Total credit hours: 120

## Degree Progress

- By the end of the fourth semester in the major, the student must have completed EDUC 200 with a C- or better and must have a minimum GPA of 2.75. If a student does not meet these criteria, they will be removed from the major until the benchmarks are met. At this time, students will apply to be admitted into professional education coursework per state requirements.
- By the end of the sixth semester in the major, the student must have completed 125 hours of field placement and must have a minimum GPA of a 2.75.
- To graduate with this major, a student needs an overall GPA of 2.75.

## Major Learning Outcomes

### SOCIAL STUDIES/SECONDARY EDUCATION

The learning goals for the WVU Secondary Teacher Education Program are to prepare students who:

1. Have commitment and skills to engage in life-long learning;
2. Are effective communicators;
3. Recognize that teaching is a professional, moral, and ethical enterprise with well-developed ethical frameworks which facilitate effective teaching;
4. Will serve as a facilitator of learning for all students;
5. Possess in-depth knowledge of both pedagogy and content, and the relationships between them;
6. Are reflective practitioners;
7. Are aware of, and have respect for, human diversity;
8. Value and integrate knowledge from a wide variety of fields, are creative and open to new ideas, and are able to act constructively in a world characterized by technological, cultural, and societal diversity and change.

# Social Work, B.S.W.

## Degree Offered

- Bachelor of Social Work (BSW)

## Nature of the Program

The School of Social Work provides students with a comprehensive program of professional education in social work, including degree programs at the baccalaureate, master's, and doctorate levels with on-campus, hybrid, and online options, as well as a range of part-time and continuing education opportunities.

The BSW and MSW programs at West Virginia University are fully accredited by the Council on Social Work Education, which makes graduates eligible to seek licensure as social workers in West Virginia and other states, depending on individual state laws. The degree programs offered by the School of Social Work allow students the opportunity to prepare for entry-level professional practice at the baccalaureate level and to specialize at the advanced (graduate) level of study. The baccalaureate program prepares social workers for generalist practice and is a recognized national leader in the development of baccalaureate-level curriculum to support this educational goal. The BSW program has been continuously accredited since 1974.

## B.S.W. Program Mission

The mission of the BSW program is to educate students to become generalist social workers. The program mission derives from and incorporates the School of Social Work mission. Generalist social work is grounded in the liberal arts, the person-in-environment framework, and competency-based education. Generalist social workers use a range of prevention and intervention methods in social work practice with diverse individuals, families, groups, organizations, and communities. Generalist social workers identify with the profession and apply ethical principles and critical thinking in practice at the micro, mezzo, and macro levels of practice. Generalist social workers recognize, support, and build on the strengths and resilience of people. They are strengths-based, and advocate for human rights and social and economic justice. They incorporate an anti-racist and anti-oppressive perspective in support of respect for all people and the quest for social, racial, economic, and environmental justice. They engage in research-informed practice and are proactive in responding to the impact of context on practice.

## The 2 + 2 Program

WVU and several colleges have entered into a joint commitment to increase the college-going rate within the state of WV and throughout the country, as well as the number of social workers within the state, through a special 2+2 arrangement that will lead to a Bachelor of Social Work degree from WVU. Current affiliation agreements for the 2 + 2 program include programs in West Virginia, Maryland, Pennsylvania, Virginia, and Washington; additional

programs are continuously added during the course of the year. For students from these colleges to enjoy the benefits of the 2+2 program they must be ready to enter the major when they matriculate to WVU. Students in the 2+2 program must meet the admissions standards for WVU and the BSW program and must follow the BSW program's policies for transfer students.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here.

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# FACULTY

## DIRECTOR

- Deana Morrow, LICSW, ACSW - MSW (University of Georgia), Ph.D. (North Carolina State University)
  Director, Eberly Family Professor for Outstanding Public Service

## PROGRAM DIRECTORS

- Mary Christensen, LICSW - Ph.D. (Simmons College)
  MSW Program Director
- Megan Gandy, LICSW - Ph.D. (Virginia Commonwealth University)
  BSW Program Director
- Lindsey Rinehart, LICSW - MSW (New York University)
  Field Education Director
- Carrie Rishel - Ph.D. (University of Pittsburgh)
  Ph.D. Program Director, Director - Rural Integrated Behavioral Health Training Program

## PROGRAM COORDINATORS

- Savanna Brown, LGSW - MSW (West Virginia University)
  Program Coordinator - Rural Integrated Behavioral Health Training Program
- Rebekah Dunaway, LGSW - MSW, MPA (West Virginia University)
  BSW Recruitment & Advising Coordinator
- Jacqueline Englehardt, ACSW - MSW (West Virginia University)
  MSW Admissions & Recruitment Coordinator; Title IV-E Coordinator
- Challice LaRose, LGSW - MSW (West Virginia University)
  BSW Online Coordinator
- Jamie Mesar - MSW (University of Pittsburgh)
  Online Field Education Coordinator
- Mandy Weirich, LSW - MSW (West Virginia University)
  MSW Online Coordinator; Geronotology Program Coordinator
- Savannah Zink, LICSW - MSW (West Virginia University)
  Field Coordinator

## PROFESSORS

- Kristina Hash, LICSW - Ph.D. (Virginia Commonwealth University)
  Aging and health care, Family caregiving, Gay and lesbian issues, Geriatric education, Use of technology in teaching and research
- Deana Morrow, LICSW - Ph.D. (North Carolina State University)
  Social work education, Older adults, Social work licensure and regulation, Mental/behavioral health, Sexual minority populations, Ethics, Social work and counseling theories and methods, Health care
- Carrie Rishel - Ph.D. (University of Pittsburgh)
  Children's behavioral health, Prevention of mental health problems, Risk and protective factors related to child outcomes, Prevention-focused social work practice, Integrated models of service delivery, Trauma-informed prevention and intervention
- Leslie Tower - Ph.D. (Barry University)
  Assessment Coordinator; Social Work Research Methods, Social Welfare Policy, Healthcare Systems (Public Administration), Health Policy: Health, Women's Health, Health Law & Ethics (Public Administration)

## ASSOCIATE PROFESSORS

- Mary Christensen, LICSW - Ph.D. (Simmons College)
  Routine suicide risk screening and assessment in outpatient settings and primary care, Development and evaluation of training and pedagogical initiatives related to suicide, Evaluation of current suicide risk screening practices in primary care and other outpatient settings

- Megan Gandy, LICSW - Ph.D. (Virginia Commonwealth University)
  LGBTQ+ populations, Mental Health services research, Young adults, Faith communities, Social Justice, Social work education, Technology in social work education, Virtual Reality
- Jiyoung Tabone - Ph.D. (University of Chicago)
  Childhood Trauma, Trauma-Informed Care, Prevention and Intervention Service Research, Risk and Resilience Research, Adverse Childhood Experiences (ACEs) and Obesity

### ASSISTANT PROFESSORS

- Bridget Bailey, LICSW - Ph.D. (Ohio State University)
  Adolescent and adult behavioral health, School-based mental health, Suicide prevention, Bipolar/mood disorders, Trauma, Underserved and diverse populations, Evidenced based treatments (i.e. dialectical behavior therapy, interpersonal social rhythms therapy; Attachment Regulation and Competency Framework), Intervention, prevention and implementation research, Community engaged research
- Megan Fabbri, LSW - Ph.D. (Ohio State University)
  Migration, Sex Work, Human Rights, Social Welfare Policy, Global Social Work
- Andrew Irish, LMSW - Ph.D. (University of Buffalo)
  Economic Inequality and Health, Substance Use/Misuse and Recovery, Mental Health & Suicidality

### TEACHING INSTRUCTORS

- Rebekah Dunaway, LGSW - MSW, MPA (West Virginia University)
  Nonprofit Administration and Organizational Leadership, Policy and Advocacy, Youth and Young Adult Populations, Social Work Theories and Methods, Community Systems
- Jacqueline Englehardt, ACSW - MSW (West Virginia University), MA, Instructional Design & Technology (West Virginia University)
  Nonprofit Management, Child Welfare, Online Teaching and Learning, Professional Development
- Challice LaRose, LGSW - MSW (West Virginia University)
  Online Teaching and Learning, Generative Artificial Intelligence (GAI), Practitioner Self-Care
- Rhonda Hayes, LICSW - MSW (West Virginia University)
  Children and Families, Clinical Interventions
- Jamie Mesar - MSW (University of Pittsburgh)
  Field Education, Social Work Practices with Children and Families, Human Behavior In the Social Environment, Title IV (or Child Welfare Courses)
- Fanica Payne, LICSW - MSW (West Virginia University)
  Human Diversity, Professional Identity and Social Justice, Clinical social work practice
- Lindsey Rinehart, LICSW - MSW (New York University)
  Field education, Nonprofit leadership, Community Engagement
- Mandy Weirich, LSW - MSW (West Virginia University)
  Policy and Advocacy, Geriatric Education, Use of technology in teaching and research
- Savannah Zink, LICSW - MSW (West Virginia University)
  Children and Families, Treatment of Trauma, Social Work Practice in Foster Care, Field Education

### EMERITUS FACULTY

- Carol Amendola - MSW (West Virginia University)
- Majorie H. Buckholz-Cleveland - Ph.D. (West Virginia University)
- Patricia Chase - Ed.D. (West Virginia University)
- Linda Ferrise - MSW (West Virginia University)
- Karen Harper-Dorton - Ph.D. (Ohio State University)
- Roger A. Lohmann - Ph.D. (Brandeis University)
- Nancy Lohmann - Ph.D. (Brandeis University)
- Caroline T. Mudd - MSW (University of Pennsylvania)
- Neal Newfield - Ph.D. (Texas Tech University)
- Michael Zakour - Ph.D. (Washington University)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 hours or more must have at least a 2.0 overall GPA. Students who have earned more than 58 earned credits are urged to speak with a Social Work adviser to establish a plan of study toward a timely graduation.

Major Code: 1407

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, School of Social Work (major) requirements, and electives to total a minimum of 120 hours.

### SCHOOL REQUIREMENTS FOR THE BACHELOR OF SOCIAL WORK

The undergraduate social work program consists of a foundation in the liberal arts, and students must complete all courses outlined below, with 58 credits at the 200-level or above. Students are encouraged to consult with the social work adviser regarding the selection of electives appropriate for their career interest.

- **Calculation of Major GPA:** A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of C- in all SOWK courses except SOWK 491 which is taken P/F. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement:** Social Work BSW students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two additional **SpeakWrite Certified Courses**[TM]: SOWK 320 and SOWK 481.
- **Field Instruction Requirements**: Students must successfully complete 12 credits of field placement.
- **Capstone Requirement:** The university requires the successful completion of a capstone course , preferably in the major. Social Work majors satisfy these requirements by completing SOWK 481.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 42 |
| Eberly Edge Requirements | | 9 |
| Social Work Major Requirements | | 69 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 6, and 8 | | 24 |

| | | |
|---|---|---|
| SOWK 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 42 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication (SOWK 320) | | |
| EDG 3: Ethics and Civil Responsibility (SOWK 151) | | |
| EDG 4: Global and Regional Perspectives | | 3 |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience (SOWK 491) | | |
| Total Hours | | 9 |

## Social Work Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Foundation Social Work Requirement** | | **6** |
| SOWK 147 | Human Diversity | |
| SOWK 151 | Introduction to Social Work | |
| **Social Science Electives:** | | **15** |
| **Government (Select one of the following):** | | |
| POLS 102 | Introduction to American Government | |
| POLS 210 | Law and the Legal System | |
| POLS 220 | State and Local Government | |
| POLS 250 | Introduction to Comparative Politics | |
| HIST 250 | West Virginia | |
| Other as approved by advisor | | |
| **Family (Select one of the following):** | | |
| SOC 221 | Families and Society | |
| COMM 332 | Family Communication | |
| CDFS 110 | Families Across the Life Span | |
| CDFS 112 | Introduction to Family Processes and Dynamics | |
| DISB 380 | Disability and the Family | |
| Other 200-level or higher as approved by advisor | | |
| **One class in PSYC 200 level or above** | | |
| **One class in SOC, ANTH, or CRIM 200 level or above** | | |
| **One additional class in POLS, PSYC, SOC, CRIM, ANTH, COMM or ECON 200 level or above** | | |
| **Minority Content Class:** | | **3** |
| Select one of the following: | | |
| ASP 220 | Introduction to Africana Studies | |
| COMM 212 | Gender Communication | |
| COMM 317 | Communication and Aging | |
| ENGL 154 | African American Literature | |
| ENGL 251 | American Folklore and Culture | |
| ENGL 252 | Appalachian Fiction | |
| ENGL 254 | African American Literature | |
| ENGL 285 | Images of Women in Literature | |
| ENGL 352 | Topics in Appalachian Studies | |
| ENGL 387 | Topics in Women's Literature | |
| HIST 250 | West Virginia | |
| HIST 473 | Appalachian Regional History | |
| NAS 200 | Introduction: Native American Studies | |

| | | |
|---|---|---|
| POLS 337 | Gender/Politics and Policy | |
| PSYC 232 | Sex Roles and Behavior | |
| PSYC 345 | Adulthood and Aging | |
| SOC 235 | Race and Ethnic Relations | |
| SOC 323 | Sociology of Rural Life | |
| SOC 360 | Sociology of Gender | |
| WGST 170 | Introduction to Women's and Gender Studies | |
| WGST 242 | Women's Health and Fitness | |
| **Advanced Social Work Courses** | | **24** |
| SOWK 300 | Social Welfare Policy and Services 1 | |
| SOWK 310 | Social Welfare Policy and Services 2 | |
| SOWK 320 | Social Work Methods 1 | |
| SOWK 322 | Social Work Methods 2 | |
| SOWK 324 | Methods 3: Organizations and Communities | |
| SOWK 330 | Human Behavior in the Social Environment | |
| SOWK 345 | Interprofessional Social Justice Practice | |
| SOWK 360 | Social Work Research and Statistics | |
| **Social Work Practice Electives** | | **6** |
| Select one of the following: | | |
| GERO 212 | Introduction to Gerontology | |
| GERO 410 | Rural Gerontology | |
| SOWK 293 | Special Topics | |
| SOWK 370 | Wellness and Resilience for the Helping Professions and Beyond | |
| SOWK 380 | Child Welfare | |
| Select an additional course at the 300 or 400 level from the list above, or from the list below, or from a minor | | |
| COMM 309 | Health Communication | |
| GEOG 300 | Geographical Data Analysis | |
| GEOG 312 | Migration and Human Rights | |
| HIST 439 | History of Modern Mexico | |
| HIST 451 | African-American History-1900 | |
| HIST 452 | African-American Since 1900 | |
| HIST 473 | Appalachian Regional History | |
| HIST 478 | American Immigration History | |
| HIST 470 | United States Civil Rights Movement | |
| HIST 477 | Working Class America | |
| **Field Instruction** | | **12** |
| SOWK 491 | Professional Field Experience | |
| **Capstone Experience** | | **3** |
| SOWK 481 | Senior Capstone (Capstone) | |
| Total Hours | | 69 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SOWK 191 | | 1 ENGL 102 (GEF 1) | 3 |
| SOWK 151 (EDG 3; GEF 5) | | 3 SOWK 147 (GEF 7) | 3 |
| ENGL 101 (GEF 1) | | 3 EDG 4: Global and Regional Perspectives | 3 |
| EDG 1: Data and Society | | 3 GEF 2 | 3 |
| GEF 3 | | 3 General Elective | 2 |
| GEF 6 | | 3 | |
| | | 16 | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SOWK 300 | | 3 GEF 8* | 3 |
| GEF 2 | | 3 PSYC 200-level Elective | 3 |
| SOC 200-level Elective | | 3 Family 200-level Elective (GEF 8) | 3 |
| Government Elective (GEF 4) | | 3 Minority Content Course | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SOWK 320 (EDG 2) | | 3 SOWK 310 | 3 |
| SOWK 330 | | 3 SOWK 322 | 3 |
| GEF 8* | | 3 SOWK 360 | 3 |
| General Elective | | 3 SOWK Elective 1 | 3 |
| General Elective | | 3 ARSC 380 (EDG 5) | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SOWK 324 | | 3 SOWK 481 (Capstone) | 3 |
| SOWK 345 | | 3 SOWK 491 | 6 |
| SOWK 491 (EDG 6) | | 6 Social Science Elective | 3 |
| SOWK Elective 2 | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

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Student completing a minor, a second major or a dual degree already fulfill F 8.

# Degree Progress

### Application to Professional Level:

Prior to starting their final two years of full-time coursework, students must petition to enter the *professional* level.

For the petitions, students:

- must have earned a final grade of C- or higher in SOWK 147 and 151.
- must complete 50 hours verified human service.
- must submit a personal statement, self-assessment, and a reference from academic or human service individual.
- have earned a minimum overall GPA of 2.0. (Students must maintain a 2.0 GPA overall after admission to the professional major).
- All majors must meet with their SOWK advisor each semester.

Students who do not meet these benchmarks are not eligible to petition to enter the *professional* level and may be removed from their major.

### Code of Ethics:

Additionally, the BSW is a professional degree accredited by the Council on Social Work Education (CSWE) (https://www.cswe.org/). Therefore, students must remain in compliance with accreditation standards, including compliance with the National Association of Social Workers (NASW) Code of Ethics (available at https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English (https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English/)) and the BSW Student Handbook (available at https://socialwork.wvu.edu/). Inability to comply with these requirements may make it difficult or impossible to complete the degree. Students should speak with a SOWK advisor regarding these requirements.

# Major Learning Outcomes

## SOCIAL WORK

Upon successful completion of the B.S.W. degree, **Social Work** majors will demonstrate:

1. Competence for entry-level generalist practice, with an emphasis on rural and small town settings, gained through a curriculum including liberal arts and social work foundations, human behavior in the social environment (HBSE) practice, policy, assessment/research with individuals, families, groups, communities, and society.
2. Ability to engage in effective practice that is responsive to changing the social context, with an existing value base and ethical standards of the social work profession.
3. Skills for effective for practice with diverse, vulnerable, and oppressed populations and to further social and economic justice.
4. A foundational identity as a professional social worker and commitment to conduct oneself accordingly.
5. Sensitivity, knowledge, and understanding of human needs and rights, social welfare issues, and approaches toward resolving social problems.

# Sociology, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

Sociology examines human society with an emphasis on social structure, processes of social interaction, and social change. Students learn the methods of social science as well as the specialized knowledge and insights of discipline while selecting from a range of substantive course topics. These include but are not limited to: Racial and ethnic relations, sex and gender, social class and poverty, families and relationships, social psychology and media, health and health care, and urban and rural sociology. Courses in the department also are intended to facilitate the application of sociological principles to a wide range of contemporary social problems.

The major prepares students to pursue a broad range of careers that require knowledge of social organization and social processes. It also prepares students for graduate studies in the social sciences in pursuit of academic or applied research careers or for professional training in law, public administration, social work, public health and other fields. For more information about this program, please visit the departmental website (http://soca.wvu.edu/students/undergraduate-students/).

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

## Minors

All students have the possibility of earning one or more minors; view a list of all available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/) here. Please note that students may not earn a minor in their major field.

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## FACULTY

### PROFESSOR AND CHAIR

- Daniel Renfrew - Ph.D. (Binghamton University) Anthropology
  Environmental and political anthropology, Social movements, Latin American cultures

### PROFESSORS

- Sharon R. Bird - Ph.D. (Washington State University) Sociology
  Social Inequality (race/ethnicity/class/gender/LGBTQ+), Workplace equity, Research methods
- Henry H. Brownstein - Ph.D. (Temple University) Sociology
  Distinguished Research Professor. Drugs and society, Drug policy, Violence, Qualitative research methods
- Katie E. Corcoran - Ph.D. (University of Washington) Sociology
  Theory, Organizations, Culture, Criminology, Religion, Social networks
- Walter S. DeKeseredy - Ph.D. (York University) Sociology
  Anna Deane Carlson Endowed Chair of Social Sciences. Violence against women, Critical criminology, Masculinities and crime, Criminology theory
- R. Gregory Dunaway - Ph.D. (University of Cincinnati) Sociology
  Dean of the Eberly College of Arts and Sciences
- S. Melissa Latimer - Ph.D. (University of Kentucky) Sociology
  Gender/race/ethnicity, Inequality/labor markets/welfare systems
- James Nolan, III - Ph.D. (Temple University) Sociology
  Criminal justice, Group and social processes
- Jason Manning - Ph.D. (University of Virginia) Sociology
  Conflict and social control, Violence, Sociology of knowledge
- Rachel Stein - Ph.D. (University of Akron) Sociology

Criminology, Victimization, Media and crime

- Karen Weiss - Ph.D. (SUNY-Stony Brook) Sociology
  Criminology, Victimization, Gender/sexuality/culture
- Rachael A. Woldoff - Ph.D. (Ohio State University) Sociology
  Community, Crime, Inequality/race/class
- Joshua Woods - Ph.D. (Michigan State University) Sociology
  Social psychology, Media, Complex organizations, Sociology of risk

### ASSOCIATE PROFESSORS

- Corey Colyer - Ph.D. (Syracuse University) Sociology
  People processing systems, Agencies of social control
- Amy Hirshman - Ph.D. (Michigan State University) Anthropology
  Mesoamerican archaeology, Social complexity, Ceramics
- Christopher P. Scheitle - Ph.D. (Pennsylvania State University) Sociology
  Religion, Science in society, Crime, Organizations
- Jennifer Steele - Ph.D. (Pennsylvania State University) Rural Sociology
  Natural resource sociology, Rural and community development
- Jesse Wozniak - Ph.D. (University of Minnesota) Sociology
  Policing, Criminology, Deviance, State power

### ASSISTANT PROFESSORS

- Daniel Brewster - M.A. (West Virginia University) Communication Studies
  Culture, Community
- Brandie S. Pugh - Ph.D. (University of Delaware) Sociology
  Inequality, Corporate crime, Interpersonal violence, Philosophy of science
- Genesis Snyder - M.A. (Western Michigan University) Anthropology
  Historical archaeology

### TEACHING INSTRUCTORS

- Douglas Sahady - M.A. (California University of Pennsylvania) Social Science

### PROFESSORS EMERITI

- Ronald C. Althouse - Ph.D. (University of Minnesota) Sociology
  Theory, Work, Occupational safety and health
- Ann L. Paterson - Ph.D. (Michigan State University) Sociology
- Patricia C. Rice - M.A. (Ohio State University) Anthropology
- Joseph J. Simoni - Ph.D. (University of Notre Dame) Sociology
- William I. Torry - Ph.D. (Columbia University) Anthropology

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major. Students must have a placement into a Math course to receive a complete schedule for their first semester.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major.
- Students transferring from another WVU major or from another institution with 24 hours or more must have at least an overall GPA of a 2.0 and meet the following requirements prior to being admitted to the major: completion of SOC 101 (http://catalog.wvu.edu/search/?P=SOC%20101) with a C- or higher and eligibility to take MATH 124 (http://catalog.wvu.edu/search/?P=MATH%20124).

Major Code: 14C4

Click here to view the Suggested Plan of Study (p. 375)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Departmental Requirements for the B.A. in Sociology

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

- **Calculation of GPA in the major**: A minimum GPA of a 2.0 is required in all courses applied to major requirements, with a minimum grade of C- is required in ANTH 105, SOC 101, and SOC 191. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement:** Sociology Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and two **SpeakWrite Certified Courses** ™: SOC 488 and a 2nd course selected from ANTH 350, ANTH 352, ANTH 354, ANTH 450, ANTH 457, ANTH 458, CRIM 318, HIST 203 , HIST 207, HIST 221, HIST 241, HIST 242, HIST 259, HIST 264, PSYC 241, SOC 323, SOC 360, WGST 150, WGST 225.
- **Experiential Learning**: Students are encouraged to pursue a Professional Field Experience (SOC 491) or Independent Study (SOC 495) in their junior or senior year, combining experiential work with previously acquired skills in a project appropriate to their career goals. SOC 490, SOC 491, and SOC 495 can be taken for variable credit and will count as general elective credits towards graduation, but they cannot be applied to major requirements.
- **Capstone Requirement:** The General Education Foundation requires the successful completion of a Capstone course. Sociology majors must complete SOC 488.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 65 |
| Eberly Edge Requirements | | 15 |
| Sociology Major Requirements | | 40 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6 and 8 | | 30 |
| General Electives | | 35 |
| Total Hours | | 65 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |

| | |
|---|---|
| EDG 3: Ethics and Civil Responsibility | 3 |
| EDG 4: Global and Regional Perspectives (ANTH 105) | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | 3 |
| EDG 6: High Impact Experience | 3 |
| Total Hours | 15 |

## Sociology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Orientation to the Major** | | **1** |
| SOC 191 | First-Year Seminar (Minimum Grade of C-) | |
| or SOC 361 | Practicing Sociology and Anthropology | |
| **Common Core Requirements** | | **12** |
| ANTH 105 | Introduction to Anthropology (Minimum Grade of C-) | |
| SOC 101 | Introduction to Sociology (Minimum Grade of C-) | |
| SOC 301 | Sociological Theory | |
| SOC 311 | Social Research Methods | |
| **Statistics Requirement** | | **3** |
| STAT 211 | Elementary Statistical Inference | |
| **Sociology Requirements** | | **15** |
| Select five of the following (at least three must be 300 or 400-level): | | |
| CRIM 302 | Deviant Behavior | |
| CRIM 318 | Hate Crime | |
| CRIM 415 | Mass Media, Crime and Deviance | |
| SOC 207 | Social Problems in Contemporary America | |
| SOC 221 | Families and Society | |
| SOC 225 | Inequality and the Media | |
| SOC 226 | Sexuality and Society | |
| SOC 235 | Race and Ethnic Relations | |
| SOC 304 | Complex Organizations | |
| SOC 312 | Death and Dying | |
| SOC 320 | Social Psychology | |
| SOC 323 | Sociology of Rural Life | |
| SOC 331 | Sociology of Law | |
| SOC 333 | Sociology of Work and Work Places | |
| SOC 337 | Sociology of American Business | |
| SOC 360 | Sociology of Gender | |
| SOC 405 | Class, Status, and Power | |
| SOC 463 | Economy and Society | |
| SOC 470 | Cities and Urban Life | |
| **Anthropology, Criminology, or Sociology Electives:** | | **6** |
| Two additional courses in sociology, anthropology, or criminology (at least one must be 300 or 400-level) | | |
| **Capstone Experience** | | **3** |
| SOC 488 | The Capstone Experience | |
| Total Hours | | 40 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SOC 191 | | 1 ENGL 101 (GEF 1) | 3 |
| SOC 101 (GEF 4) | | 3 ANTH 105 (GEF 7 & EDG 4) | 3 |
| GEF 3 | | 3 GEF 2 | 3 |
| GEF 5 | | 3 GEF 6 | 3 |

| | | | |
|---|---|---|---|
| EDG 1: Data and Society | 3 | EDG 2: Effective and Civil Communication | 3 |
| General Elective | 1 | General Elective | 1 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | GEF 2 | 3 |
| GEF 8* | 3 | GEF 8* | 3 |
| 200-level Sociology Course | 3 | 200-level Sociology Course | 3 |
| Statistics Requirement | 3 | EDG 5: Practicing Arts and Sciences (ARSC 380) | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 8* | 3 | SOC 311 | 3 |
| SOC 301 | 3 | Upper-level Sociology Course | 3 |
| Upper-level Sociology Course | 3 | EDG 6: High Impact Experience | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Upper-level Sociology Course | 3 | SOC 488 (Capstone) | 3 |
| Anthropology, Criminology, or Sociology Elective 1 | 3 | Anthropology, Criminology, or Sociology Elective 2 | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

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Students completing a minor, a second major or a dual degree already fulfill F 8.

## Degree Progress

Students are expected to meet the benchmarks set below.

- Complete SOC 101 and ANTH 105 with grades of C- or higher and be eligible to take MATH 124 by the end of the second semester in the program;
- Complete 200-level SOC coursework and STAT 211 by the end of the fourth semester in the program;
- Complete four 300-level courses (including SOC 301 and SOC 311) by the end of of the sixth semester in the program.
- Maintain a GPA of 2.0 overall and a minimum GPA of 2.0 in all SOC, ANTH, and CRIM courses counting toward major requirements.
- All majors must meet with their adviser every semester.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### SOCIOLOGY

Students graduating with a BA in **Sociology** will have the ability to:

1. Describe sociology's core concepts and approaches to the study of social structures, social dynamics, and social issues, and how it is similar to and different from other social sciences.
2. Demonstrate the sociological imagination by describing how culture and social structure operate, how society shapes individuals and individuals shape society, and the intersectionality of race/ethnicity, gender, class, or other bases of inequality.
3. Identify and compare sociology's core theoretical and methodological approaches and discuss their role in building knowledge about society.
4. Apply ethical principles to the conduct of sociological research and the applications of its findings.

5. Critically analyze sociological questions and issues by retrieving and synthesizing appropriate information and evidence and identifying implications for research and practice/policy.
6. Demonstrate effective, clear and persuasive communication skills according to disciplinary conventions.

# Sustainability Studies, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

Students in the Bachelor of Arts in Sustainability Studies will explore core concepts in sustainable global futures, including development, resilient communities, and global humanitarianism. Graduates of the Sustainability Studies will be prepared to solve global challenges using critical systems thinking and a vision of peace, human rights, promoting cultures of resilience and sustainability and advancing sustainable development in Appalachia and globally. Students will be prepared in career pathways that include Local, Regional, and International Development, Disaster/Humanitarian Relief Assessment and Advocacy, Social Studies Education, Urban/Regional Planning, Environmental/Energy/Labor/International Law, Journalism, Social Entrepreneurship, Public Administration, Business Administration, Public Health, International Diplomacy, and Professional/Academic Geography.

Students in the Sustainability BA will take courses that that combine geoscience, environmental, social, and humanities research methods that involve geospatial analysis, mapping, development practice, and community engagement. They will also be well prepared for admission to graduate and professional schools.

## Minors

All students have the possibility of earning one or more minors; a list of all available minors and their requirements (p. 52) is available. Please note that students may not earn a minor in their major field.

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## FACULTY

### CHAIR

- Brent McCusker - Ph.D. (Michigan State University)

### ASSOCIATE CHAIR

- Joseph Lebold - Ph.D. (West Virginia University)

### PROFESSORS

- Kathleen Benison - Ph.D. (The University of Kansas)
  Regular Graduate Faculty, Sedimentary Geology - Planetary Geology
- Dengliang Gao - Ph.D. (Duke University)
  Regular Graduate Faculty, Exploration Geophysics, Petroleum and Structural Geology
- Amy Hessl - Ph.D. (University of Arizona)
  Regular Graduate Faculty, Biogeography, Forest Ecosystems, Climate Variability
- Brent McCusker - Ph.D. (Michigan State University)
  Regular Graduate Faculty, Livelihood Systems & Climate Change, Africa, Policy Making
- Brenden McNeil - Ph.D. (Syracuse University)
  Regular Graduate Faculty, GIS, Environmental modeling, Forest Ecosystem Services
- Shikha Sharma - Ph.D. (University of Lucknow)
  Regular Graduate Faculty, Isotope Geochemistry
- Jaime Toro - Ph.D. (Stanford University)
  Regular Graduate Faculty, Structure and Tectonics
- Dorothy Vesper - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Aqueous Geochemistry, Hydrogeology

### ASSOCIATE PROFESSORS

- Jamison Conley - Ph.D. (Pennsylvania State University)
  Regular Graduate Faculty, Spatial Analysis, Geocomputation, Health Geography
- Karen Culcasi - Ph.D. (Syracuse University)
  Regular Graduate Faculty, Geopolitics, Identity, Middle East
- Cynthia Gorman - Ph.D. (Rutgers University)

Regular Graduate Faculty, Gender, Migration, Human Rights, Refugee Communities

- James Lamsdell - Ph.D. (The University of Kansas)
  Regular Graduate Faculty, Paleobiology, Arthropods, Macroevolution, Heterochrony, Paleoecology, Phylogenetics
- Rick Landenberger - Ph.D. (West Virginia University)
  Forest ecology, Land use Management and Restoration
- Joseph Lebold - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Paleoecology, Paleontology, Regional Geology
- Maria Alejandra Perez - Ph.D. (University of Michigan)
  Regular Graduate Faculty, Cultural Geography, Science & Technology Studies, Speleology, Latin America and the Caribbean
- Amy Weislogel - Ph.D. (Stanford University)
  Regular Graduate Faculty, Sedimentology
- Bradley Wilson - Ph.D. (Rutgers University)
  Regular Graduate Faculty, Social Movements, Local/Global Food Systems, Food Justice

### ASSISTANT PROFESSORS

- Michael Harman - Ph.D. (West Virginia University)
  3D visualization, modeling complex landforms and processes, GIS
- Jacob Hileman - Ph.D. (University of California, Davis)
  Environmental Science, Sustainability
- Aaron Maxwell - Ph.D. (West Virginia University)
  Regular Graduate Faculty, Geospatial Instruction, Remote Sensing, Image Analysis, Spatial Modeling
- Holly Moulton - Ph.D. (University of Oregon)
  Feminist political ecology, Gender, Climate change adaptation, Indigenous studies, Critical development studies, ice loss, and Andean communities

### PROFESSOR EMERITI

- Robert Behling - Ph.D. (The Ohio State University)
- Timothy Carr - Ph.D. (University of Wisconsin - Madison)
- Joe Donovan - Ph.D. (Pennsylvania State University)
- Greg Elmes - Ph.D. (Pennsylvania State University)
- Trevor Harris - Ph.D. (University of Hull)
- Thomas Kammer - Ph.D. (Indiana University)
- Steven Kite - Ph.D. (University of Wisconsin)
- Kenneth C. Martis - Ph.D. (Michigan University)
- Henry Rauch - Ph.D. (Pennsylvania State University)
- Robert C. Shumaker - Ph.D. (Cornell University)
- Richard Smosna - Ph.D. (University of Illinois)
- Timothy Warner - Ph.D. (Purdue University)
- Thomas Wilson - Ph.D. (West Virginia University)

## Admissions for 2026-2027

- First-Time Freshmen are admitted directly to the major.
- Students transferring from other majors or another institution are admitted directly to the major if they have at least a 2.0 overall GPA.

Major Code: 14F7

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |

| | | |
|---|---|---|
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements for the B.A. in Sustainability Studies

- **Calculation of Major GPA**: A minimum GPA of 2.0 is required in all courses applied to major requirements, with a minimum grade of C- in SUST 102, SUST 202/SUST 202L, and SUST 207/SUST 207. If a course is repeated, all attempts will be included in the calculation of the GPA, unless the course is eligible for a D/F repeat.
- **Writing and Communication Requirement:** Sustainability Studies Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103) and two additional **SpeakWrite Certified Courses™** certified course.
- **Areas of Emphasis**: Sustainability Studies majors will choose a curriculum from one of these Areas of Emphasis: Environmental Studies; GIS Methods; Sustainable Development
- **Capstone Requirement**: The university requires the successful completion of a Capstone requirement. In Sustainability Studies, based on their Area of Emphasis and with permission from their advisor, students will select the capstone section of SUST 402, GEOG 411, GEOG 415, or GEOG 452. The course selected for the capstone should not be already used to meet any other major requirement.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 68 |
| Eberly Edge Requirements | | 15 |
| Sustainability Studies Major Requirements | | 37 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 3, 5, 6, and 8 | | 21 |
| SUST 191 | First-Year Seminar | 1 |
| General Electives | | 46 |
| Total Hours | | 68 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (SUST 102) | | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |

| | |
|---|---|
| EDG 6: High Impact Experience | 3 |
| Total Hours | 15 |

## Sustainability Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES:** | | **16** |
| SUST 102 | Global Sustainability | |
| SUST 202 & 202L | Just Sustainable Development and Sustainable Development Laboratory | |
| SUST 207 & 207L | Climate System Science and Climate System Science Laboratory | |
| SUST 250 & 250L | Digital Earth and GIS and Digital Earth and GIS Laboratory | |
| SUST 388 | Careers in Sustainability | |
| **AREA OF EMPHASIS:** | | **15** |
| Select one of the following: | | |
| Environmental Studies | | |
| GIS Methods | | |
| Sustainable Development | | |
| **UPPER-DIVISION ELECTIVE:** | | **3** |
| Any GEOG, GEOL, or SUST course at the 300 level or above | | |
| **CAPSTONE:** * | | **3** |
| Select from of the following, based on the AoE: | | |
| GEOG 411 | Rural and Regional Development | |
| GEOG 415 | Global Environmental Change | |
| GEOG 452 | Geographic Information Science: Applications | |
| SUST 402 | Climate and Environmental Justice | |
| Total Hours | | 37 |

*

SUST course(s) selected to fulfill the Capstone should not already fulfill another SUST major requirement.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| F3 | 3 | ENGL 101 (F1) | 3 |
| F6 | 3 | SUST 250 & 250L (F2B) | 4 |
| SUST 102 (EDG 4 & F7 ) | 3 | EDG 1: Data and Society | 3 |
| SUST 191 | 1 | General Elective | 3 |
| EDG 2: Effective and Civil Communication | 3 | General Elective | 2 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SUST 202 & 202L (GEF 4) | 4 | ENGL 102 (GEF 1) | 3 |
| SUST 207 & 207L (F8 Course 1)* | 4 | F5 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | F8 Course 2 | 3 |
| General Elective | 4 | General Elective | 3 |
| | | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SUST 388 | 1 | AoE Course 2 | 3 |
| AoE Course 1 | 3 | AoE Course 3 | 3 |
| ARSC 380 (EDG 5) | 3 | General Elective | 3 |
| F8 Course 3* | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AoE Course 4 | 3 | Capstone Course | 3 |
| AoE Course 5 | 3 | Upper-Division Elective | 3 |
| EDG 6: High Impact Experience | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

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Students completing a minor, a double major or a dual degree already fulfill GEF 8.

## Areas of Emphasis

- Environmental Studies (p. 381)
- GIS Methods (p. 382)
- Sustainable Development (p. 382)

## Environmental Studies Area of Emphasis Curriculum

| Code | Title | Hours |
|---|---|---|
| **ENVIRONMENTAL STUDIES CORE COURSES:** | | **10** |
| SUST 101 & 101L | Sustainable Earth and Sustainable Earth Laboratory | |
| GEOL 365 | Environmental Geology | |
| GEOG 415 | Global Environmental Change | |
| **ENVIRONMENTAL STUDIES ELECTIVES:** | | **6** |
| Select 2 courses from the following: | | |
| GEOG 455 & 455L | Introduction to Remote Sensing and Introduction to Remote Sensing Laboratory | |
| GEOL 321 | Geomorphology | |
| GEOL 463 | Physical Hydrogeology | |
| GEOL 466 | Cave and Karst Geology | |
| SUST 302 | Research for Sustainable Development | |
| SUST 305 | Sustainable Governance | |
| SUST 308 | Climate Modeling | |
| SUST 340 | Urban Sustainability | |
| SUST 402 | Climate and Environmental Justice | |
| Total Hours | | 16 |

## GIS Methods Area of Emphasis Curriculum

| Code | Title | Hours |
|---|---|---|
| **GIS METHODS CORE COURSES:** | | **10** |
| GEOG 350 & 350L | Geospatial Problem Solving and Geospatial Problem Solving Laboratory | |
| GEOG 451 | Introduction to GIS Programming | |
| GEOG 455 & 455L | Introduction to Remote Sensing and Introduction to Remote Sensing Laboratory | |
| **GIS METHODS ELECTIVES:** | | **6** |
| Select 2 courses from the following: | | |
| GEOG 300 | Geographical Data Analysis | |
| GEOG 409 | Applied International Development | |
| GEOG 452 | Geographic Information Science: Applications | |
| GEOG 453 | Spatial Databases | |
| GEOG 454 | Environmental Geographic Information Systems | |
| GEOG 456 | Remote Sensing Applications | |
| GEOG 457 | Open-Source Spatial Analytics | |
| GEOG 461 | Web GIS | |
| GEOG 462 | Digital Cartography | |
| SUST 302 | Research for Sustainable Development | |
| Total Hours | | 16 |

## Sustainable Development Area of Emphasis Curriculum

| Code | Title | Hours |
|---|---|---|
| **SUSTAINABLE DEVELOPMENT CORE COURSES:** | | **12** |
| SUST 302 | Research for Sustainable Development | |
| SUST 305 | Sustainable Governance | |
| SUST 402 | Climate and Environmental Justice | |
| SUST 403 | Sustainability, Planning and Development | |
| **SUSTAINABLE DEVELOPMENT ELECTIVES:** | | **3** |
| Select 1 course from the following list: | | |
| GEOG 300 | Geographical Data Analysis | |
| GEOG 302 | Political Geography | |
| GEOG 303 | Cultural Geography | |
| GEOG 309 | Introduction to International Development | |
| GEOG 312 | Migration and Human Rights | |
| GEOG 409 | Applied International Development | |
| GEOG 411 | Rural and Regional Development | |
| GEOG 415 | Global Environmental Change | |
| SUST 340 | Urban Sustainability | |
| SUST 372 | Sustainable Energy | |
| Total Hours | | 15 |

**Degree Progress**

Majors are expected to maintain a 2.0 GPA overall and a 2.0 in all SUST, GEOG, and GEOL courses applied to major requirements.

- By the end of their fourth semester in the major, students should have completed their required 100 and 200 level courses with the requisite grade.
- Students should complete SUST 388 (Careers in Sustainability) by their sixth semester in the major.
- In the advising appointment prior to the senior year, students will select an appropriate capstone option.
- All majors must meet with their departmental advisor each semester to evaluate progress.

Students who do not meet these benchmarks may be removed from their major.

## Major Learning Outcomes

### SUSTAINABILITY STUDIES

1. Understand Earth systems and society relations and their relevance to address sustainability challenges.
2. Describe the cultural diversity and complexity of human-environment relationships.
3. Analyze the spatial dimensions and impacts of political and economic activities.
4. Compare different approaches to social and environmental justice.
5. Evaluate the local, regional, national, and global contributions to sustainability by key agents and institutions.
6. Collect, analyze, evaluate, and visualize data to enable evidence-based decision-making for sustainable futures.
7. Communicate clearly and effectively in written, oral, graphical, and cartographic form about social, environmental, and sustainability issues to audiences of diverse backgrounds.

# Women's and Gender Studies, B.A.

## Degree Offered

- Bachelor of Arts

The Center for Women’s and Gender Studies offers a bachelor of arts degree in women’s and gender studies, as well as minors in women's and gender studies and LGBTQ+ studies. Many students in women’s and gender studies double major in other fields such as biology, psychology, communication studies, sociology, English, history, and other fields in the social sciences, humanities, and physical sciences.

## Nature of the Program

The Center for Women's and Gender Studies at WVU advances interdisciplinary research and innovative teaching to inspire new generations of gender and sexuality scholars and leaders. The mission of WGST is to examine the complex interplay of power and difference across multiple intersecting categories--including gender, race, sexuality, class, age, ability, and nationality. Students in this program develop tools for addressing social inequities in everyday life. As an interdisciplinary field, WGST embraces humanities, arts, social science, and STEM fields. WGST students are challenged to investigate the meanings of categorization and difference on local and global levels.

## Career Opportunities

Business, public administration, non-profit, health care, communications, law, teaching, social work, counseling, creative arts, government, and journalism are all fields in which a major or minor in women’s and gender studies may be a valuable professional credential. A background in this field is helpful to both women and men entering professions that have traditionally been restricted to one sex. These areas of study are especially useful for employment in fields such as family law, international development, child and family counseling, domestic violence, social services, and education.

## Academic Opportunities in Women’s and Gender Studies

Women’s and Gender Studies courses are offered in a variety of academic disciplines throughout the University. Many of these courses fulfill General Education Curriculum requirements. In addition to the Women’s & Gender Studies courses listed in this catalog, many other courses are offered through other departments. Updated lists of these courses are available from the Center for Women’s & Gender Studies each semester.

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## FACULTY

### DIRECTOR

- Kelly L. Watson - Ph.D. (Bowling Green State University)
  History of gender, sex, and sexuality; colonialism; indigenous studies

### PROFESSORS

- Sharon Bird - Ph.D (Washington State University)
  Sociological studies of equity in higher education and work organizations
- J. Kasi Jackson - Ph.D. (University of Kentucky)

### ASSOCIATE PROFESSORS

- Cynthia Gorman - Ph.D. (Rutgers University)
- Kelly L. Watson - Ph.D. (Bowling Green State University)

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major.
- Students transferring from other majors or another institution are admitted directly to the major if they have at least a 2.0 overall GPA.

Major Code: 1404

Click here to view the Suggested Plan of Study (p. 386)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must complete WVU General Education Foundations requirements, Eberly Edge Program requirements, major requirements, and electives to total a minimum of 120 hours.

## Departmental Requirements

- **Calculation of Major GPA:** A minimum GPA of 2.0 is required in all courses applied to major requirements with a minimum grade C- in WGST 170, WGST 200, WGST 330, WGST 360,and WGST 484. If a course is repeated, all attempts will be included in the calculation of the GPA unless the course is eligible for a D/F repeat.
- **Writing and Communication Skills Requirement**: The Women's and Gender Studies Bachelor of Arts is a **SpeakWrite Certified Program™**. SpeakWrite Certified programs incorporate and develop students' written, verbal, visual, and mediated communication skills across the curriculum.
- **Secondary Concentration**: Students must complete a minor outside of Women's & Gender Studies or a second major.
- **Credit Limitations**: Students may not count more than six hours of any combination of WGST 491 or WGST 495 toward their major requirements.
- **Capstone Requirement**: The university requires the successful completion of a Capstone course: WGST 484.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 57 |
| Eberly Edge Requirements | | 15 |
| Women's and Gender Studies Major Requirements | | 48 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5 and 6 | | 24 |
| WGST 191 | First-Year Seminar | 1 |
| General Electives | | 32 |
| Total Hours | | 57 |

## Eberly Edge Program Requirements

| Code | Title | Hours |
|---|---|---|
| EDG 1: Data and Society | | 3 |
| EDG 2: Effective and Civil Communication | | 3 |
| EDG 3: Ethics and Civil Responsibility | | 3 |
| EDG 4: Global and Regional Perspectives (WGST 170) | | |
| EDG 5: Practicing Arts & Sciences (ARSC 380) | | 3 |
| EDG 6: High Impact Experience | | 3 |
| Total Hours | | 15 |

## Women's and Gender Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| **CORE COURSES:** | | **12** |
| WGST 170 | Introduction to Women's and Gender Studies | |
| WGST 200 | Feminist Histories and Practices | |
| WGST 330 | Feminist Theory | |
| WGST 360 | Queer Theories | |
| **ELECTIVES:*** | | **18** |
| Select a minimum of 6 WGST credits; at least 9 credits must be at the 300 or 400 level. | | |
| WGST 150 | Women in Movies | |
| WGST 215 | African Women Writers | |
| WGST 220 | Medieval Women Mystics | |
| WGST 225 | Women in Appalachia | |
| WGST 242 | Women's Health and Fitness | |
| WGST 250 | Women in Science | |
| WGST 260 | Perspectives on Lesbian, Gay, Bisexual, Transgender, and Queer Studies | |
| WGST 340 | Gender and Violence | |
| WGST 345 | Women in International Development | |
| WGST 448 | Sexuality in American Culture | |
| WGST 449 | Women's Movements Since 1960 | |
| WGST 450 | Sex and Science at the Movies | |
| WGST 460 | Men and Masculinities | |
| ACE 471 | Gender and Sport | |
| ANTH 358 | Anthropology of Health and Illness | |
| ARHS 348 | Women in Art | |
| BIOL 122 | Human Sexuality | |
| COMM 212 | Gender Communication | |
| DISB 380 | Disability and the Family | |
| DISB 385 | Disability and Society | |
| ENGL 156 | Literature of Native America | |
| ENGL 180 | Literature of Love, Sex, and Gender | |
| ENGL 252 | Appalachian Fiction | |
| ENGL 254 | African American Literature | |

| | | |
|---|---|---|
| ENGL 255 | Multiethnic Literature | |
| ENGL 285 | Images of Women in Literature | |
| ENGL 288 | Gender and Sexuality in Literature and Film | |
| ENGL 385 | American Women Writers | |
| ENGL 386 | British Women Writers | |
| ENGL 387 | Topics in Women's Literature | |
| ENGL 388 | Topics in Gay/Lesbian Studies | |
| FLIT 316 | Arab Women Writers | |
| GEOG 412 | Geography of Gender | |
| GERO 212 | Introduction to Gerontology | |
| GERO 412 | Public Policy of Aging | |
| GERO 418 | Aging, Women and Culture | |
| HIST 207 | Revolutionary Europe | |
| HIST 346 | Women, Gender, and Kinship in Premodern Europe | |
| HIST 445 | History of American Women | |
| PHIL 130 | Current Moral Problems | |
| PHIL 314 | Philosophy of Sex and Gender | |
| PHIL 331 | Health Care Ethics | |
| POLS 317 | Interest Groups and Democracy | |
| POLS 324 | Sexuality, Law, and Politics | |
| POLS 337 | Gender/Politics and Policy | |
| PSYC 232 | Sex Roles and Behavior | |
| SOC 221 | Families and Society | |
| SOC 235 | Race and Ethnic Relations | |
| SOC 360 | Sociology of Gender | |
| SOC 405 | Class, Status, and Power | |
| ULIB 301 | Gender and the Research Process | |
| **Minor Requirement** | | **15** |
| Students must complete a minor (or a second major) | | |
| **Capstone Experience** | | **3** |
| WGST 484 | Seminar:Capstone | |
| Total Hours | | 48 |

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Students may petition to have other courses count as electives. For more information, email the faculty advising point of contact (as indicated in the catalog under the Faculty tab).

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WGST 191 | 1 | ENGL 101 (GEF 1) | 3 |
| WGST 170 (EDG 4 & F7) | 3 | WGST 200 | 3 |
| EDG 1: Data and Society | 3 | EDG 2: Effective and Civil Communication | 3 |
| GEF 2 | 3 | GEF 2 | 3 |
| GEF 3 | 3 | GEF 4 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 6 | 3 | ENGL 102 (GEF 1) | 3 |
| WGST Elective 1 | 3 | WGST Elective 2 | 3 |
| EDG 3: Ethics and Civil Responsibility | 3 | Minor Requirement 1* | 3 |
| GEF 5 | 3 | General Elective | 3 |

| | | | |
|---|---|---|---|
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WGST 330 | | 3 ARSC 380 (EDG 5) | 3 |
| WGST Elective 3 | | 3 WGST 360 | 3 |
| Minor Requirement 2 | | 3 WGST Elective 4 (Upper Division) | 3 |
| General Elective | | 3 Minor Requirement 3 | 3 |
| General Elective | | 3 Minor Requirement 4 | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| WGST 484 | | 3 WGST Elective 6 (Upper Division) | 3 |
| WGST Elective 5 (Upper Division) | | 3 Minor Requirement 5 | 3 |
| General Elective | | 3 EDG 6: EEDG High Impact Experience | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

*****
Completion of the minor also fulfills F 8.

# Degree Progress

- By the end of the second semester in the major, students should have completed WGST 170 with a minimum grade of C-.
- Students should review their progress in the major each semester with their WGST adviser.
- Students should maintain a GPA of 2.0 in courses that will count toward the major by their Junior year, with minimum grade of C- in WGST 330 and WGST 360.

Students who do not meet these benchmarks may be removed from their major.

# Major Learning Outcomes

## WOMEN'S AND GENDER STUDIES

Upon successful completion of the B.A. degree, **Women's and Gender Studies** majors will demonstrate competency in the field as expressed in the following outcomes:

1. Demonstrate understanding of key concepts of the interdisciplinary field of Women's and Gender Studies, including how gender, sexuality, race, ethnicity, ability, and legal status shape experiences of individuals and interlocking systems of power from local to global scales.
2. Use critical thinking skills and interdisciplinary feminist, gender, or queer approaches to research, revising and presenting knowledge.
3. Employ interdisciplinary feminist, gender or queer methodologies to problem solving evidenced through multiple modalities of communication.
4. Apply feminist, gender, or queer theory, methods, and praxis to scholarship, activism, or public engagement in the classroom, social institutions, the community, or the workplace.

# Business and Economics

## Degrees Offered

- Bachelor of Science in Business Administration
    - Accounting
    - Entrepreneurship and Innovation
    - Finance
    - General Business
    - Hospitality and Tourism Management
    - Management
    - Management Information Systems
    - Marketing
    - Supply Chain Management
- Bachelor of Science
    - Applied AI and Data Analytics
    - Economics
    - Supply Chain Management Science
- Bachelor of Arts
    - Economics

## Historical Background

The John Chambers College of Business and Economics was founded in November of 1951 and graduated its first class in the spring of 1953. Since that time, the Chambers College has become one of the largest colleges at West Virginia University.  In 1954, the College became fully accredited by The Association to Advance Collegiate Schools of Business (AACSB) International, the gold standard for business accreditation.

The Chambers College is located in the newly opened Reynolds Hall. The facility includes collaborative classrooms and learning labs for virtually every discipline. Advanced technologies connect WVU to the world, from students across campus to companies around the globe. Reynolds Hall is designed to enhance the educational and teaching model and significantly enhance the student experience at WVU's business school.

## Mission

Through our people and our values, the WVU John Chambers College of Business and Economics is committed to educating and transforming our students, our state and our world toward greater prosperity, through research and scholarship.

## Vision

The WVU John Chambers College of Business and Economics fosters a diverse and inclusive culture and builds business leaders while dedicating ourselves to excellence, innovation, and ethics. We catalyze interdisciplinary solutions that advance economic growth in the state of West Virginia and beyond.

## Goals

- Foster and advance the reputation of the Chambers College and its programs
- Recruit, retain, and graduate high-quality students
- Recruit and retain top-notch faculty and staff devoted to the land grant mission of the University and Chambers College
- Continually enhance the educational environment for student learning
- Promote discovery and exchange of knowledge and ideas
- Improve West Virginia's economic health and quality of life

## Values

- SERVICE - We seek opportunities to serve others and are committed to providing the highest quality of service.
- CURIOSITY - We ask questions, seek new opportunities and change through innovation.
- RESPECT - We are respectful, transparent and inclusive with each other.

- ACCOUNTABILITY - We perform at our very best every day to create a University that is responsive, efficient and effective.
- APPRECIATION - We support and value each other's contributions as we build a community that is One WVU.

## Statement of Quality

The faculty, staff, administrators, and student employees of the John Chambers College of Business and Economics are committed to being responsive, sensitive, and understanding to the needs of the students and to the needs of each other. Our conduct shall be positive, professional, and supportive to all.

## Accreditation

Business programs in the John Chambers College of Business and Economics are accredited by The Association to Advance Collegiate Schools of Business (AACSB) International at the undergraduate and graduate levels. AACSB International accreditation assures students and prospective employers that our programs adhere to the highest standards of excellence in worldwide recognized business programs. The Chambers College has maintained full accreditation in the AACSB International since 1954.

## Honor Societies

- Beta Gamma Sigma Honorary for all majors.
- Beta Alpha Psi for accounting, finance and management information systems majors.

## Technology

The array of technology available to students in the John Chambers College of Business and Economics is impressive. Through coursework and experiential learning opportunities, students develop skills with technology and its application to business. Business students have access to standard and specialized business software, e-mail, and Internet services through three computer labs in the new, innovative Reynolds Hall. Students can receive technology assistance through the new Tech Spot.

Students use the latest word processing, spreadsheet, database, and presentation software. Each student is encouraged to purchase a personal computer. A wireless network provides Internet access from anywhere in Reynolds Hall to students with properly equipped laptop computers. In addition, all general-purpose classrooms have multimedia presentation capabilities, and the building houses a Cybersecurity Lab, the Wehrle Global Supply Chain Lab, the Data Analytics Lab, Roll Capital Markets Center, and an Ideation Hub.

## Careers

The John Chambers College of Business & Economics focuses heavily on career preparation services that help our students to secure internship positions and full-time opportunities after graduation. The Center for Career Development (CCD), a resource specifically dedicated to business students, facilitates a variety of recruitment and networking events on campus throughout the year to connect students with diverse employer partners. The CCD team also offers one-on-one career coaching sessions, resume and cover letter reviews, virtual and in-person mock interviews, internship and full-time search assistance, salary negotiation guidance, and more. These networking opportunities and resources, in conjunction with the support of the Center's staff, allow students to expand their networks, gain valuable professional and internship experiences, and ultimately reach their desired career outcomes.

## Student Organizations

WVU recognizes 480+ student organizations across academic colleges and areas of interest. Student organizations are a great way to get connected on campus, engage with your peers, and develop new skills. Connect with fellow Mountaineers who share your interests in academic majors, careers and industries, leisure and entertainment activities, political and religious affiliations, and more! Visit https://wvuengage.wvu.edu/organizations (https://wvuengage.wvu.edu/organizations/) to view the complete list of WVU student organizations, including 16 Chambers College-specific clubs.

**Questions?**

Contact the team at the Becker Academic engagement Success Center at be-aesc@mail.wvu.edu or 304.293.7884.

## Definition of Good Academic Standing

To remain in good academic standing with the John Chambers College of Business and Economics a student must possess a minimum overall GPA of 2.0 and demonstrate reasonable progress toward completion of the degree requirements. Students may attempt a course three times (including withdrawing); if at the end of the third attempt the appropriate grade was not attained, they will be referred to the Center for Learning, Advising, and Student Success. Students who have a cumulative GPA of below 2.0 after the fall or spring semester will be placed on academic probation and will be required to attend Mid-Year Academy and sign a contract outlining the requirements for removal from probation. Students who fail to complete these requirements will be referred to the Center for Learning, Advising, and Student Success. Students will be suspended after two semesters of academic probation. Students who have been suspended are able to appeal to the College's Academic Standards committee.

The John Chambers College of Business and Economics has high standards of conduct for its students. Any student who has been found to have broken the Code of Student Conduct may be dismissed from the Chambers College.

A minimum grade of C- is normally required in each of the prerequisite courses required for admission to the program or for enrollment in upper-division business (BCOR) or major core courses; however, some academic majors require heightened grade requirements in the prerequisite courses. Please see detailed information on prerequisite courses in the academic major sections that follow.

The John Chambers College of Business and Economics undergraduate students not direct admitted to a major as a first-time freshman or a first-time transfer will declare their major upon successfully completing the pre-business curriculum. A minimum overall GPA of 2.5 is required (2.0 for majors in Entrepreneurship and Innovation, General Business, and Hospitality and Tourism Management). At the beginning of the semester in which students intend to complete the prerequisite courses, they will meet with their academic advisor to review the student's transcript to determine if all prerequisite courses have been taken with the required grade in order to move into the desired major. Once verified, the advisor will complete an Academic Status Update, declaring the student's major.

This publication was produced well in advance of the start of the academic year; therefore, students are advised to review current academic program requirements on the College's website.

## Classes Taken at Other Institutions

Business and economics majors may petition the Chambers College to complete upper-division business administration coursework out of residence, provided the courses are completed at other AACSB-accredited institutions. Courses must be approved by the dean or designee of the College before registering at another institution. Ordinarily, required business courses must be taken at WVU.

Up to 15 hours of upper level coursework will be accepted in transfer. A maximum of six hours of work taken prior to admission may be applied to the major and must be transferred from an AACSB-accredited institution. A maximum of nine hours will be accepted for upper level BCOR courses and do not have to be from an AACSB-accredited institution. BCOR 460 must be taken in residence. Courses taken at two-year institutions will not be given upper level credit.

## Maximum and Minimum Load

A minimum of twelve hours in a semester is required for full-time status in the John Chambers College of Business and Economics. The maximum load in the Fall and Spring semesters is twenty hours. The maximum load in the Summer semester is fourteen hours. Exceptions to the minimum or maximum load require approval of the student's academic advisor before registration. Students seeking to withdraw from individual courses must seek approval from their academic advisor whenever the remaining load falls below the required minimum, even though all other conditions supporting the request for the individual course withdrawal may be in order.

## Undergraduate Advising

Professional academic advisors assist students with academic planning in the Office of Undergraduate Programs and Advising, Room 2200, Reynolds Hall, (304) 293-4959. Students are required to meet with their advisor each semester to maintain degree progress. For students who need immediate assistance, walk-in hours are available daily. Course scheduling and graduation certification are also administered by this office.

## Regulations Affecting Degree Completion

Consistent with University requirements, a student has seven years from the first semester at WVU to complete the requirements. After seven years, the student will have to meet the requirements of a later catalog that is no more than seven years old when the student completes his or her studies. With the consent of the student's advisor and dean, a student may choose to meet the conditions published in a later catalog.

Transfer or returning students who have upper-division business or economics coursework completed more than seven years prior must have that coursework evaluated by the Chambers College before the credit may apply to a degree awarded by the Chambers College.

Regarding pass-fail courses, University regulations limit full-time students with a 2.0 GPA or higher to a maximum of four semester hours each term. Courses taken for pass-fail grading must be unrestricted (free) electives.

Students are permitted to apply a maximum of six semester hours of Professional Field Experience (491) toward a business administration or economics degree. Some academic departments prohibit or limit the use of Professional Field Experience towards requirements in the major. Students should consult an academic advisor to ascertain how Professional Field Experience applies to a respective degree program.

Students are required to complete a minimum of 90 credit hours, or 30 of their final 36 credit hours of study at WVU. Students must have completed 120 credit hours, met all degree requirements, and possess a cumulative GPA of 2.0 and a major GPA of 2.0, in order to be eligible for graduation.

## Multiple and Concurrent Bachelor's Degrees

If a student seeks to earn two bachelor's degrees simultaneously, the student must meet all requirements for both degrees.

Students seeking to double-major in the John Chambers College of Business and Economics may use a maximum of 6 credit hours toward both majors. Those majoring and minoring in the College may use no more than 6 credit hours toward the major and the minor.

The student must complete all University GEF requirements, all Chambers College pre-business and core requirements, and must satisfy the course requirements of one of the College's majors (See Requirements for Degrees).

## International Opportunities – Abroad and On-campus

The John Chambers College of Business and Economics offers students several opportunities to add an international dimension to their studies by participating in programs that span the globe. We currently offer three-credit hour short-term study **abroad** courses and semester-long experiences.

In addition to these global engagements abroad, the College also offers **on-campus** opportunities for students to learn more about international business.

**Short-term programs abroad**

Each Summer and Spring Break, the Chambers College coordinates several seven to ten day faculty-led study abroad experiences where a student can earn up to three credit hours. At present, these courses and destinations include those in Guatemala/ Costa Rica, Japan, Greece, Ireland, India, Kenya, and Thailand.

*Guatemala/Costa Rica*. This seven-day Spring Break program explores both the coffee bean industry and Mayan culture in Guatemala and Costa Rica. With Morgantown's Mountaineer Roasting Company as our guide, we will travel to both countries to observe operations at coffee bean farms. Students will be provided with hands on experience to include picking of beans, processing, sampling and quality control, preparation for shipping, and seaport operations. This unique experience will give students an appreciation for the complexities of the coffee bean industry and international business practices outside of the textbook. In addition, we will spend 2 days in Tikal to explore a complex of Mayan ruins in the rainforests of northern Guatemala. Historians believe that the more than 3,000 structures on the site are the remains of a Mayan city called Yax Mutal, which was the capital of one of the most powerful kingdoms of the ancient empire. We will also experience Central American business and culture in both counties. In addition to the wonders of Guatemala, you will see that Costa Rica is incredibly diverse, with two coastlines, rainforests, and a host of volcanic regions and waterfalls. For more information on this program, please contact Dr. David Dawley at David.Dawley@mail.wvu.edu.

*Greece.* This study abroad trip to Greece offers a dynamic immersion into the country's economic landscape, cultural heritage, and business environment. The trip typically includes visits to major economic hubs like Athens and Thessaloniki, where students engage in interactive seminars and workshops led by local experts and business leaders. These sessions delve into topics such as Greek business practices, entrepreneurship, international trade, and the impact of historical and cultural factors on modern business operations. Additionally, excursions to key historical sites such as the Acropolis and Delphi provide valuable insights into Greece's rich history and its influence on contemporary business dynamics. Networking opportunities with Greek entrepreneurs, company visits, and case studies further enhance the learning experience, offering students a holistic understanding of Greece's business ecosystem within a global context. For more information on this program, please contact Dr. David Dawley at David.Dawley@mail.wvu.edu.

*India*. Traveling alongside experts on global supply chain management who have lived and worked in India you will gain a unique appreciation from your experience. From visiting Reliance Industries, India's largest retailer and business conglomerate, to experiencing India's iconic World Heritage sites such as the Taj Mahal (considered one of the modern wonders of the world) to a candid behind-the-scenes look at the exciting world of Bollywood and India's contribution to the cornerstones of global popular culture, you will gain a new appreciation of India's diverse role in the global economy. The Faculty Co-Lead's extensive network will afford you exclusive opportunities to network with India's government, business, and academic leaders. These networks will be invaluable as you progress in your career, as several global and virtually all Fortune 500 companies either do business with companies in India or are operating in India. As you travel between India's Capital, New Delhi, in the north and India's cultural and financial capital, Mumbai on the west coast, you will experience the diversity in culture, food, language, clothing, climate, and many other socio-political factors that will provide you an appreciation for the complexity of doing business in India. In addition to the outstanding study-abroad experiences of company and supply chain site visits, you will have an exclusive experience of India reserved for a select few visitors. For more information on this program, please contact Dr. John Saldanha at jpsaldanha@mail.wvu.edu.

*Japan.* This trip and related course incorporates a study abroad program with a dual focus on business and consumer culture. Students will visit Japan to obtain first-hand experience with local business professionals, collegiate peers, and others living in Japan. The experience allows students interested in international business to explore foreign economic, technological, social, and cultural environments via company tours, campus visits, and cultural immersion activities. Students will spend time in Japan and complete the required coursework during and after the trip. This study abroad course also provides an opportunity for students giving thought to whether a foreign environment would be something they would enjoy. For more information on this program, please contact Dr. Laurel Cook at Laurel.Cook@mail.wvu.edu.

*Thailand.* In this excursion to Thailand, you will interact with local businesses, floating markets, street markets, temples, Hill-Tribe villages, and a coconut farm. Students will have hands-on experiences with local handicrafts such as weaving silk, dying fabrics, pottery, and cooking Thai food. This unique experience will give students an appreciation for the complexities of entrepreneurship in a developing economy in a postcolonial world. Students will be provided with a full immersion of Thai Culture and that of Southeast Asia. For more information on this program, please contact Dr. Susan Lantz at Susan.Lantz@mail.wvu.edu.

**Semester-long programs abroad**

The John Chambers College of Business & Economics proudly participates in all WVU Education Abroad commissioned semester-long exchange programs. This program is aligned with accredited and prestigious schools around the world, including institutions in Australia, Brazil, China, France, Germany, Hong Kong, Italy, Ireland, Israel, Japan, South Korea, Spain, and the United Kingdom. There, you can spend a full semester earning course credit.

In addition, we have a special arrangement through a consortium in Italy with thirty-four schools for the purpose of providing international study opportunities for their students. The consortium's classes are held on a campus in Paderno del Grappa, Italy. Paderno is in northern Italy about thirty miles northwest of Venice. Students have the opportunity to attend either for a full semester or for a summer session. All classes are taught in English by faculty from the consortium universities with the students also being from the consortium member schools. Students who attend have the opportunity to take upper-division business, language, culture, and other specialized classes. Students pay tuition and fees as well as room and board to the consortium. The contact person for the Italy program is the College's coordinator of international studies.

For more information about any semester-long international program or internship, please visit WVU Abroad (https://wvuabroad.wvu.edu/).

**On-campus International Engagements**

*Annual Export Consulting Project*. Are you looking for a hands-on project to get you started in international business consulting? Each Spring, we offer a project designed to improve and document your international consulting skills and help a local business globalize its product. To be eligible for selection into this program you must have either a) two undergraduate or b) one graduate-level international business-related courses under your belt. Applicants must also be either juniors, seniors, or graduate students.

Students will spend one full day (usually a Friday) with us in Reynolds Hall meeting with international business experts, students, instructors, and the local business owner(s). Beyond that teams will meet virtually as needed as they prepare the final plan to be delivered in mid-to-late April.

This is an exceptional opportunity because:

- We will be working with one of the top-rated international business schools in the world – George Washington University's Center for International Business Education and Research (https://business.gwu.edu/research/ciber/about-gw-ciber (https://business.gwu.edu/research/ciber/about-gw-ciber/))
- It's our chance to help a regional business expand internationally
- It's your chance to get real-world, hands-on consulting experience

*Annual International Business Bootcamp & Certification Program.* Each Spring, The Robbins Center for Global Business & Strategy and George Washington University's Center for International Business and Research Offer a no-cost way to enhance your global business knowledge and earn a professional certification. During this 6-week program, students will learn international trade mechanics through interactive webinars with experienced experts. It is an opportunity to build your knowledge to sit for NASBITE International's Certified Global Business Professional (CGBP) exam, a certification that will set you apart in global commerce.

*The International Business Club*. This student organization is a dynamic student-led organization dedicated to fostering global business awareness, cross-cultural exchange, and professional development. Our mission is to equip students with the knowledge, skills, and networks necessary to succeed in the increasingly interconnected world of international business.

For more information on any of these on-campus offerings, please contact Dr. David Dawley, Executive Director, Robbins Center for Global Business and Strategy, at David.Dawley@mail.wvu.edu.

# ADMINISTRATION

## DEAN

- Joshua Hall - Ph.D. (West Virginia University)
  Economics

## ASSOCIATE DEAN FOR ACADEMIC AFFAIRS AND RESEARCH

- Brad Humphreys - Ph.D. (Johns Hopkins University)
  Economics

## ASSOCIATE DEAN FOR UNDERGRADUATE AND GRADUATE PROGRAMS

- Rebel Smith - Ed.D. (University of Arkansas)
  Higher Education Administration

### ASSISTANT DEANS

- Susan Catanzarite - J.D. (West Virginia University)
  Assistant Dean for Undergraduate Programs
- Abigail Esguerra - M.A. Communication Studies (West Virginia University)
  Assistant Dean of Development
- John Lympany - E.D. (Spalding University)
- Julie Turner-Maramba - M.Ed. (Frostburg State University)
  Assistant Dean for Graduate Programs

## Accreditation

The following programs within the College of Business and Economics have specialized accreditation through the Association to Advance Collegiate Schools of Business International (AACSB).

- Accounting
- Economics
- Entrepreneurship and Innovation
- Finance
- General Business
- Global Supply Chain Management
- Hospitality and Tourism Management
- Management
- Management Information Systems
- Marketing
- Organizational Leadership

## Admission to the Chambers College

The John Chambers College of Business and Economics offers admission to eligible freshmen. Students interested in pursuing the degree of Bachelor of Science in Business Administration, or the degree of Bachelor of Science in Economics, or the degree of Bachelor of Arts in Economics are encouraged to apply to the University online at http://apply.wvu.edu/.

## Admission for First Time Freshmen

The John Chambers College of Business and Economics offers two different classifications of admission to first time freshmen. Students are eligible for direct admission to a major or general admission to Business. Students offered direct admission to a major may select from one of eleven academic majors: Accounting, Economics, Entrepreneurship and Innovation, Finance, General Business, Global Supply Chain Management, Hospitality and Tourism Management, Management, Management Information Systems, Marketing or Organizational Leadership. Please review the table below to verify your admission eligibility.

1. ***Direct Admission to Major*** - 3.0 HS GPA
2. ***Admission to Business*** - admitted to WVU AND a Math score of 20 on the ACT OR 520 on the SAT OR a score of 40 on the ALEKS placement exam.

Students who take the ACT or SAT more than once should note that WVU superscores results. The highest ACT and SAT scores are combined to determine eligibility for admission. Students who satisfy the requirements for admission to WVU but not those stated above will be admitted to the Center for Learning, Advising, and Student Success until they are eligible for admission to the John Chambers College of Business and Economics.

The Admission Requirements above will be the same for the 2026-2027 Academic Year.

## Admission for Transfer and International Students

To be admitted into the John Chambers College of Business and Economics, all non-first time freshmen students are required to have a 2.25 minimum cumulative GPA and the eligibility to take College Algebra.

GPA calculation for admission is computed using all (transferable) baccalaureate coursework attempted at regionally accredited institutions. All students entering the John Chambers College of Business and Economics who do not qualify for direct admission to a major as freshmen will declare their major once the pre-business curriculum has been completed and the appropriate grades and GPA have been reached. International students who do not have an ACT/SAT/ALEKS score will be admitted to CLASS until the appropriate level of Math and minimum GPA of 2.25 is reached.

The Admission Requirements above will be the same for the 2026-2027 Academic Year.

## Progression to the Major and Eligibility to Enroll in Upper-Division Business Courses

Students are asked to refer to the individual major pages for admission to the major and eligibility to enroll in upper-division business courses.

## Degree Designation Learning Outcomes

### BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (BSBAD)

1. **Critical Thinking** - *Graduates will be able to think critically and determine appropriate actions.*
2. **Teamwork -** *Graduates will be able to deal with the dynamics of individuals and teams within organizations.*
3. **Global Awareness -** *Graduates will recognize the opportunities and challenges associated with the global marketplace.*
4. **Ethics** - *Graduates will have an appreciation of the ethical, legal, and regulatory issues impacting the decision-making process.*
5. **Functional Knowledge** – *Graduates will be able to demonstrate and apply the basic concepts in each of the following areas: accounting, economics, finance, management, management information systems, and marketing.*

## Becker AeSC

The Becker Academic Engagement and Success Center (AeSC) is a study center with presentation practice rooms, group work centers, computer bays and tutors on hand to assist students in a variety of business and communication subjects. It pulls together separate pedagogically-based programs that rely on peer assisted tutoring, review, and coaching skills to help our students become better scholars, writers, speakers, and professionals-in-training. Becker AeSC selects student leaders and trains them to run review sessions, become better communicators, and model successful student behaviors. The Center also coordinates relationships between Chambers College freshman, faculty, and the Adventure West Virginia Program.

Visit our website at: https://business.wvu.edu/students/aesc (https://business.wvu.edu/students/aesc/)

## Center for Career Development

The Center for Career Development (CCD) guides students in identifying career opportunities that fit with their skills, interests, and aspirations. We facilitate specialized programs, generate internship and full-time opportunities, and build connections between students, alumni, and employers.

All Chambers College students and alumni can take advantage of the CCD's services:

- Individualized career exploration, planning, and job search strategies
- Strengths-based coaching with a Gallup Certified Strengths Coach
- Peer career coaching sessions through the Career Studio
- One-on-one resume and cover letter creation
- Mock interviews, both virtual and in-person
- Graduate school preparation
- Job shadowing opportunities and company site visits
- Career fairs, networking events, and professional development workshops
- On-campus interviews with nationwide employers hiring for internships and full-time roles
- Handshake, WVU's premier job portal, where thousands of internships and full-time jobs are posted annually
- Professional attire through the Gloria Jean Rosenthal Career Closet

Visit our website at https://business.wvu.edu/centers/center-for-career-development (https://business.wvu.edu/centers/center-for-career-development/) for details.

## Roll Capital Markets Center

The Roll Capital Markets Center is a state-of-the-art research and training facility. The center is equipped with Bloomberg terminals, the market leader in real-time data, news and analytics for finance professionals. The Center is extensively utilized by student analysts in the Student Managed Investment Fund (SMIF) to conduct equity research, macroeconomic analysis, and other data analytics to make informed decisions regarding their real-money portfolio. Beyond the realm of investment strategies, the center serves as a training ground for finance students preparing for cutting edge finance industry certifications. Moreover, the lab's resources are instrumental for students working on experiential learning projects, not only in finance courses but across a spectrum of business disciplines, providing a hands-on approach to education that prepares students for the challenges and dynamics of the business world.

## Research and Outreach Centers

### BUREAU OF BUSINESS AND ECONOMIC RESEARCH

Since the 1940s, the BBER's mission has been to serve the people of West Virginia by providing the state's business and policy-making communities with reliable data and rigorous applied economic research and analysis that enables the state's leaders to design better business practices and public

policies. Our goal is to be the premier applied economics research organization serving West Virginia's government and business leaders for regional economic and policy analysis and, as such, help fulfill a key part of West Virginia University's mission as a land-grant institution.

Active research programs include:

- West Virginia Economic Outlook Report: A comprehensive program analyzing the state economy, providing a forecast, and analyzing economic development challenges and opportunities.
- Regional Economic Analysis: Research, data, and forecasts for various counties or regions of the state.
- Public Policy Analysis: Research on various government policies that affect West Virginia.
- Labor Market and Demographic Analysis: Research relating to the state's labor market and population and how various factors such as age distribution, population density, education attainment, health, and drug abuse affect economic outcomes.
- Industry Studies: Research providing detail on major industries, such as energy, manufacturing, health care and tourism, and they relate to economic development in West Virginia.
- Special studies sponsored by the State of West Virginia, local governments in the state, business groups, and community organizations.

Visit our website at: https://business.wvu.edu/centers/bureau-of-business-and-economic-research (https://business.wvu.edu/centers/bureau-of-business-and-economic-research/) for details.

## CENTER FOR ASIAN BUSINESS

The Center for Asian Business housed at the West Virginia University John Chambers College of Business and Economics, is dedicated to advancing research, education, and business practices relate to Asia. Our goal is to provide our students, faculty, and business entrepreneurs with a comprehensive and diverse business and cultural exposure through promoting conducting cutting-edge research, offering innovative programs and initiatives, and fostering partnerships and collaborations with industry, academia, and communities in Asia and beyond.

Visit our website at: https://business.wvu.edu/research-outreach/center-for-asian-business

## CENTER FOR FINANCIAL LITERACY AND EDUCATION

The Center for Financial Literacy and Education promotes financial literacy and education in the state of West Virginia through experiential learning opportunities, faculty engagement in research initiatives and collaborations, and the promotion of better financial decision making.

The Center is divided into four pillars: banking, insurance, personal finance, and investments. These pillars serve as a foundation and create a strong tie to our mission: 1) to prepare students for careers in finance via curriculum and experiential learning; 2) to serve corporate partners by facilitating access to WVU's best and brightest students, and 3) to provide leading-edge research and consulting for high-performance organizations.

Visit our website at https://business.wvu.edu/research-outreach/center-for-financial-literacy-and-education (https://business.wvu.edu/research-outreach/center-for-financial-literacy-and-education/)

## CENTER FOR FORENSIC BUSINESS STUDIES

The College of Business and Economics in collaboration with the WVU Forensic Science Institute offers several programs meeting the needs of the forensic community.  These initiatives include:

(1) The FORESIGHT Project which assists forensic science laboratories in standardizing definitions for performance metrics to evaluate work process while linking financial information to work tasks and functions.

(2) The Masters in Forensic and Fraud Examination (MS-FFE) and the Forensic Accounting and Fraud Examination Certificate (FAFE) expose students to practicing experts, real-world and simulated case examinations and nationally renowned faculty. The real world, hands-on experiential case examinations, including written and oral communications, in the classroom prepares students for successful careers.

Visit our website at https://business.wvu.edu/graduate-degrees/forensic-accounting-fraud-examination-graduate-certificate (https://business.wvu.edu/graduate-degrees/forensic-accounting-fraud-examination-graduate-certificate/) for more details.

## CENTER FOR FREE ENTERPRISE

Founded in 2014, the mission of the WVU Center for Free Enterprise is to advance teaching, research, and outreach on the free enterprise system and how this system relates to increased prosperity and quality of life within West Virginia and around the world. The Center primarily provides research-related support for its affiliated faculty and graduate students. CFE-affiliated Ph.D. students receive assistantships and are provided the opportunity to attend professional conferences and present their research. The Center organizes a weekly seminar series for its graduate students and hosts a reading group. In addition, the Center provides a two week summer workshop teaching cutting edge empirical methods to graduate students across the country.

Visit our website: https://business.wvu.edu/research-outreach/center-for-free-enterprise

## CENTER FOR GAMING RESEARCH AND INDUSTRY DEVELOPMENT

The passing of House Bill 5668 gives access to transactional data and metrics from the gaming industry that will provide Chambers faculty and students the opportunity to better understand consumer activity and behavior, industry standards and economic trends that support our RI and land-grant missions. The Center will provide this research to the state to advance understanding of consumer behavior around gamin.

## CYBER-RESILIENCE RESOURCE CENTER (CRRC)

The Cyber-Resilience Resource Center (https://wvutoday.wvu.edu/stories/2024/10/24/wvu-leading-new-center-to-bolster-cybersecurity-for-businesses-train-students/) (CRRC) at West Virginia University is a first-of-its-kind, state-wide initiative dedicated to strengthening cybersecurity and cyber-resilience across West Virginia as part of the fight against cybercriminals and nation-state-level threats. Funded by a $1.5 million grant from the Appalachian Regional Commission, the center provides free cybersecurity training, assessments, guidance, and direct support to businesses, critical infrastructure, and organizations, with a particular focus on small businesses, startups, and critical infrastructure. Recognizing that many organizations lack the financial and human resources for robust cybersecurity programs, the CRRC aims to bridge this gap by offering expert-led resources and hands-on support to enhance cyber defenses, mitigate threats, and support economic prosperity.

Led by cybersecurity experts from the John Chambers College of Business and Economics at West Virginia University, the CRRC collaborates with higher education institutions, private industry, and public sector organizations to deliver cutting-edge education, workforce development programs, and cybersecurity awareness initiatives. The center we provide free expert guidance, hands-on support, and practical solutions to safeguard sensitive data and critical infrastructure for organizations across the state. The center also provides cutting-edge educational opportunities to train the next generation of cybersecurity professionals through offering a number of cyber-resilience fellowships for students at any 2-year or 4-year university within WV. Cyber-resilience fellows will be placed on real-world experiential learning projects to solve cybersecurity and technology problem sets for WV businesses, start-ups, non-profits, municipalities, and critical infrastructure, as part of the larger effort to enhance the cyber-resilience of the state of West Virginia.

## DATA DRIVEN WEST VIRGINIA

Data Driven WV (DDWV) is an outreach center within the Department of Management Information Systems at West Virginia University, committed to advancing the state's prosperity and economic health through data-driven and technical solutions. Our experiential learners, comprising undergraduate and graduate students from diverse fields, collaborate with faculty and staff to provide real-world problem-solving for our partners.

Our vision is to leverage the analytical and technical skills taught at WVU's John Chambers College of Business and Economics to support West Virginia and its people through targeted outreach, education, and research. Founded in 2019 by a group of Business Data Analytics students, DDWV has since expanded to coordinate experiential learning projects, advise the state on data-related matters, and offer on-demand analytical and technical services to organizations of all sizes.

DDWV is a learning space to nurture the next generation of data scientists, cybersecurity, and analytics professionals. From artificial intelligence to data science to development of infrastructure to policy recommendations, DDWV gives students an opportunity to lead. By partnering with industry leaders who share our goal of bridging the digital divide, we enable students to gain real-world experience through capstones, employment, and extracurricular activities, preparing them for future careers. As a proud R1 research land grant university, DDWV also supports the academic and research efforts of the Chambers College faculty, collaborating with colleagues across WVU on leading research projects.

While primarily focused on the academic programs of Chambers College Business Data Analytics and Business Cybersecurity Management, and Management Information Systems, DDWV also works with faculty and students from other departments and colleges on projects of varying sizes and scopes. As a multidisciplinary hub, we offer a consistent engagement experience for industry, state, and non-profit partners, striving to positively impact our state and students through innovative solutions.

Visit our website at https://business.wvu.edu/research-outreach/data-driven-wv (https://business.wvu.edu/research-outreach/data-driven-wv/)

## ENCOVA CENTER FOR INNOVATION AND ENTREPRENEURSHIP

Established in 2002, the Encova Center for Innovation and Entrepreneurship serves the entire University community and beyond. The Center’s mission is to promote entrepreneurship education that leads to economic development. The Center supports the major and minor in Entrepreneurship -more information may be found under the Management section of the catalog. The Center hosts Ignite WV, a pitch competition in which residents across West Virginia, with the help of trained professionals, develop business plans for their business ideas to be judged by a panel of experts. During the final round of competition seed funds are distributed to help start or grow their business in the state. Through partnerships, the Center also actively participates in an internship program that provides students with real world experience. The Center is also partnered on several grants with the Benedum Foundation and Appalachian Regional Commission.

Visit our website at https://business.wvu.edu/research-outreach/encova-center-for-innovation-and-entrepreneurship (https://business.wvu.edu/research-outreach/encova-center-for-innovation-and-entrepreneurship/) for details.

## KENDRICK CENTER FOR AN ETHICAL ECONOMY

Founded in 2022 with a generous donation from Ken and Randy Kendrick, the Kendrick Center for an Ethical Economy creates value for West Virginians by deepening existing ethics and economics education through the following projects:

- Kendrick Educators Program (https://business.wvu.edu/research-outreach/kendrick-center-for-an-ethical-economy/#fellows)supports West Virginia teachers to pursue a Masters of Science in Economics degree at West Virginia University with the goal of providing an economist to every community across the State.
- Kendrick Fellows Program (https://business.wvu.edu/research-outreach/kendrick-center-for-an-ethical-economy/#fellows1)identifies talented West Virginia University undergraduate students, provides them a world-class education in ethics and economics, and incentivizes them to contribute in the Mountain State after graduation.
- Economics 201 Program (https://business.wvu.edu/research-outreach/kendrick-center-for-an-ethical-economy/#econ)provides scholarships for West Virginia high school students to take ECON 201 at West Virginia University while still enrolled in high school.

The Kendrick Center for an Ethical Economy is breaking new ground in what business ethics means in a business college. It supports multiple new faculty hires, all of whom elevate the research, teaching, and outreach mission of the Chambers College of Business and Economics and West Virginia University.

Visit our website at: https://business.wvu.edu/research-outreach/kendrick-center-for-an-ethical-economy

### KNEE REGULATORY RESEARCH CENTER

Established in 2016, The Knee Regulatory Research Center (KRRC) is an academic research center currently housed in the John Chambers College of Business and Economics at West Virginia University. The mission of KRRC is to produce high-quality research on the effects of government regulation and to communicate the results broadly to inform real world change. In addition to hosting a national database of occupational regulation, the Center maintains a community of scholars and policy experts, supports emerging scholars, and organizes academic conferences and panels exploring the effects of certificate of need, occupational regulation, and scope of practice. Our team is willing to assist state governments or policy groups by providing research-based analysis of policy and reform. Our website (http://csorwvu.com/) highlights our state reports, previous grants, achievements, newsletters, and legislative testimonies.

### STUART M. AND JOYCE N. ROBBINS CENTER FOR GLOBAL BUSINESS AND STRATEGY

The Stuart M. and Joyce N. Robbins Center for Global Business and Strategy was established through an endowment to the John Chambers College of Business and Economics. The mission of the Center is to support research, education, and outreach activities related to global business and strategy focusing on G-20 countries. Through the Center, the Chambers College has developed student and faculty exchanges with top universities in G-20 countries. For example, students may pursue studies in Australia, Brazil, China, France, Germany, Hong Kong, Italy, Ireland, Israel, Japan, South Korea, Spain, and the United Kingdom, to name a few.

The Center is also responsible for developing stronger connections with international institutions and global business enterprises.

Visit our website at https://business.wvu.edu/centers/robbins-center-for-global-business-and-strategy (https://business.wvu.edu/centers/robbins-center-for-global-business-and-strategy/)

## Labs

### BEHAVIORAL ECONOMICS AND SITUATIONAL TESTING (BEAST) LAB

The BEAST Lab uses experimental methods to explore behavioral questions in economics and related fields, focusing on projects that make a difference for marginalized communities. Current research emphasizes education mentoring, identity and gender, currency stability, team formation, group identity cohesion, effects of propaganda and much more. Undergraduate students can join the BEAST Lab as research apprentices through the RAP program. They can learn from active graduate students in the lab, assist with research and data analysis, and develop their own research skills.

### DR. RANDY AND KAREN EVANS CYBERSECURITY LAB

The Dr. Randy and Karen Evans Cybersecurity Lab in the John Chambers College of Business and Economics, located in Reynolds Hall is a cutting-edge teaching, research, and service laboratory, modeled as a modern Security Operations Center (SOC). The mission of this lab is to transform West Virginia University and the state of West Virginia into a national leader in cybersecurity research, service, and education. Within this lab, students and faculty conduct research on a variety of cybersecurity topics including vulnerability detection, software security, IT-OT architecture, industrial control systems, cybersecurity workforce development, and security operations. Furthermore, this lab serves as the Chambers College hub for industrial outreach and experiential learning cybersecurity projects, where students and faculty directly contribute to West Virginia University's land-grant mission through assisting business and organizations within and beyond the state with tackling their cybersecurity problem sets and improving their cybersecurity posture. This lab also serves as a training ground for Management Information Systems (MIS), and Business Cybersecurity (CYBR) students to train and hone their cybersecurity skills in preparation for national- and international-scale competitions such as the NATO Locked Shields exercise. Finally, this lab serves as the training hub for cybersecurity students seeking to pass rigorous, technical industry cybersecurity certification exams, which are a frequent pre-requisite for employment in the cybersecurity field.

## NEMACOLIN HOSPITALITY INNOVATION AND TECHNOLOGY LAB

The Nemacolin Hospitality Innovation and Technology Lab at WVU aims to foster innovation and technological advancements in the hospitality industry. Through cutting-edge interactive tools like Internet of Things (IoTs), Augmented Reality (AR) and Virtual Reality (VR) devices, HIT Lab partners can access various hospitality software and applications. The lab's purpose is to develop, test and evaluate new information technologies, conduct research projects and offer training for both students and the hospitality workforce. It provides state-of-the-art analytical tools and statistical software for data collection and analysis, enabling students to tackle real-life industry problems and trends.

## WEHRLE GLOBAL SUPPLY CHAIN LAB

The purpose of the SCM lab is to provide a physical space for an immersive and stimulating environment for its users to explore their curiosity to learn and discover new solutions and build skills for the digital supply chain. Primary objectives are to:

- Enable interactions among scholars from various colleges in the university to tackle supply chain issues across disparate industries such as energy and healthcare,
- Facilitate interactions between scholars and practitioners from for-profit, non-profit and government organizations,
- Provide a venue for industry partners to engage in imagining, testing and piloting new data driven tasks and processes,
- Enrich lab users' experiential learning experiences using VR and AR technology that will immerse them in the digital supply chain.
- Leverage adaptive manufacturing to both develop innovative learning modalities and imagine new discoveries to transform practice,
- Build lab users' proficiency in augmented analytics to leverage ML and A-I to develop predictive and prescriptive insights from large, varied data,
- Allow lab users to interact with and manipulate autonomous machines to stimulate immersive learning as well as discover new ways to deploy these machines to achieve supply chain process objectives, and
- Offer opportunities to simulate physical, digital and melded environments, such as IoT, for learning and discovery.https://business.wvu.edu/research-outreach/center-for-asian-business

## John Chambers College of Business and Economics Minors

- Accounting (http://catalog.wvu.edu/undergraduate/minors/accounting/)
- Business Cybersecurity (http://catalog.wvu.edu/undergraduate/minors/businesscybersecurity/)
- Business Data Analytics (http://catalog.wvu.edu/undergraduate/minors/buda/)
- Business Ethics and Prosperity (http://catalog.wvu.edu/undergraduate/minors/businessethics/)
- Economics (http://catalog.wvu.edu/undergraduate/minors/economics/)
- Entrepreneurship (http://catalog.wvu.edu/undergraduate/minors/entrepreneurship/)
- Esports Management (http://catalog.wvu.edu/undergraduate/minors/esports_management/)
- Finance (http://catalog.wvu.edu/undergraduate/minors/finance/)
- General Business (http://catalog.wvu.edu/undergraduate/minors/general_business/)
- Hospitality and Tourism Management (http://catalog.wvu.edu/undergraduate/minors/hospitality_and_tourism_mgmt/)
- Human Resource Management (http://catalog.wvu.edu/undergraduate/minors/hrmg/)
- Insurance (http://catalog.wvu.edu/undergraduate/minors/insurance/)
- International Business (http://catalog.wvu.edu/undergraduate/minors/internationalbusiness/)
- Nonprofit Management (http://catalog.wvu.edu/undergraduate/minors/nonprofitmanagement/)
- Marketing (http://catalog.wvu.edu/undergraduate/minors/marketing/)
- Professional Sales (http://catalog.wvu.edu/undergraduate/minors/professionalsales/)
- Real Estate (http://catalog.wvu.edu/undergraduate/minors/real_estate/)

Note: Students may only declare two minors from the John Chambers College of Business and Economics.

# Accounting, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

The accounting program has a rich heritage of producing successful accounting professionals and business leaders. Graduates excel in professional examinations, and we have a strong track record for graduate career placement. With an extensive alumni network and a solid reputation among major accounting firms, the accounting program at WVU has an excellent record of placing students in the accounting profession.

The accounting program at WVU has been separately accredited by AACSB International, the Association to Advance Collegiate Schools of Business, since 1997. As of November 2024, only 193 programs had achieved this distinction internationally. Accounting majors learn skills vital for every organization, from multi-national companies to government agencies and nonprofits. We provide the foundation you will need to enter the profession.

Accounting majors learn skills vital for every organization, from multi-national companies to government agencies and nonprofits. WVU provides the foundation graduates need to enter the profession with a heavy emphasis on performance measurement and accounting (data) analytics.

Our undergraduate program offers specialized tracks in the following areas:

- The CPA Exam grounded in the 2024 CPA Evolution (BAR, ICS, Tax).
- Corporate and organizational accounting with ties to the Certified Internal Auditor (CIA) and Certified Financial Management (CMA) exams.
- Data analytics and big data.
- Forensic accounting and fraud examination with ties to the Certified Fraud Examiners exam.

Undergraduate students can mix and match their accounting specialized tracks to set their career on a path to success.

We also offer an Accelerated Bachelor's to Master's (ABM) and a “3+1” program where advanced placement students earn both an undergraduate degree and either a Master of Accountancy (MAcc) or Master of Science in Forensic and Fraud Examination (MS-FFE) in approximately four years.

The faculty is comprised of twelve tenure-track faculty, two teaching scholar faculty, and two teaching instructor faculty.

Faculty members are actively engaged in the following goals as drivers for our strategic plan:

1. To strengthen the accounting pipeline through recruiting new students and through improved retention and persistence of existing students.
2. To excel in workforce readiness by embracing Assurance of Learning, curriculum enhancements, career placement, incorporating contemporary technology, and working with stakeholders.
3. To create knowledge through research through our doctoral programs and by our faculty.

The overarching goal of the accounting programs is to meet the evolving needs of its stakeholders through teaching, research, and service. The undergraduate accounting degree program builds upon a general education curriculum to provide students with a base of academic knowledge in business and accounting. It is designed to integrate basic knowledge with a professional orientation and form a foundation for future learning as well as career and academic success. The accounting program and course offerings are subject to periodic review for timeliness, professional requirements, and relevance in a global marketplace.

The advanced courses in the program provide both specialized knowledge in accounting, technology, and financial reporting and an integrated overview of the economic activities of a business entity. These courses give students the basic educational foundation required for a variety of entry-level positions in accounting, business, government, and not-for-profit organizations. Accounting graduates may pursue careers that lead to positions in public accounting, corporate finance, or government. Positions such as certified public accountants, financial planning and analysis, managerial accountants, controllers, chief financial officers (CFO), tax accountants, financial fraud examiners, forensic accountants, budget analysts, internal auditors, public administration officers, and even as chief executive officers (CEO) are occupied by graduates of our program.

The accounting major is also designed to give students the basic educational foundation necessary to prepare for the professional examinations that may be required of them in their careers. These examinations include those needed to become a Certified Public Accountant (CPA), Certified Management Accountant (CMA), Certified Fraud Examiner (CFE), and Certified Internal Auditor (CIA). Requirements to sit for the Uniform CPA Examination vary by jurisdiction, and students are encouraged to become familiar with the requirements of the jurisdictions where they plan to be certified. Many states, including West Virginia, require a bachelor's degree to sit for the exam and 150 semester hours of college credit to be licensed once the exam is successfully completed. The John Chambers College of Business and Economics offers a Master of Accountancy (MAcc) that helps students meet the professional certification requirement and prepare for the licensing exam while allowing students to earn a graduate degree. The John Chambers College also offers an innovative Master of Science in Forensic & Fraud Examination (MS FFE) and a graduate certificate in Forensic Accounting and Fraud Examination (FAFE), both designed to prepare entry-level accountants and others making career adjustments for forensic accounting and fraud examination careers.

# FACULTY

## CHAIR

- Arron “Scott” Fleming - Ph.D. (Virginia Polytechnic Institute and State University)
  CPA, CMA. Managerial, Financial, Auditing, Fraud and Forensic Accounting, Corporate Governance, behavioral research.

## PROFESSORS

- Jack Dorminey - PhD (Virginia Commonwealth University
  Financial accounting, Regulatory accounting
- Richard B. Dull - Ph.D. (Virginia Polytechnic Institute and State University)

GoMart Professor in Accounting Information Systems, CPA/CFF, CFE, CISA. Accounting information systems, Fraud and forensic accounting, IT auditing.

- Kip Holderness - Ph.D. (Bentley University)
  CPA, CMA, CFE. Managerial accounting, Forensic accounting, AI, Behavioral research.
- Presha Neidermeyer - Ph.D. (Virginia Commonwealth University)
  CPA. Principles of Accounting. Behavioral Research.
- Richard Riley - Ph.D. (University of Tennessee)
  Louis F. Tanner Distinguished Professor of Public Accounting, CPA/CFF, CFE, CVA. Financial Accounting, Fraud and Forensic Accounting, Auditing, Consulting, Entrepreneurship.
- L. Christian Schaupp - Ph.D. - (Virginia Polytechnic Institute and State University)
  David W. and Nancy F. Hamstead Professor, CFE. Accounting information Systems, IT Auditing

### ASSOCIATE PROFESSORS

- Mark Nigrini - Ph.D. (University of Cincinnati)
  Auditing, Forensic analytics, Prosecution of fraud schemes.
- Ji Woo Ryou - Ph.D. (University of Memphis)
  Financial, Advanced and cost accounting, Financial Statement Analysis.
- John Treu - LLM (New York University) JD (University of Utah)
  Taxation

### ASSISTANT PROFESSORS

- Lauren Cooper - Ph.D. (Oklahoma State University)
  Taxation, Financial accounting
- Romina Rakipi - Ph.D. (University of Pisa)
  Auditing, Financial Accounting. Behavioral Research.

### TEACHING PROFESSOR

- Nancy P. Lynch - M.S. (University of Colorado)
  CPA, CMA. Principles of accounting. Financial accounting.

### TEACHING ASSOCIATE PROFESSOR

- Megan McBride - MACIS (Virginia Polytechnic Institute and State University)
  CISA. Principles of accounting, Accounting information systems.

### TEACHING ASSISTANT PROFESSOR

- Keith Donnelly - University of Pittsburgh)
  CPA, CFE. Taxation, Principles of Accounting. Research in taxation.
- Nathan Garrett - Ph.D. (Claremont Graduate University)
  CPA. Data Analytics. Behavioral Technology Research.

### LECTURER

- Lewis Hardway - Ph.D. (West Virginia University)
  CPA. Internal Audit, Corporate Accounting, Finance. Behavioral Research.

### EMERITI

- Jay H. Coats
- David Pariser
- Ann B. Pushkin

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit Chambers admissions.**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201<br>& ACCT 202 | Principles of Accounting 1<br>and Principles of Accounting 2 * | 6 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| MATH 124 | Algebra with Applications | 3 |
| Total Hours | | 23-26 |

*

A minimum grade of a B- each in ACCT 201 and ACCT 202 is required for admission to the program and to enroll in ACCT 311, Intermediate Accounting.

Major Code: 2107

Click here to view Suggested Plan of Study (p. 403)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses (i.e. ACCT, BLAW), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions.  Since the College is AACSB accredited, upper-division courses (courses

equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 31 |
| Program Requirements | | 26 |
| Business Core Requirements | | 33 |
| Accounting Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives * | | 14 |
| Total Hours | | 31 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of B-) | 3 |
| ACCT 202 | Principles of Accounting 2 (Minimum grade of B-) | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Select one of the following (may fulfill GEF 1; minimum grade of C-): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| Total Hours | | 26 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy (Fulfills University Capstone requirement) | 3 |
| Total Hours | | 33 |

## Accounting Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| ACCT 311 | Intermediate Accounting (Minimum grade of C- to attempt ACCT 312) | 3 |
| ACCT 312 | Intermediate Accounting | 3 |
| ACCT 321 | Introduction to Accounting Systems | 3 |
| ACCT 322 | Accounting Systems | 3 |
| ACCT 431 | Cost Management | 3 |
| ACCT 440 | Introduction to Income Taxation Accounting | 3 |
| ACCT 451 | Auditing Theory | 3 |
| ACCT 461 | Accounting for Nonbusiness Entities | 3 |
| Select a Track: | | 6 |
| CPA - Bar | | |
| ACCT 415 | Advanced Accounting | |
| ACCT 452 | Assurance Services and Professional Standards | |
| CPA - ICS | | |
| ACCT 427 | Accounting Information Systems Audit | |
| ACCT 452 | Assurance Services and Professional Standards | |
| CPA - TCP | | |
| ACCT 441 | Individual Income Tax Accounting | |
| ACCT 442 | Entity Income Tax Accounting | |
| FAFE | | |
| ACCT 479 | Fraud Examination Concepts and Practice | |
| ACCT 480 | Forensic Accounting Concepts and Practice | |
| Corporate Accounting | | |
| ACCT 445 | Corporate Financial Management | |
| ACCT 446 | Internal Auditing | |
| Accounting Analytics | | |
| ACCT 425 | Accounting Analytics | |
| ACCT 426 | Analytics for Accounting Analysis | |
| Total Hours | | 30 |

*

A maximum of six credit hours of ACCT 491, Professional Field Experience, may apply towards the 120 credit hours required for the degree.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| ENTR 102 | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| MATH 124 (GEF 3) | 3 | Minor or General Elective | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ACCT 202 | 3 | ACCT 311 | 3 |
| ECON 202 (GEF 8) | 3 | ACCT 321 | 3 |
| ECON 225 (GEF 8) | 3 | BCOR 299 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 330 | 3 |

| | | | |
|---|---|---|---|
| GEF (Choose from F2, F5, F6, F7 or F8) | | 3 BCOR 370 | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ACCT 312 | | 3 ACCT 451 | 3 |
| ACCT 440 | | 3 ACCT 461 | 3 |
| BCOR 340 | | 3 BCOR 360 | 3 |
| BCOR 350 | | 3 BCOR 380 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | | 3 GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ACCT 431 | | 3 ACCT 322 | 3 |
| BCOR 320 | | 3 BCOR 460 | 3 |
| Track course | | 3 Track Course | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | | 3 Minor or General Electives | 6 |
| Minor or General Electives | | 3 | |
| | | 15 | 15 |

Total credit hours: 120

## Accelerated Program

- B.S.B.AD. Accounting and M.S. Forensic and Fraud Examination (p. 404)

## Accelerated Bachelor's/Master's Degree Requirements

The Chambers College Accelerated Bachelor’s to Master’s (ABM) program offers highly motivated accounting students with an interest in the Forensic and Fraud Examination Master of Science the opportunity to complete a Bachelor of Science in Business Administration (BSBA) and a Master’s degree in an accelerated format. In order to be eligible for this program, students must:

- Have a cumulative 3.0 after the fall semester of their sophomore year,
- Have completed 24 undergraduate credits in residence,
- Indicate interest in the program by March of their sophomore year and been approved for program admission by the beginning of their junior year, and
- Successfully complete the required courses.

## ABM Requirements

Successfully complete all undergraduate and graduate requirements including grade stipulations for courses and grade point average (GPA) requirements. Must possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

| Code | Title | Hours |
|---|---|---|
| Undergraduate Requirements | | 108 |
| Shared Bachelor's/Master's Coursework | | 12 |
| Graduate Coursework | | 18 |
| Total Hours | | 138 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| Overall 3.0 GPA required. | | |
| Minimum grade of C required in all courses applied toward the degree. | | |
| **FFE Shared Courses** | | |
| ACCT 580 | Accounting for Forensic and Fraud Investigators | 3 |
| ACCT 581 | Fraud Investigation | 3 |
| ACCT 583 | Fraud: Criminology/Legal Issues | 3 |

| | | |
|---|---|---|
| ACCT 585 | Forensic and Fraud Examination Advanced Analytical Techniques | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 121 | 2 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 | 3 |
| BCOR 199 | 3 | ENGL 101 | 3 |
| ENTR 102 | 3 | GEF 2B, 5, 6, or 7 | 3 |
| MATH 124 (GEF 3) | 3 | Minor or General Elective | 3 |
| GEF 2B, 5, 6, or 7 | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ACCT 202 | 3 | ACCT 311 | 3 |
| ECON 202 | 3 | ACCT 321 | 3 |
| ECON 225 | 3 | BCOR 299 | 3 |
| ENGL 102 | 3 | BCOR 330 | 3 |
| GEF 2B, 5, 6, or 7 | 3 | BCOR 370 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ACCT 312 | 3 | ACCT 451 | 3 |
| ACCT 440 | 3 | ACCT 461 | 3 |
| BCOR 340 | 3 | BCOR 360 | 3 |
| BCOR 350 | 3 | BCOR 380 | 3 |
| ACCT 580 | 3 | ACCT 585 | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| ACCT 431 | 3 | ACCT 322 | 3 | ACCT 582 | 3 |
| BCOR 320 | 3 | BCOR 460 | 3 | ACCT 584 | 3 |
| Minor/Unrestricted Elective | 6 | GEF 2B, 5, 6, or 7 | 3 | | |
| ACCT 581 | 3 | Minor/Unrestricted Elective | 3 | | |
| | | ACCT 583 | 3 | | |
| | 15 | | 15 | | 6 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ACCT 586 | 3 | AOE Course | 3 |
| AOE Course | 3 | AOE Course | 3 |
| | 6 | | 6 |

Total credit hours: 138

*****

In order to register on time for Fall, students must apply for ABM by March 1 prior to Junior year.

## Major Learning Outcomes

### ACCOUNTING

The objective of providing a foundational education in accounting at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate accounting major, we subscribe to the following learning goals for each of our undergraduate students.

- Students will be competent in core technical areas.
- Students will apply current or emerging technologies to provide information for business decisions.
- Students will identify U.S. federal income tax issues for individuals and entities.
- Students will interpret professional standards.
- Students will identify the effect of regulatory and ethical issues on the practice of accounting.

# Applied AI and Data Analytics, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Students in the Applied Artificial Intelligence and Data Analytics program gain the skills necessary to develop, deploy, maintain, and manage current and next-generation AI technology and systems that businesses and organizations need to remain competitive. Our students work with the technology that industry professionals encounter in everyday environments while gaining real-world experience before graduation.  Professionals who complete this program acquire hands-on skills through collaboration with organizations and develop foundational abilities critical for understanding both the business and technical needs of these entities. Additionally, a required minor can be pursued anywhere in the university based on the student's interests.

Career opportunities are broad and include:

- Consulting
- Data Analyst
- Data Scientist
- AI Engineer
- and other emerging roles in this cutting-edge field

This program is excellent for students who enjoy technology, problem-solving, and engaging in hands-on projects across multiple sectors and fields.

## Admissions for 2026-2027

For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit Chambers admissions.

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| BCOR 121 | Introduction to Business Applications | 2 |
| ENGL 101 | Introduction to Composition and Rhetoric | 3 |
| ENGL 102 | Composition, Rhetoric, and Research | 3 |
| ECON 201 | Principles of Microeconomics | 3 |
| ECON 202 | Principles of Macroeconomics | 3 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| MATH 150 | Applied Calculus | 3 |

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 28 |
| Pre-Business Requirements | | 20 |
| Business Core Requirements | | 9 |
| Information Science Requirements | | 18 |
| Major Requirements | | 45 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, and 7 | | 13 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 14 |
| Total Hours | | 28 |

## Pre-Business Requirements

| Code | Title | Hours |
|---|---|---|
| BCOR 121 | Introduction to Business Applications (Minimum Grade of C-) | 2 |
| ENGL 101 | Introduction to Composition and Rhetoric (Minimum Grade of C-) | 3 |
| ENGL 102 | Composition, Rhetoric, and Research (Minimum Grade of C-) | 3 |
| ECON 201 | Principles of Microeconomics (Minimum Grade of C-) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum Grade of C-) | 3 |
| ECON 225 | Elementary Business and Economics Statistics (Minimum Grade of C-) | 3 |
| MATH 150 | Applied Calculus (Minimum Grade of C-) | 3 |
| Total Hours | | 20 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication | 3 |

| | | |
|---|---|---|
| BCOR 330 | Information Systems and Technology | 3 |
| Total Hours | | 9 |

## Information Science Requirements

| Code | Title | Hours |
|---|---|---|
| MIST 320 | Managing Information Technology | 3 |
| MIST 351 | Database Management Systems (Minimum Grade of C-) | 3 |
| MIST 352 | Business Application Programming (Minimum Grade of C-) | 3 |
| MIST 353 | Advanced Information Technology | 3 |
| MIST 460 | Requirements Analysis and Design of Machine Learning and AI Based Systems (Minimum Grade of C-) | 3 |
| MIST 462 | Development and Deployment of Machine Learning and AI Based Systems (Minimum Grade of C-) | 3 |
| Total Hours | | 18 |

## Major Requirements

| Code | Title | Hours |
|---|---|---|
| BUDA 450 | Business Data Mining and Visualization (Minimum Grade of C-) | 3 |
| BUDA 451 | Advanced Business Data Mining (Minimum Grade of C-) | 3 |
| BUDA 452 | Business Simulation Modeling (Minimum Grade of C-) | 3 |
| BUDA 453 | Advanced Simulation with AI (Minimum Grade of C-) | 3 |
| BUDA 455 | Introduction to Business Intelligence and Artificial Intelligence (Minimum Grade of C-) | 3 |
| BUDA 460 | Artificial Intelligence and Machine Learning for Business (Minimum Grade of C-) | 3 |
| BUDA 461 | Generative AI-Concepts, Models, & Applications (Minimum Grade of C-) | 3 |
| BUDA 468 | Introduction to Applied AI and Data Analytics in Practice (Minimum Grade of C-) | 3 |
| BUDA 470 | Applied Artificial Intelligence and Data Analytics in Practice | 3 |
| MANG 426 | Introduction to Decision Analysis | 3 |
| Required Minor or Double Major | | 15 |
| Total Hours | | 45 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| BCOR 191 | 1 | ECON 201 | 3 |
| BCOR 199 | 3 | MATH 150 | 3 |
| MATH 124 (GEF 3) | 3 | GEF 2, 5, 6, or 7 | 3 |
| GEF 2, 5, 6, or 7 | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | BCOR 299 | 3 |
| ECON 202 | 3 | BCOR 330 | 3 |
| ECON 225 | 3 | BUDA 455 | 3 |
| Minor | 3 | MIST 320 | 3 |
| General Elective | 3 | MIST 351 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BUDA 450 | 3 | BUDA 451 | 3 |
| BUDA 452 | 3 | BUDA 453 | 3 |
| MANG 426 | 3 | MIST 353 | 3 |

| | | | |
|---|---|---|---|
| MIST 352 | 3 | BUDA 468 | 3 |
| Minor | 3 | GEF 2, 5, 6, or 7 | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BUDA 460 | 3 | BUDA 461 | 3 |
| MIST 460 | 3 | BUDA 470 | 3 |
| GEF 2, 5, 6, or 7 | 3 | MIST 462 | 3 |
| Minor | 3 | Minor | 3 |
| Minor | 3 | GEF 2, 5, 6, or 7 | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### APPLIED AI AND DATA ANALYTICS

- Competence in core technical areas associated with data analytics and applied artificial intelligence, such as programming, databases, and foundational mathematical, statistical, and data science models.
- Knowledge of the selection, implementation, and use of artificial intelligence and analytics tools in organizations.
- Competence in analyzing business problems and designing, building, deploying and maintaining appropriate artificial intelligence and analytics solutions to solve those problems.

# Economics, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The program leading to the B.A. degree is designed for students who wish to combine fundamental training in economics with a liberal arts education. In addition to the general education and related requirements, students have in excess of forty credit hours of unrestricted electives.

Economics students are taught to identify the costs and the benefits of a decision, which are often not obvious. The economist has the skill to identify the real consequences of a decision. That skill is valued highly in many aspects of business and government. Economics is a useful major for anyone interested in a career in banking, business, foreign service, law, public policy, and any other field in which the ability to make or analyze decisions is important. The demand for people with degrees in economics, both at the graduate and undergraduate levels, is high. In recent years firms such as Amazon and Microsoft have hired a number of economists to improve pricing, strategy, and evidence-based decision-making within the company.

All students must earn at least one minor to earn the degree. For more information, please consult the list of available minors and their requirements (http://catalog.wvu.edu/undergraduate/minors/). Please note that a student may not earn a minor in their major field.

## FACULTY

### CHAIR

- Feng Yao - Ph.D. (Oregon State University)
  Theoretical Econometrics, Applied Econometrics

### PROFESSORS

- Roger Congleton - Ph.D. (Virginia Polytechnic Institute and State University)
  Public Economics, Public Choice, Constitutional Political Economy
- Joshua Hall - Ph.D. (West Virginia University)
  Public Economics, Public Choice, Urban and Regional Economics
- Brad Humphreys - Ph.D. (Johns Hopkins University)
  Urban and Regional Economics, Sports Economics
- Jane Ruseski - Ph.D. (Johns Hopkins University)
  Health Economics, Sports Economics

- Feng Yao - Ph.D. (Oregon State University)
  Theoretical Econometrics, Applied Econometrics

## ASSOCIATE PROFESSORS

- Arabinda Basistha - Ph.D. (University of Washington)
  Empirical Macroeconomics, International Finance
- John Deskins - Ph.D. (University of Tennessee)
  Public Economics
- Daniel Grossman - Ph.D. (Cornell University)
  Health Economics
- Scott Schuh - Ph.D. (Johns Hopkins University)
  Applied Macro Theory, Monetary Economics, Household Finance
- Cathleen Johnson - Ph.D. (Virginia Polytechnic Institute and State University)
  Experimental Economics, Economic Education
- Shuichiro Nishioka - Ph.D. (University of Colorado at Boulder)
  International Trade, Economic Development
- Adam Nowak - Ph.D. (Arizona State University)
  Applied Econometrics, Urban and Regional Economics

## ASSISTANT PROFESSORS

- Nathaniel Burke - Ph.D. (University of Arkansas)
  Experimental Economics, Economics of Education, Group Identity
- Kole Reddig - Ph.D. (Carnegie Mellon University)
  Health Economics, Industrial Organization, Applied Microeconomics
- Palak Suri - Ph.D. (University of Maryland)
  Urban Economics, Labor Economics

## SERVICE ASSOCIATE PROFESSOR

- Edward Timmons - Ph.D. (Lehigh University)
  Labor Economics, Health Economics

## LECTURER

- Joylynn Pruitt - Ph.D. (West Virginia University)

## ADJUNCT PROFESSORS

- David Martinelli - Ph.D. (University of Maryland)
- Levan Elbakidze - Ph.D. (Texas A&M University)
- Victor Chow - Ph.D. (University of Alabama)
- Randall Jackson - Ph.D. (University of Illinois at Urbana-Champaign)
- Alicia Plemmons - Ph.D. (Georgia State University)
- Brad Price - Ph.D. (University of Minnesota)
- Peter Schaeffer - Ph.D. (University of Southern California)
- Paul Speaker - Ph.D. (Purdue University)
- Heather Stephens - Ph.D. (The Ohio State University)

## PROFESSORS EMERITI

- Brian Cushing
- Stratford Douglas
- Clifford Hawley
- Ming-jeng Hwang
- Patrick Mann
- William Reece
- Tom Witt

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit Chambers admissions.**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics * | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Choose one of the following; a minimum of D- is needed in MATH 150, MATH 154, or MATH 155 | | 3-6 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 | |
| MATH 150 | Applied Calculus | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 | |
| Total Hours | | 17-23 |

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At minimum, one B- and one C- are required in ECON 201 and ECON 202 for admission to the program.

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A minimum grade of D- is required in MATH 150 for admission to the program. A grade of D- in MATH 154 or higher college calculus course also satisfies the calculus requirement for admission to the program.

Major Code: 2138

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must earn a minimum of 24 semester hours of upper-division coursework in economics. Additional recommended courses can be taken in consultation with an adviser.

- Capstone Requirement: The university requires the successful completion of a Capstone course. Economics majors are required to take ECON 482 in order to satisfy the Capstone requirement.
- Writing and Communication Skills: Economics Bachelor of Arts students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103) and BCOR 299.
- Calculation of the GPA in the Major: Economics majors must maintain a grade point average of 2.0 in all Economics Major Requirements coursework and earn a grade of C- or better in ECON 301, ECON 302, and ECON 425. Students must receive a D- or higher in MATH 150.
- Minor: All B.A. in Economics students must have a minor.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 55 |
| Economics Program Requirements | | 17 |
| Economics Major Requirements | | 48 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, and 7 | | 13 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 41 |
| Total Hours | | 55 |

## Economics Program Requirements

| Code | Title | Hours |
|---|---|---|
| BCOR 199 | Introduction to Business | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum Grade of C-) | 2 |
| BCOR 299 | Business Communication | 3 |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following; minimum grade of D- in MATH 150, MATH 154 or MATH 155 (may fulfill GEF 3): | | 3-6 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 | |
| MATH 150 | Applied Calculus | |
| MATH 155 | Calculus 1 | |
| Total Hours | | 17 |

## Economics Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Core Economics Courses** | | **18** |
| ECON 201 | Principles of Microeconomics (Minimum Grade of one B- and one C- in ECON 201 and ECON 202; may fulfill GEF 4) | |
| ECON 202 | Principles of Macroeconomics (Minimum Grade of one B- and one C- in ECON 201 and ECON 202; may fulfill GEF 4) | |
| ECON 225 | Elementary Business and Economics Statistics (Minimum Grade of C-) | |
| ECON 301 | Intermediate Micro-Economic Theory (Minimum Grade of C-) | |
| ECON 302 | Intermediate Macro-Economic Theory (Minimum Grade of C-) | |
| ECON 425 | Introductory Econometrics (Minimum Grade of C-) | |
| **Economics Electives** | | **12** |
| Select 12 hours of Economics at the 300 or 400 level | | |
| **Required Minor** | | **15** |
| All B.A. Economics majors must complete a minor (double major or dual degree also will count) | | |
| **Capstone Requirement** | | **3** |
| ECON 482 | Applied Economic Research | |
| Total Hours | | 48 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ENGL 101 (GEF 1) | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | GEF 2B, 5, 6, or 7 | 3 |
| MATH 124 (GEF 3) | 3 | General Elective | 6 |
| GEF 2B, 5, 6, or 7 | 3 | | |
| General Elective | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 | 3 | BCOR 299 | 3 |
| ECON 225 | 3 | ECON 301 | 3 |
| ENGL 102 (GEF 1) | 3 | Economics Elective | 3 |
| GEF 2B, 5, 6, or 7 | 3 | Minor Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 302 | 3 | ECON Elective | 3 |
| ECON Elective | 3 | Minor Elective | 3 |
| Minor Elective | 3 | General Elective | 9 |
| GEF 2B, 5, 6, or 7 | 3 | | |
| General Elective | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 425 | 3 | ECON 482 | 3 |
| Minor Elective | 3 | ECON Elective | 3 |
| General Elective | 9 | Minor Elective | 3 |

| | | |
|---|---|---|
| | General Elective | 6 |
| | 15 | 15 |

Total credit hours: 120

## Area of Emphasis

- Law and Economics (p. 414)

### LAW AND ECONOMICS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| ECON 425 | Introductory Econometrics | 3 |
| ECON 441 | Public Economics | 3 |
| ECON 443 | Law and Economics | 3 |
| ECON 445 | Government and Business | 3 |
| Total Hours | | 12 |

*Economics electives exist now in the plan of study. Those wanting to do this AoE will take these four classes to fulfill their major.

## Major Learning Outcomes

### ECONOMICS

Upon successful completion of the B.A. degree, **Economics** majors will be able to:

1. Explain definitions and interpretations of macroeconomic data.
2. Analyze the causes and consequences of unemployment, inflation, economic growth, and monetary and fiscal policy.
3. Diagram market equilibrium and predict the impacts of exogenous changes on equilibrium outcomes for individuals, firms, and markets.
4. Assess the efficiency of competitive market outcomes relative to alternative arrangements.
5. Evaluate the theoretical and empirical literature on an economic topic in written form.
6. Produce an original research report that formulates a research question, proposes a methodology to answer that research question, and interpret the results' statistical significance and economic importance.

# Economics, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

In the broadest sense, economics is the science of decision-making.  In economics, students learn how to identify the costs, benefits, and consequences of a decision.  Government economists assess economic conditions in the U.S. and abroad and estimate the economic impact of specific changes in legislation or public policy.  Economists in private industry work for marketing research firms, management consulting firms, banks, investment firms, insurance companies, and in pricing and strategy departments of firms like Amazon and Microsoft.  A degree in economics is also highly desirable for students who plan to attend law school or graduate school in economics, data analytics, or public policy.  The John Chambers College of Business and Economics has an excellent record of placing economics students in both law and graduate schools.

The Department of Economics has several areas of strength including market-based solutions to social and economic problems, urban and regional economics, and health economics.

Economics is an excellent major for anybody interested in a career in:

- Banking
- Business
- Domestic government service
- Foreign service
- Law
- Politics

# FACULTY

## DEPARTMENT CHAIRPERSON

- Feng Yao - Ph.D. (Oregon State University)
  Theoretical Econometrics, Applied Econometrics

## PROFESSORS

- Roger Congleton - Ph.D. (Virginia Polytechnic Institute and State University)
  Public Economics, Public Choice, Constitutional Political Economy
- Joshua Hall - Ph.D. (West Virginia University)
  Public Economics, Public Choice, Urban and Regional Economics
- Brad Humphreys - Ph.D. (Johns Hopkins University)
  Urban and Regional Economics, Sports Economics
- Jane Ruseski - Ph.D. (Johns Hopkins University)
  Health Economics, Sports Economics
- Feng Yao - Ph.D. (Oregon State University)
  Theoretical Econometrics, Applied Econometrics

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- Daniel Grossman - Ph.D. (Cornell University)
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- Cathleen Johnson - Ph.D. (Virginia Polytechnic Institute and State University)
  Experimental Economics, Economic Education
- Shuichiro Nishioka - Ph.D. (University of Colorado at Boulder)
  International Trade, Economic Development
- Adam Nowak - Ph.D. (Arizona State University)
  Applied Econometrics, Urban and Regional Economics
- Scott Schuh - Ph.D. (Johns Hopkins University)
  Applied Macro Theory, Monetary Economics, Household Finance

## ASSISTANT PROFESSORS

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  Experimental Economics, Economics of Education, Group Identity
- Kole Reddig - Ph.D. (Carnegie Mellon University)
  Health Economics, Industrial Organization, Applied Microeconomics
- Palak Suri - Ph.D. (University of Maryland)
  Urban Economics, Labor Economics

## SERVICE ASSOCIATE PROFESSOR

- Edward Timmons - Ph.D. (Lehigh University)
  Labor Economics, Health Economics

## LECTURER

- Joylynn Pruitt - Ph.D. (West Virginia University)

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- Brad Price - Ph.D. (University of Minnesota)
- Peter Schaeffer - Ph.D. (University of Southern California)

- Paul Speaker - Ph.D. (Purdue University)
- Heather Stephens - Ph.D. (The Ohio State University)

### EMERITI

- Brian Cushing
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- Clifford Hawley
- Ming-Jeng Hwang
- Patrick Mann
- William Reece
- Tom Witt

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit Chambers admissions.**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics * | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Choose one of the following; a minimum of C- is needed in MATH 150 or D- in MATH 154 or MATH 155 | | 3-4 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 ** | |
| MATH 150 | Applied Calculus ** | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 ** | |
| Total Hours | | 20-24 |

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At minimum, one B- and one C- are required in ECON 201 and ECON 202 for admission to the program.

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A minimum grade of C- is required in MATH 150 for admission to the program. A grade of D- in MATH 154 or a higher college calculus course satisfies the calculus requirement for admission to the program.

Major Code: 2135

Click here to view the Suggested Plan of Study (p. 418)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the Bachelor of Science in Economics students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses,  calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 46 |
| Program Requirements | | 23 |
| Economics Major Requirements | | 51 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 29 |
| Total Hours | | 46 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of one B- and one C- in ECON 201 and ECON 202; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of one B- and one C- in ECON 201 and ECON 202; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 8): | | 3 |

| | | |
|---|---|---|
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher | | 3-8 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 | |
| MATH 150 | Applied Calculus | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 | |
| Total Hours | | 23 |

## Economics Major Requirements

Most economics electives should not be attempted until ECON 301 has been completed with a minimum grade of C-. Students interested in graduate work in economics should take ECON 421.

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| ECON 301 | Intermediate Micro-Economic Theory (Minimum grade of C-) | 3 |
| ECON 302 | Intermediate Macro-Economic Theory (Minimum grade of C-) | 3 |
| ECON 425 | Introductory Econometrics | 3 |
| ECON 482 | Applied Economic Research | 3 |
| Economics Electives | | 12 |
| Chambers College Electives* | | 21 |
| Total Hours | | 51 |

*

Chambers College Electives must be completed by 300- or 400-level coursework and can include Economics courses (no limit).

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 191 | 1 | ACCT 201 | 3 |
| BCOR 199 | 3 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| Select one of the following: | 3-4 | Select one of the following: | 3-4 |
| MATH 124 | | MATH 150 | |
| MATH 129 | | MATH 154 | |
| MATH 150 | | MATH 155 | |
| MATH 153 | | MATH 156 | |
| MATH 155 | | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| General Electives | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |

| | | | |
|---|---|---|---|
| ECON 225 (GEF 8) | 3 | ECON 301 | 3 |
| ENGL 102 (GEF 1) | 3 | Chambers Elective | 6 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 6 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Chambers Elective | 3 | ECON 425 | 3 |
| ECON 302 | 3 | Chambers Elective | 3 |
| Economics Elective | 3 | Economics Elective | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | Minor or General Electives | 6 |
| Minor or General Electives | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Chambers Elective | 6 | Chambers Elective | 3 |
| Economics Elective | 3 | Economics Elective | 3 |
| Minor or General Electives | 6 | ECON 482 | 3 |
| | | Minor or General Electives | 6 |
| | 15 | | 15 |

Total credit hours: 120

## Area of Emphasis

- Law and Economics (p. 419)

### LAW AND ECONOMICS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| ECON 425 | Introductory Econometrics | 3 |
| ECON 441 | Public Economics | 3 |
| ECON 443 | Law and Economics | 3 |
| ECON 445 | Government and Business | 3 |
| Total Hours | | 12 |

*Economics electives exist now in the plan of study. Those wanting to do this AoE will take these four classes to fulfill their major.

## Accelerated Program

- B.S. Economics and M.S. Economics (p. 419)

## Accelerated Bachelor's/Master's Degree Requirements

The Chambers College Accelerated Bachelor’s to Master’s (ABM) program offers highly motivated economics students with an interest in the Master of Science in Economics the opportunity to complete a Bachelor of Science and a Master’s degree in an accelerated format. In order to be eligible for this program, student's must:

- Have a 3.0 after the fall semester of their sophomore year,
- Have completed 24 undergraduate credits in residence,
- Indicate interest in the program by March of their junior year, and
- Successfully complete the required courses.

## ABM Requirements

Successfully complete all undergraduate and graduate requirements including grade stipulations for courses and grade point average (GPA) requirements. Students should take ECON 421  ECON 425 as part of their Economic Electives in their undergraduate work. Must possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy.

| Code | Title | Hours |
|---|---|---|
| Undergraduate Requirements | | 108 |
| Shared Bachelor's/Master's Coursework | | 12 |
| Graduate Coursework | | 18 |
| Total Hours | | 138 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum cumulative GPA of 3.0 is required. | | |
| ECON 520 | Small Data Methods | 3 |
| AOE Course | | 6 |
| MS Elective | | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 121 | 2 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 | 3 |
| BCOR 199 | 3 | ENGL 101 | 3 |
| Select one of the following: | 3 | MATH 150 | 3 |
| MATH 122 | | GEF 2B, 5, 6, or 7 | 3 |
| MATH 124 | | | |
| MATH 150 | | | |
| Minor/Unrestricted Elective | 3 | | |
| GEF 2B, 5, 6, or 7 | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 | 3 | BCOR 299 | 3 |
| ECON 225 | 3 | ECON 301 | 3 |
| ENGL 102 | 3 | Chambers Elective | 3 |
| GEF 2B, 5, 6, or 7 | 6 | Minor/Unrestricted Elective | 3 |
| | | GEF 2B, 5, 6, or 7 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 302 | 3 | ECON 425 | 3 |
| Chambers Elective | 6 | Chambers Elective | 6 |
| Minor/Unrestricted Elective | 6 | Minor/Unrestricted Elective | 6 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Chambers Elective | 3 | Chambers Elective | 3 |
| ECON 520 | 3 | ECON 482 | 3 |
| MS AOE | 3 | MS AOE | 3 |
| Minor/Unrestricted Elective | 6 | MS AOE/Elective | 3 |

| | | | | | |
|---|---|---|---|---|---|
| | | Minor/Unrestricted Elective | 3 | | |
| | 15 | | 15 | | |

**Fifth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| ECON 510 | | 3 MS Elective | | 3 ECON 582 | 3 |
| MS Elective | | 3 MS AOE/Elective | | 3 MS AOE/Elective | 3 |
| | | 6 | | 6 | 6 |

Total credit hours: 138

*

In order to register on time for Fall, students must apply for ABM by March 1 prior to Senior year.

## Degree Requirements

To qualify for the Bachelor of Science in Economics and Doctor of Jurisprudence joint program, you must meet the following criteria:

- Have a 3.0 after your freshman year,
- Have a 3.2 after your sophomore year,
- Have a 3.4 after the first semester of your junior year,
- Take the LSAT in October of your junior year,
- Complete the first three years as outlined in the plan of study, and
- Apply to and be accepted by the Law School. Those who apply by January 15th of their junior year with LSAT scores of 158 or higher and an undergraduate GPA of 3.7 or higher will be admitted to the College of Law. Students with a GPA of 3.4-3.69 and an LSAT less than 158 will have their application considered alongside the general Law School applicant pool.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 17 |
| Program Requirements | | 23 |
| Economics Major Requirements | | 51 |
| Doctor of Jurisprudence Requirements | | 32 |
| Total Hours | | 123 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, and 7 | | 13 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 3 |
| Total Hours | | 17 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (GEF 8) | 3 |
| Select one of the following (GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher: | | 3-8 |

| | |
|---|---|
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 |
| MATH 150 | Applied Calculus |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus |
| MATH 155 | Calculus 1 |
| Total Hours | 23 |

## Economics Major Requirements

| Code | Title | Hours |
|---|---|---|
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication | 3 |
| ECON 301 | Intermediate Micro-Economic Theory | 3 |
| ECON 302 | Intermediate Macro-Economic Theory | 3 |
| ECON 425 | Introductory Econometrics | 3 |
| ECON 441 | Public Economics | 3 |
| ECON 443 | Law and Economics | 3 |
| ECON 445 | Government and Business | 3 |
| ECON 465 | Health Economics | 3 |
| ECON 482 | Applied Economic Research | 3 |
| Chambers Elective (300 or higher B&E elective towards a minor) | | 21 |
| Total Hours | | 51 |

## Doctor of Jurisprudence Requirements

| Code | Title | Hours |
|---|---|---|
| LAW 641 | Introduction to Legal Research | 1 |
| LAW 675 | Introduction to the Profession | 1 |
| LAW 686 | Civil Procedure | 4 |
| LAW 700 | Legal Analysis, Research and Writing 1 | 3 |
| LAW 703 | Contracts 1 | 4 |
| LAW 705 | Criminal Law | 3 |
| LAW 707 | Property | 4 |
| LAW 709 | Torts 1 | 4 |
| LAW 711 | Legal Analysis, Research and Writing 2 | 2 |
| LAW 725 | Constitutional Law 1 | 4 |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 191 | 1 | ENGL 101 (GEF 1) | 3 |
| BCOR 199 | 3 | ECON 202 (GEF 8) | 3 |
| BCOR 121 | 2 | ACCT 201 | 3 |
| Select one of the following (GEF 3): | 3-4 | Select one of the following: | 3-4 |
| MATH 124 | | MATH 150 | |
| MATH 129 | | MATH 154 | |
| MATH 150 | | MATH 155 | |
| MATH 153 | | MATH 156 | |
| MATH 155 | | GEF (Choose from F2B, F5, F6 or F7) | 3 |
| ECON 201 (GEF 4) | 3 | | |

| | | | |
|---|---|---|---|
| GEF (Choose from F2B, F5, F6 or F7) | | 3 | |
| | | 15 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | | 3 BCOR 299 | 3 |
| ECON 225 (GEF 8) | | 3 ECON 302 | 3 |
| ECON 301 | | 3 ECON 425 | 3 |
| ECON 443 | | 3 ECON 445 | 3 |
| GEF (Choose from F2B, F5, F6 or F7) | | 3 ECON 465 | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 441 | | 3 ECON 482 | 3 |
| Chambers Elective | | 3 Chambers Elective | 3 |
| Chambers Elective | | 3 Chambers Elective | 3 |
| Chambers Elective | | 3 Chambers Elective | 3 |
| GEF (Choose from F2B, F5, F6 or F7) | | 3 Chambers Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| LAW 641 | | 1 LAW 675 | 1 |
| LAW 686 | | 4 LAW 703 | 4 |
| LAW 700 | | 3 LAW 707 | 4 |
| LAW 705 | | 3 LAW 711 | 2 |
| LAW 709 | | 4 LAW 725 | 4 |
| | | 15 | 15 |

Total credit hours: 120

Once accepted to the College of Law, students will complete all of the requirements of the Doctor of Jurisprudence degree (http://catalog.wvu.edu/graduate/law/academic_policies_and_procedures/academic_programs/jd/#majortext) as are in effect when the student begins at the College of Law. The classes taken during the first year at the College of Law will count toward both the student's undergraduate degree and Doctor of Jurisprudence degree. During their second and third years at the College of Law, students shall be responsible for fulfilling all of the other requirements in order to graduate with the Doctor of Jurisprudence as in effect when the student began at the College of Law. Students should communicate with their undergraduate program during their 4th year of undergraduate/1st year of law school to coordinate graduating with their undergraduate degree in the August following the completion of their first year of law classes.

## Major Learning Outcomes

### ECONOMICS

Upon successful completion of the B.S. degree, **Economics** majors will be able to:

1. Explain definitions and interpretations of macroeconomic data.
2. Analyze the causes and consequences of unemployment, inflation, economic growth, and monetary and fiscal policy.
3. Diagram market equilibrium and predict the impacts of exogenous changes on equilibrium outcomes for individuals, firms, and markets.
4. Assess the efficiency of competitive market outcomes relative to alternative arrangements.
5. Evaluate the theoretical and empirical literature on an economic topic in written form.
6. Produce an original research report that formulates a research question, proposes a methodology to answer that research question, and interpret the results' statistical significance and economic importance.

# Entrepreneurship and Innovation, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

The Entrepreneurship and Innovation Major will prepare graduates for starting new ventures, as well as positions in organizations that propose, analyze, and implement entrepreneurial growth strategies. Through a flexible series of courses that emphasize both conceptual and hands-on/ experiential learning, students will develop knowledge and skills that provide them with a platform to start, run, and grow enterprises. Career options for Entrepreneurship and Innovation Majors include:

- Entrepreneur or business owner
- Business or economic development
- Corporate innovation
- New product development
- Management consulting
- Sales agent (financial services, insurance, real estate, etc.)

## FACULTY

### CHAIR

- Olga Bruyaka Collignon - Ph.D. (University Lyon 3, EM Lyon Business School)

### ASSISTANT PROFESSORS

- Ryan Angus - Ph.D. (University of Utah)
- Hyeonsuh Lee - Ph.D. (University of Illinois Urbana-Champaign)

### POSTDOCS

- Nancy Chen - Ph.D. (University of Missouri)
- Susan Major - DOL (Hood College)

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.0 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.0 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| MATH 124 | Algebra with Applications | 3 |
| Total Hours | | 20-23 |

Major Code: 2162

Click here to view the Suggested Plan of Study (p. 426)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students seeking admission to the Bachelor of Science in Business Administration, Entrepreneurship & Innovation Major offered by the John Chambers College of Business and Economics (B&E) must make formal application to the program. Ideally, a student will apply for admission to the program when he/she has completed the pre-requisite coursework (listed in the table below) with a minimum grade of C- at the end of the application term, an overall GPA of at least 2.0 (B&E student 2.0, other students 2.5) and completed a minimum of 45 semester hours at the end of the application term.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 34 |
| Program Requirements | | 23 |
| Business Core Requirements | | 33 |
| Entrepreneurship and Innovation Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 20 |
| Total Hours | | 37 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following (Minimum grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |

| | | |
|---|---|---|
| STAT 211 | Elementary Statistical Inference | |
| MATH 124 | Algebra with Applications (Minimum grade of C-; may fulfill GEF 3) | 3 |
| Total Hours | | 23 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## Entrepreneurship and Innovation Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| ENTR 400 | Advanced Concepts in Entrepreneurship (Minimum Grade of C-) | 3 |
| ENTR 405 | Entrepreneurial Creativity & Innovation (Minimum Grade of C-) | 3 |
| ENTR 420 | Entrepreneurial Finance (Minimum Grade of C-) | 3 |
| ENTR 440 | Small Business Consulting | 3 |
| ENTR 460 | Entrepreneurship Practicum | 3 |
| Select five of the following electives (two must be in Chambers): | | 15 |
| Entrepreneurship (ENTR) Courses 400+ | | |
| ACCT 331 | Managerial Accounting | |
| COMM 306 | Organizational Communication | |
| COMM 404 | Persuasion | |
| DSGN 270 | Product Design Foundations | |
| MKTG 320 | Professional Selling 1 | |
| MKTG 321 | Professional Selling 2 | |
| MKTG 345 | Selling with Digital Media | |
| MKTG 350 | Product and Brand Management | |
| MKTG 445 | Start Up Marketing Promotions | |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| ENTR 102 | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| MATH 124 (GEF 3) | 3 | Minor or General Elective | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| ECON 225 (GEF 8) | 3 | BCOR 330 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 340 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8)) | 6 | BCOR 350 | 3 |
| | | BCOR 370 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 320 | 3 | BCOR 360 | 3 |
| ENTR 400 | 3 | ENTR 420 | 3 |
| ENTR 405 | 3 | Major Elective | 6 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| Minor or General Electives | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 380 | 3 | BCOR 460 | 3 |
| ENTR 440 | 3 | ENTR 460 | 3 |
| Major Elective | 6 | Major Elective | 3 |
| Minor or General Electives | 3 | Minor or General Electives | 6 |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### ENTREPRENEURSHIP AND INNOVATION

The objective of providing a foundational education in entrepreneurship and innovation at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate entrepreneurship and innovation major, we subscribe to the following learning goals for each of our undergraduate students:

- Graduates will be able to manage and evaluate organizational systems focused on the following entrepreneurial outcomes.
  - Identify organizational tasks, roles, and responsibilities of managing entrepreneurial ventures.
  - Designate the interrelationships between functional areas of entrepreneurial ventures.
  - Describe the interrelationships between resources, organizational structure, and strategies utilized to create and grow entrepreneurial ventures.
  - Demonstrate an understanding of entrepreneurial phenomena across organizational contexts, including start-ups, small and medium sized enterprises, family businesses, and corporate ventures.
  - Prescribe effective practices in identifying and exploiting entrepreneurial opportunities.
  - Identify alternative ways to market a new product or service that contribute to the growth of an entrepreneurial venture.
  - Assess entrepreneurial opportunities using financial methods.
- Graduates will be able to think critically and solve problems in entrepreneurial ventures.
- Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.
- Graduates will be able to use computer and information technology in solving problems and perform functions commonly seen in managing businesses and other organizations.
- Graduates will be able to effectively communicate recommendations to management and other constituencies, orally and in writing.
- Graduates will have knowledge of business disciplines: accounting, finance, management, management information systems, and marketing.

# Finance, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

Finance is the study of the creation and management of wealth and the allocation of resources in capital markets. A finance major learns how to evaluate and control risk, appropriately price new projects, perform capital expansion for firms, and maximize returns from investments. The finance program prepares students for a variety of positions in financial enterprises. Areas of Emphasis within the major are aligned with career opportunities existing in investments, wealth management, corporate valuation and management, personal finance, insurance, risk management, energy finance and commercial banking.

People with degrees in finance have careers such as:

- Financial Manager
- Commercial Banker
- Credit Manager
- Financial Analyst
- Financial Planner
- Institutional Portfolio Manager
- Insurance and Risk Manager
- Insurance Underwriter
- Investment Banker
- Loan Officer

## FACULTY

### DEPARTMENT CHAIRPERSON

- Ann Marie Hibbert - Ph.D., Florida International University
  Behavioral Finance, Corporate Finance, Fixed Income Securities, Derivative Securities, Household Finance

### PROFESSORS

- Victor Chow - Ph.D., CFA (University of Alabama)
  Investments, Portfolio Management.
- Ann Marie Hibbert - Ph.D. (Florida International University)
  Behavioral Finance, Corporate Finance, Fixed Income Securities, Derivative Securities, Household Finance
- Alexander Kurov - Ph.D., CFA (Binghamton University (SUNY))
  Financial Market Microstructure, Futures Markets.
- Paul J. Speaker - Ph.D. (Purdue University)
  Corporate Finance, Public Sector Financial Management, Business Valuation, and Business of Forensics.

### ASSOCIATE PROFESSORS

- Ashok Abbott - Ph.D. (Virginia Polytechnic Institute and State University)
  Financial Institutions, Corporate Finance, and Mergers and Acquisitions.
- Ruiyuan Chen - Ph.D. (University of South Carolina)
  Empirical Corporate Finance, Banking, International Finance, Government Ownership.
- Bingxin Li - Ph.D. (University of Houston)
  Derivatives Modeling, Financial Risk Management, Empirical Asset Pricing, and Energy Finance.
- Sabatino (Dino) Silveri - Ph.D. (Arizona State University)
  Empirical Corporate Finance, Financial Institutions, Mergers and Acquisitions, Corporate Governance, Executive Compensation, Market Microstructure
- He (Helen) Wang - Ph. D. (University of South Carolina)
  Corporate Finance, International Finance, Corporate Social Responsibility.
- Gulnara Zaynutdinova - Ph.D. (Washington State University)
  Empirical Asset Pricing, Institutional Investors, Mutual Funds and Investor Behavior.

### TEACHING ASSISTANT PROFESSORS

- Robert (Brant) Hammer - M.S. (West Virginia University)
  Applied Investment Management, Financial Institutions, Principles of Finance, Corporate Finance, and FinTech

## CLINICAL INSTRUCTOR

- Kaitlin Nickasch - M.S. (West Virginia University)
  General Insurance, Property and Liability Insurance, Life and Health Insurance

## SERVICE ASSISTANT PROFESSOR

- Michael Zhao - M.S. (West Virginia University)

## EMERITI

- Naomi Boyd
- Howard L. Brewer
- William B. Riley
- Frederick C. Scherr

# Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201<br>& ACCT 202 | Principles of Accounting 1<br>and Principles of Accounting 2 | 6 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics * | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Choose one of the following; a minimum of C- is needed in MATH 150 or D- in MATH 154 or MATH 155 | | 3-4 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 ** | |
| MATH 150 | Applied Calculus ** | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 ** | |
| Total Hours | | 23-27 |

*****

A minimum grade of B- is required in ECON 201 and ECON 202 for admission to the program.

******

A minimum grade of C- is required in MATH 150 for admission to the program. A minimum grade of D- in MATH 154 or a higher college calculus course satisfies the calculus requirement for admission to the program.

Major Code: 2142

Click here to view the Suggested Plan of Study (p. 432)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 31 |
| Program Requirements | | 26 |
| Business Core Requirements | | 33 |
| Finance Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 14 |
| Total Hours | | 31 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| ACCT 202 | Principles of Accounting 2 (Minimum grade of C-) | 3 |

| | | |
|---|---|---|
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of B-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of B-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher; (may fulfill GEF 3): | | 3-8 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 | |
| MATH 150 | Applied Calculus | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 | |
| Total Hours | | 26 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance (Minimum grade of B- to advance to FIN courses, except FIN 350) | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## Finance Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| FIN 305 | Intermediate Finance (B- or better in BCOR 340) | 3 |
| FIN 310 | Investments (B- or better in BCOR 340) | 3 |
| FIN 315 | Financial Data Analytics (B- or better in BCOR 340) | 3 |
| FIN 320 | Financial Statements Analysis (B- or better in BCOR 340) | 3 |
| FIN 330 | Financial Institutions (B- or better in BCOR 340) | 3 |
| FIN 350 | General Insurance | 3 |
| Required Area of Emphasis | | 12 |
| Total Hours | | 30 |

*

FIN 491, Professional Field Experience, may not be used to fulfill finance elective credit. A maximum of six credit hours of professional field experience may be counted towards the 120 credit hours required for the degree.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| Select one of the following (GEF 3): | 3 | Select one of the following: | 3 |
| MATH 124 | | MATH 150 | |
| MATH 129 | | MATH 154 | |
| MATH 150 | | MATH 155 | |
| MATH 153 | | MATH 156 | |
| MATH 155 | | GEF (Choose from F2B, F5, F6, F7 or F8) | 3 |
| ENTR 102 | 3 | | |
| GEF (Choose from F2B, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ACCT 202 | 3 | BCOR 299 | 3 |
| ECON 202 (GEF 8) | 3 | BCOR 330 | 3 |
| ECON 225 (GEF 8) | 3 | BCOR 340 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 370 | 3 |
| GEF (Choose from F2B, F5, F6, F7 or F8) | 3 | FIN 350 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 350 | 3 | BCOR 320 | 3 |
| BCOR 360 | 3 | BCOR 380 | 3 |
| FIN 305 | 3 | FIN 310 | 3 |
| FIN 320 | 3 | FIN 315 | 3 |
| FIN 330 | 3 | GEF (Choose from F2B, F5, F6, F7 or F8) | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Area of Emphasis | 3 | BCOR 460 | 3 |
| Area of Emphasis | 3 | Area of Emphasis | 3 |
| GEF (Choose from F2B, F5, F6, F7 or F8) | 3 | Area of Emphasis | 3 |
| Minor or General Electives | 6 | Minor or General Electives | 6 |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis Offered:

- Banking (p. 433)
- Corporate Finance and Valuation (p. 433)
- Energy Finance (p. 433)
- Financial Planning (p. 433)
- General Finance (p. 434)
- Investments (p. 434)
- Risk Management and Insurance (p. 434)

## BANKING AREA OF EMPHASIS

The Banking Area of Emphasis prepares finance majors for successful careers in the banking industry. Graduates will be familiar with the composition of this sector, its regulatory environment, and factors influencing commercial bank performance.

| Code | Title | Hours |
|---|---|---|
| FIN 460 | Bank Management | 3 |
| FIN 461 | Applied Bank Management | 3 |
| Select two of the following: | | 6 |
| FIN 411 | Options, Futures and Other Derivatives | |
| FIN 420 | Business Valuation | |
| FIN 421 | Mergers and Acquisitions | |
| FIN 422 | Advanced Financial Statement Analysis | |
| FIN 465 | Applied Investment Management | |
| FIN 480 | International Finance | |
| FIN 485 | Advanced Topics in Financial Planning | |
| FIN 493 | Special Topics | |
| Total Hours | | 12 |

## CORPORATE FINANCE AND VALUATION AREA OF EMPHASIS

The Corporate Finance/Valuation Area of Emphasis prepares finance majors for successful careers in financial management for private and public corporations, valuation, and entrepreneurial enterprises. Graduates also meet the professional standards required for the Certified Valuation Analyst (CVA) certification.

| Code | Title | Hours |
|---|---|---|
| FIN 420 | Business Valuation (minimum grade of B-) | 3 |
| FIN 421 | Mergers and Acquisitions (minimum grade of B-) | 3 |
| Select two of the following: | | 6 |
| FIN 422 | Advanced Financial Statement Analysis | |
| FIN 470 | Advanced Corporate Finance | |
| FIN 480 | International Finance | |
| Total Hours | | 12 |

## ENERGY FINANCE AREA OF EMPHASIS

The Energy Finance Area of Emphasis prepares students for jobs in the energy sector. The energy market is big, it's global, and so are its challenges. Its capital needs are second to none. The transition to clean energy adds to its challenges and opportunities. Students are trained for jobs in financial engineering, funding, commodity trading, project proforma modeling, deal structuring, and risk analysis.

| Code | Title | Hours |
|---|---|---|
| FIN 411 | Options, Futures and Other Derivatives | 3 |
| FIN 430 | Energy Financial Economics | 3 |
| FIN 431 | Energy Law and Regulations | 3 |
| FIN 432 | Energy Financial Accounting | 3 |
| FIN 433 | Energy Financial Risk Management | 3 |
| Total Hours | | 15 |

## FINANCIAL PLANNING AREA OF EMPHASIS

The Financial Planning Area of Emphasis provides students with a strong foundation for becoming a practicing financial planner. The curriculum meets the educational requirements for the Certified Financial Planning designation (CFP).

| Code | Title | Hours |
|---|---|---|
| FIN 370 | Personal Finance | 3 |
| FIN 452 | Employee Benefit Plans | 3 |
| FIN 453 | Estate and Tax Planning for Financial Advisors | 3 |

| | | |
|---|---|---|
| FIN 485 | Advanced Topics in Financial Planning | 3 |
| Total Hours | | 12 |

## GENERAL FINANCE AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| Finance Electives * | | 12 |
| Total Hours | | 12 |

*

The General Finance area of emphasis is available to Finance majors who do not meet the requirements of other Finance Major areas of emphasis.

## INVESTMENTS AREA OF EMPHASIS

The Investments Area of Emphasis prepares students for careers in the very dynamic asset management industry. These include roles such as research analysts, traders, financial analysts, investment bankers portfolio managers and chief investment officers.

| Code | Title | Hours |
|---|---|---|
| Select four of the following: | | 12 |
| FIN 410 | Security Analysis and Portfolio Management | |
| FIN 411 | Options, Futures and Other Derivatives | |
| FIN 420 | Business Valuation | |
| FIN 465 | Applied Investment Management (Course may be repeated once for a total of 6 credits) | |
| FIN 480 | International Finance | |
| FIN 485 | Advanced Topics in Financial Planning | |
| Total Hours | | 12 |

## RISK MANAGEMENT AND INSURANCE AREA OF EMPHASIS

The Risk Management and Insurance area of emphasis prepares students for practices and procedures in the business of corporate risk management and insurance industry operations.

| Code | Title | Hours |
|---|---|---|
| Select four of the following: | | 12 |
| FIN 451 | Life and Health Insurance | |
| FIN 452 | Employee Benefit Plans | |
| FIN 453 | Estate and Tax Planning for Financial Advisors | |
| FIN 454 | Property and Liability Insurance | |
| FIN 455 | Risk Management | |
| Total Hours | | 12 |

## Major Learning Outcomes

### FINANCE

The undergraduate finance curriculum offers rigorous study and investigation of a variety of topics related to financial markets, decision making, products, and institutions.  Within the undergraduate finance major, we subscribe to the following learning goals for each of our undergraduate students.

- Competence in core technical areas
- Knowledge of financial markets and institutions
- Ability to value and analyze financial products and firms
- Execute financial decisions for firms and individuals that demonstrate an understanding of risk and return

# General Business, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

The General Business program is for students who may desire an “individualized” (i.e. less prescriptive) business major. For instance, a student interested in working for a market research firm may want to combine courses from both management information systems (MIS) and marketing.

Under the program, the major in General Business is comprised of twenty-four semester hours of upper#division business core course work (required of all candidates for the degree of B.S. in Business Administration) and thirty semester hours of upper division business and economics electives. The thirty semester hours of course work must be approved by the academic advisor and should *not* exceed more than nine semester hours in one academic discipline (e.g. MTKG).

Students interested in pursuing the General Business major should contact an academic advisor in the Office of Undergraduate Programs and Advising, 2nd Floor, Reynolds Hall to prepare a matriculation plan that satisfies the requirements for the degree and academic major and that compliments their professional career interests.

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers Admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.0 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.0 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| MATH 124 | Algebra with Applications | 3 |
| Total Hours | | 20-23 |

Major Code: 2160

Click here to view the Suggested Plan of Study (p. 437)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |

| | |
|---|---|
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the Bachelor of Science in Business Administration-General Business students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 34 |
| Program Requirements | | 23 |
| Business Core Requirements | | 33 |
| General Business Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 34 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| MATH 124 | Algebra with Applications (Minimum grade of C-; may fulfill GEF 3) | 3 |
| Total Hours | | 23 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business (Fulfills First Year Seminar requirement) | 3 |

| | | |
|---|---|---|
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## General Business Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| Major Electives * | | 30 |
| Total Hours | | 30 |

*

The thirty semester hours of major electives that form the General Business major must consist of upper-division business and economics courses in disciplines such as Accounting (ACCT), Economics (ECON), Entrepreneurship and Innovation (ENTR), Finance (FIN), Global Supply Chain Management (GSCM), Hospitality and Tourism Management (HTOR), Management (MANG), Management Information Systems (MIST), Marketing (MKTG) and Organizational Leadership (ORGL). No more than nine semester hours in one of the aforementioned disciplines may apply toward the major. General Business majors may apply for up three credit hours of Professional Field Experience toward the major electives and the remaining three credit hours toward unrestricted electives.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 8) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| ENTR 102 | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| MATH 124 | 3 | Minor or General Electives | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| Select one of the following (GEF 8): | 3 | BCOR 320 | 3 |
| ECON 225 | | BCOR 330 | 3 |
| STAT 211 | | BCOR 350 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 370 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 6 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 340 | 3 | BCOR 380 | 3 |
| BCOR 360 | 3 | Major Elective | 3 |
| Major Elective | 3 | Major Elective | 3 |
| Major Elective | 3 | Major Elective | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| | 15 | | 15 |

| Fourth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| Major Elective | 3 | BCOR 460 | 3 |
| Major Elective | 3 | Major Elective | 3 |
| Major Elective | 3 | Major Elective | 3 |
| Minor or General Electives | 6 | Minor or General Electives | 6 |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### GENERAL BUSINESS

The objective of providing a foundational education in general business at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate general business major, we subscribe to the following learning goals for each of our undergraduate students

- Graduates will be able to think critically and solve problems in business settings.
- Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.
- Graduates will be able to use computer and information technology in solving problems and perform functions commonly seen in managing businesses and other organizations.
- Graduates will recognize the opportunities and challenges associated with the global marketplace.
- Graduates will have an appreciation of the ethical, legal, and regulatory issues impacting the decision-making process.
- Graduates will be able to communicate recommendations to management and other constituencies, orally and in writing.

# Hospitality and Tourism Management, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

The mission of the Hardy Family Hospitality and Tourism Management program is to prepare future business leaders in the hospitality and tourism industry. The program goals are:

**Leadership: Graduates will be able to identify leadership traits and styles to achieve organizational goals.**

**Operations: Graduates will be able to manage and evaluate functional systems in hospitality organizations.**

**Human Skills: Graduates will be able to recognize the importance of human skills in the hospitality industry.**

**Technology: Graduates will be able to set up and demonstrate existing and new information technologies and data in hospitality.**

**Entrepreneurship: Graduates will be able to experiment, learn and build products and services in hospitality.**

This program prepares students for leadership roles in the hospitality and tourism industry through applied learning and industry engagement. One of the program's signature experiences is the Nemacolin Hospitality Lab, an innovative student consulting and experiential learning initiative in partnership with Nemacolin Resort. Through the Lab, students collaborate directly with local business leaders on real-world industry challenges, gaining hands-on experience in luxury hospitality operations, guest experience innovation, marketing, and revenue management.

Additionally, the program offers students networking opportunities with the Advisory Council and industry partners, involvement in the WVU Hospitality Club, and the chance to join Eta Sigma Delta (ESD), an international hospitality management honor society. Graduates of the program have successfully secured positions with leading organizations, including Marriott International, The Walt Disney Company, Nemacolin, Hilton Hotels & Resorts, Hyatt Hotels Corporation, Stonebridge Companies, Fresh Hospitality Group, The Greenbrier Resort, Snowshoe, Adventures on the Gorge, Oglebay Resort, and the WV Department of Tourism, among others.

# FACULTY

## CHAIR

- Michael F. Walsh - Ph.D. (University of Pittsburgh)

## PROGRAM COORDINATOR AND TEACHING ASSOCIATE PROFESSOR

- Frank DeMarco - M.B.A. (West Virginia University)
  Program Coordinator Hospitality and Tourism Management, Hospitality and Tourism Leadership, Hotel Operations, Restaurant Operations, Event Planning, and Professional Field Experience

## DIRECTOR OF NEMACOLIN LAB AND SERVICE ASSISTANT PROFESSOR

- Meridith Balas - Ph.D. (West Virginia University)
  Outdoor Recreation and Adventure-Based Tourism, Tourism Management, Hospitality and Tourism Leadership, Heritage Tourism

## ASSOCIATE PROFESSOR

- Ajay Aluri - Ph.D. (Oklahoma State University)
  Founding Director, Hospitality Innovation, and Technology (HIT) Lab, Hospitality Revenue Management, Hospitality Business Innovation Technology (HBIT)

## ADJUNCT PROFESSOR

- Carrie Digman - M.B.A. (Virginia Tech)
  Hospitality and Tourism Leadership

# Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.0 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.0 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| MATH 124 | Algebra with Applications | 3 |
| Total Hours | | 20-23 |

Major Code: 2144

Click here to view the Suggested Plan of Study (p. 441)

# General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a minimum GPA of 2.0 for all major courses (i.e. HTOR), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 34 |
| Program Requirements | | 23 |
| Business Core Requirements | | 33 |
| Hospitality and Tourism Management Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 34 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum grade of C-; may fulfill GEF 1): | | 6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |

| | | |
|---|---|---|
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following (Minimum grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| MATH 124 | Algebra with Applications (Minimum grade of C-; may fulfill GEF 3) | 3 |
| Total Hours | | 23 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## Hospitality and Tourism Management Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| HTOR 276 | The Hospitality of Outdoor Recreation and Adventure-Based Tourism | 3 |
| HTOR 376 | Hospitality & Tourism Leadership (Minimum Grade of C-) | 3 |
| HTOR 380 | Hospitality Business, Innovation, and Technology | 3 |
| HTOR 470 | Tourism Management | 3 |
| HTOR 471 | Restaurant Management (Minimum Grade of C-) | 3 |
| HTOR 472 | Hotel Operations Management (Minimum Grade of C-) | 3 |
| HTOR 474 | Hospitality Revenue Management | 3 |
| HTOR 480 | Event Planning Practicum | 3 |
| HTOR 491 | Professional Field Experience | 3 |
| MKTG 475 | Social Media and Marketing | 3 |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| ENTR 102 | 3 | HTOR 276 | 3 |
| MATH 124 | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| ECON 225 or STAT 211 (GEF 8) | 3 | BCOR 340 | 3 |

| | | | |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | BCOR 350 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 6 | BCOR 370 | 3 |
| | | HTOR 376 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 320 | 3 | BCOR 330 | 3 |
| BCOR 360 | 3 | HTOR 380 | 3 |
| HTOR 470 | 3 | HTOR 472 | 3 |
| HTOR 471 | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| Minor or General Electives | 3 | Minor or General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 380 | 3 | BCOR 460 | 3 |
| HTOR 474 | 3 | HTOR 480 | 3 |
| MKTG 475 | 3 | HTOR 491 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | Minor or General Electives | 6 |
| Minor or General Electives | 3 | | |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### HOSPITALITY AND TOURISM MANAGEMENT

The objective of providing a foundational education in hospitality and tourism management at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate hospitality and tourism management major, we subscribe to the following learning goals for each of our undergraduate students:

***Leadership: Graduates will be able to identify leadership traits and styles to achieve organizational goals***

- **Assess the importance of management and leadership in hospitality**
- **Connect people across various functional areas and being able to deal with the dynamics of individuals and teams**

***Operations: Graduates will be able to manage and evaluate functional systems in hospitality organizations***

- **Strategize various tasks across functional areas toward the organizational goals**
- **Construct knowledge about various functional areas that lead to organizational performance**

***Human Skills: Graduates will be able to recognize the importance of human skills in the hospitality industry***

- **Identify the elements of human skills in the hospitality industry**
- **See oneself as being culturally sensitive while building interpersonal relationships with peers, customers, and others**

***Technology: Graduates will be able to set up and demonstrate existing and new information technologies and data in hospitality***

- **Explain the importance of information technology and data in creating customer experiences in hospitality**
- **Develop best practices to increase efficiency using existing and new emerging technologies in hospitality**

***Entrepreneurship: Graduates will be able to experiment, learn, and build products and services in hospitality***

- **Recognize the importance of experimenting in both entrepreneurship and intrapreneurship in hospitality**
- **Develop a proposal for a business opportunity to improve and enhance hospitality products and services**

# Human Resource Management, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

The **Human Resource Management (HRM) Major** prepares students for managerial roles and empowers students to unlock employee potential, promote well-being, and align workforce strategies with organizational goals within **any** business, government, or nonprofit environment. This major not only focuses on core HR functions like talent acquisition, training, compensation, and employee relations but also offers specialized knowledge in managing teams, leading diverse work units, and navigating the complexities of employment and labor law. Students can choose from three areas of emphasis: **Artificial Intelligence in HR**, **Global HR**, and **People and Culture**, aligning their education with specific career aspirations. In response to evolving industry demands, the curriculum also integrates data analytics, enhancing students' ability to make informed decisions and optimizing organizational performance. Our graduates develop robust skills in communication, ethical decision-making, coordination, conflict resolution, and team management, equipping them to become effective leaders and valuable assets in **any** organizational setting.

The **HRM Major** offers **career opportunities** such as:

- HR Generalist
- Payroll Specialist
- Talent Acquisition Specialist
- HR Coordinator
- Benefits Administrator
- Recruiting Coordinator
- Onboarding Specialist
- Employee Relations Specialist

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# FACULTY

## CHAIR

- Olga Bruyaka Collignon - Ph.D. (Jean Moulin University Lyon 3, EM Lyon)
  Strategic Management, Technology Management and Innovation

## PROFESSORS

- Mark Gavin - Ph.D. (Purdue University)
  Organizational Behavior, Research Methods
- Jeff Houghton - Ph.D. (Virginia Tech)
  Leadership, Organizational Behavior

## ASSOCIATE PROFESSORS

- Olga Bruyaka Collignon - Ph.D. (Jean Moulin University Lyon 3, EM Lyon)
  Strategic Management, Technology Management and Innovation
- David Dawley - Ph.D. (Florida State University)
  Strategic Management, International Business
- Tianxu Chen - Ph.D. (Drexel University)
  Strategic Management, International Business
- James Field - Ph.D. (Virginia Commonwealth University)
  Organizational Behavior, Research Methods
- Kayla Follmer - Ph.D. (Penn State University)
  Human Resource Management, Organizational Behavior
- XiaoXiao Hu - Ph.D. (George Mason University)
  Research Methods, Organizational Behavior
- Abhishek Srivastava - Ph.D. (University of Maryland)
  Organizational Behavior

## TEACHING PROFESSOR

- Rebecca Thacker - Ph.D. (Texas A&M)
  Human Resource Management, Organizational Behavior
- Thomas Zeni - Ph.D. (University of Oklahoma)
  Organizational Behavior, Human Resource Management, Business Ethics and Law

### PROFESSORS EMERITI

- Neil Bucklew
- Randyl D. Elkin
- Jack Fuller
- Richard W. Humphreys
- Ali H. Mansour

### ASSOCIATE PROFESSORS EMERITI

- Gerald Blakely

### TEACHING ASSOCIATE PROFESSOR EMERITUS

- David Cale

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major at the beginning of the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| MATH 124 | Algebra with Applications | 3 |
| Total Hours | | 20-23 |

Major Code: 2153

Click here to view the Suggested Plan of Study (p. 446)

## Human Resource Management Program Requirements

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |

| | |
|---|---|
| F5 - Human Inquiry & the Past | 3 |
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0 or higher.
- Possess a minimum GPA of 2.0 for all Major Courses calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 34 |
| Program Requirements | | 23 |
| Business Core Requirements | | 33 |
| Human Resource Management Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 34 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum Grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following (Minimum grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| MATH 124 | Algebra with Applications (Minimum grade of C-; may fulfill GEF 3) | 3 |
| Total Hours | | 23 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## Human Resource Management Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all Major Courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| HRMG 200 | Diversity and Inclusion Management | 3 |
| MANG 330 | Human Resource Management Fundamentals | 3 |
| MANG 422 | Organizational Behavior | 3 |
| HRMG 440 | Training and Development | 3 |
| HRMG 450 | Talent Acquisition & Performance Management | 3 |
| HRMG 480 | Employee and Labor Relations | 3 |
| **Area of Emphasis** | | **12** |
| AI in HR | | |
| Global HR | | |
| People and Culture | | |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| ENTR 102 | 3 | HRMG 200 | 3 |
| MATH 124 (GEF 3) | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| ECON 225 (GEF 8) | 3 | BCOR 340 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 350 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | BCOR 370 | 3 |
| Minor or General Elective | 3 | Minor or General Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 320 | 3 | BCOR 360 | 3 |

| | | | |
|---|---|---|---|
| BCOR 330 | 3 | HRMG 450 | 3 |
| MANG 330 | 3 | MANG 422 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | Area of Emphasis | 3 |
| Minor or General Elective | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 380 | 3 | BCOR 460 | 3 |
| HRMG 440 | 3 | HRMG 480 | 3 |
| Area of Emphasis | 6 | Area of Emphasis | 3 |
| Minor or General Elective | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| | | Minor or General Electives | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis

- AI in HR (p. 447)
- Global HR (p. 447)
- People and Culture (p. 447)

## AI in HR Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| HRMG 455 | AI Applications in HRM | 3 |
| MANG 426 | Introduction to Decision Analysis | 3 |
| MANG 434 | People Analytics | 3 |
| Select one of the following: | | 3 |
| BUDA 450 | Business Data Mining and Visualization | |
| BUDA 455 | Introduction to Business Intelligence and Artificial Intelligence | |
| MIST 320 | Managing Information Technology | |
| MIST 351 | Database Management Systems | |
| Total Hours | | 12 |

## Global HR Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| MANG 315 | Cross-Cultural Communication | 3 |
| MANG 360 | International Business | 3 |
| MANG 485 | Global Strategic Issues | 3 |
| Select one of the following: | | 3 |
| COMM 316 | Intercultural Communication | |
| HRMG 491 | Professional Field Experience | |
| BCOR 200 | Faculty-Led Study Abroad | |
| Total Hours | | 12 |

## People and Culture Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| COMM 306 | Organizational Communication | 3 |
| MANG 434 | People Analytics | 3 |
| MANG 480 | Corporate Social Responsibility | 3 |
| or HRMG 491 | Professional Field Experience | |
| Select one of the following: | | 3 |
| ANTH 254 | Cultural Anthropology | |

| | |
|---|---|
| SOC 235 | Race and Ethnic Relations |
| SOC 304 | Complex Organizations |
| Total Hours | 12 |

## Major Learning Outcomes

### HUMAN RESOURCE MANAGEMENT

The objective of providing a foundational education in management at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate management major, we subscribe to the following learning goals for each of our undergraduate students:

- Graduates will acquire the knowledge of basic functional areas of human resource management.
- Graduates will be able to deal with the dynamics of individuals and teams within organizations and to motivate, lead, and inspire employees toward achieving organizational goals.
- Graduates will have an appreciation of the ethical, legal, and regulatory issues impacting the decision-making process.
- Graduates will recognize the opportunities and challenges associated with the global marketplace.

# Management Information Systems (MIS), B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

Students in the MIS program gain the skills necessary to analyze an organization’s information needs and develop technological solutions to effectively solve business problems.  In today’s fast-paced, global environment, technology is a vital and integral part of business. Every organization relies on technology, and MIS professionals are the experts that ensure organizations succeed with technology.  MIS professionals have the knowledge to understand the organization's business goals and information needs and deliver the critical technologies to meet those needs. Every organization is becoming a technology-driven organization, making the career opportunities board for MIS professionals, but some include:

- Consulting
- Database Administration
- Information Systems Security
- Networking and Telecommunications
- Systems Analysis and Design
- Technology Management

This is an excellent major for students who enjoy technology and hands-on experience and want to apply their knowledge in a business environment.

## FACULTY

### DEPARTMENT CHAIRPERSON

- Brad Price - Ph.D. (University of Minnesota)
  Statistics

### PROFESSOR

- Gary Templeton - Ph.D. (Auburn University)
  Management of Information Technolgy and Innovation

### ASSOCIATE PROFESSORS

- Stephane Collignon - Ph.D. (Virginia Tech)
  Business Information and Technology
- Salman Nazir - Ph.D. (McGill)
  Management Information Systems
- A. Graham Peace - Ph.D. (University of Pittsburgh)
  Management Information Systems
- Brad Price - Ph.D. (University of Minnesota)
  Statistics

- Nanda Surendra - Ph.D. (University of Cincinnati)
  Management Information Systems

### ASSISTANT PROFESSOR

- Jeongsub Choi - Ph.D. (Rutgers)
  Artificial Intelligence/Machine Learning
- Bin Liu - Ph.D. (Rutgers)
  Artifical Intelligence/Machine Learning
- Christopher Ramezan - Ph.D. (West Virginia University)
  Cybersecurity

### SERVICE ASSISTANT PROFESSOR

- Joshua Meadows - M.S. (West Virginia University)
  Business Data Analytics

### TEACHING ASSISTANT PROFESSOR

- Mohammad (MJ) Ahmad - Ph.D. (West Virginia University)
  Cybersecurity
- Vincent Dobilas - M.B.A. (Rider University)

### EMERITUS

- Thomas L. Blaskovics - Ed.D.
  (University of Wisconsin)
- Virginia Franke Kleist - Ph.D.
  (University of Pittsburgh)

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Choose one of the following: a minimum of C- is needed in MATH 150 or D- in MATH 154 or MATH 155 | | 3-4 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 * | |
| MATH 150 | Applied Calculus * | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 * | |
| Total Hours | | 20-24 |

*

A minimum grade of C- in MATH 150 is required for admission to the program.  A grade of D- in MATH 154 or a higher college calculus course satisfies the calculus requirement.

Major Code: 2152

Click here to view the Suggested Plan of Study (p. 452)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the Bachelor of Science in Business Administration students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess an overall GPA of 2.0.
- Possess a GPA of 2.0 for all major courses (i.e. ACCT, MIST), calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 34 |
| Program Requirements | | 23 |
| Business Core Requirements | | 33 |
| Management Information Systems Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7, and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |

| | |
|---|---|
| General Electives | 17 |
| Total Hours | 34 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following (Minimum grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher; (may fulfill GEF 3): | | 3-8 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 | |
| MATH 150 | Applied Calculus | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 | |
| Total Hours | | 23 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## Management Information Systems Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| MIST 320 | Managing Information Technology (Minimum Grade of C-) | 3 |
| MIST 351 | Database Management Systems (Minimum Grade of C-) | 3 |
| MIST 352 | Business Application Programming (Minimum Grade of C-) | 3 |
| or CS 110 | Introduction to Computer Science | |
| MIST 353 | Advanced Information Technology | 3 |
| MIST 355 | Data Communications | 3 |
| MIST 450 | Systems Analysis | 3 |

| | | |
|---|---|---|
| MIST 452 | Systems Design and Development | 3 |
| MIST Electives | | 9 |
| ACCT 321 | Introduction to Accounting Systems | |
| BETH 357 | The Ethics of Information Technology | |
| MIST 356 | Network Security | |
| MIST 491 | Professional Field Experience (maximum of six credits) | |
| Upper-Division BUDA, CS, CYBR Courses | | |
| Other Courses Approved by Department | | |
| Total Hours | | 30 |

**The College restricts students to six credit hours of Professional Field Experience toward completion of a degree. No more than three credit hours may apply toward the major.**

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| Select one of the following (GEF 3): | 3 | Select one of the following (GEF 8): | 3 |
| MATH 124 | | MATH 150 | |
| MATH 129 | | MATH 154 | |
| MATH 150 | | MATH 155 | |
| MATH 153 | | MATH 156 | |
| MATH 155 | | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| ENTR 102 | 3 | | |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| ECON 225 (GEF 8) | 3 | BCOR 330 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 350 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 6 | BCOR 370 | 3 |
| | | MIST 351 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 340 | 3 | BCOR 380 | 3 |
| MIST 320 | 3 | MIST 355 | 3 |
| MIST 352 | 3 | MIST 353 | 3 |
| Minor or General Electives | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | Minor or General Electives | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 320 | 3 | BCOR 460 | 3 |
| BCOR 360 | 3 | MIST 452 | 3 |
| MIST 450 | 3 | MIS Elective | 3 |

| | | |
|---|---|---|
| MIS Elective | 6 Minor or General Electives | 6 |
| | 15 | 15 |

Total credit hours: 120

## Major Learning Outcomes

### MANAGEMENT INFORMATION SYSTEMS

The objective of providing a foundational education in management information systems and innovation at the undergraduate level cannot be realized without appropriate curricula content, effective teaching, and ultimately, learning. Within the undergraduate management information systems major, we subscribe to the following learning goals for each of our undergraduate students:

- Competence in core technical areas associated with MIS, such as programming, data communications and databases
- Knowledge of the selection, implementation and use of management information systems in organizations
- Awareness of how to analyze business problems and to design, build and maintain appropriate technological systems to solve those problems

# Marketing, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

Marketing professionals are involved in the exchange of value through planning, promoting, pricing, and distributing products and services. The marketing program is designed to give students a strong understanding of the elements of marketing plans used by organizations to satisfy customer needs and wants. In addition to the foundations of marketing strategy, the required courses provide an appreciation of how marketing strategies are used in the globalized economy. Students may select from three tracks: integrated digital marketing communications (iDMC), professional sales, and start up/high tech marketing. Career opportunities for marketing majors include:

- Advertising
- AI Marketing
- Brand Management
- Communication
- Customer Relationship Management
- Digital Marketing
- Distribution and Channel Management
- Influencer Marketing
- International Business
- Marketing Analytics
- Marketing Management
- Product Management
- Professional Sales
- Promotions
- Retail Management
- Sports Marketing
- Sustainable Marketing

## FACULTY

### CHAIR

- Annie Peng Cui - Ph.D. (Kent State University)
  International Marketing and Brand Management

### PROFESSORS

- Jody Crosno - Ph.D. (University of Kentucky)
  Marketing Channels, Product and Price Policies
- Annie Peng Cui - Ph.D. (Kent State University)

International Marketing and Brand Management

- M. Paula Fitzgerald - Ph.D. (University of South Carolina)
  Consumer behavior, Promotion, Marketing research
- Michael Walsh - Ph.D. (University of Pittsburgh)
  Integrated marketing communications, Sales, Global Marketing, Public policy and marketing

### ASSOCIATE PROFESSORS

- Laurel Ayne Cook - Ph.D. (University of Arkansas)
  Consumer collaboration, Consumer health & welfare, Public policy
- Julian Givi - Ph.D. (Carnegie Mellon University)
  Consumer Behavior, Gift Giving
- Emily Tanner - Ph.D. (Oklahoma State University)
  Public Policy, Professional Sales
- Xinchun Wang - Ph.D. (Texas Tech University)
  Marketing Strategy, Innovation, B2B marketing, and International business

### TEACHING ASSOCIATE PROFESSOR

- Suzanne O'Connell - MBA
  Professional Sales, Marketing

### TEACHING ASSISTANT PROFESSORS

- David Brauer - D.B.A. (Durham University)
  Professional Sales, Distribution Channels
- Joseph Derby - Ph.D. (Texas Tech University)
  Professional Sales and Marketing Strategy
- Khue (Kylie) Vo - Ph.D. (University of North Texas)
  Consumer Behavior and Social Media Marketing

### EMERITUS

- James R. Brown - D.B.A.
- Robert Cook
- Cy Logar
- Philip Mahin
- John L. Porter

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |

| | | |
|---|---|---|
| MATH 124 | Algebra with Applications | 3 |
| Total Hours | | 20-23 |

Major Code: 2163

Click here to view the Suggested Plan of Study (p. 457)

# Marketing Program Requirements

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

To qualify for the degree of Bachelor of Science in Business Administration, Marketing, students must meet the following criteria:

- Complete a minimum of 120 credit hours.
- Possess a minimum overall GPA of 2.0.
- Possess a GPA of 2.0 for all major courses, calculated using all attempted GPA hours unless excluded by the D/F repeat policy.
- The John Chambers College of Business and Economics accepts all baccalaureate transferable course work completed at public and private colleges in West Virginia and other regionally accredited institutions. Since the College is AACSB accredited, upper-division courses (courses equivalent to 300/400 level at WVU) must be evaluated by the Dean or designee before they may count toward business core, major core and major restricted electives in the Bachelor of Science in Business Administration or Bachelor of Science in Economics program.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 34 |
| Program Requirements | | 23 |
| Business Core Requirements | | 33 |
| Marketing Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |

| | |
|---|---|
| General Electives | 17 |
| Total Hours | 34 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum Grade of C-; GEF 1): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following (Minimum grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| MATH 124 | Algebra with Applications (Minimum grade of C-; may fulfill GEF 3) | 3 |
| Total Hours | | 23 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing (minimum grade of C-) | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## Marketing Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| MKTG 315 | Buyer Behavior | 3 |
| MKTG 320 | Professional Selling 1 | 3 |
| MKTG 325 | Marketing Research | 3 |
| MKTG 330 | Distribution Channels | 3 |
| MKTG 350 | Product and Brand Management | 3 |
| MKTG 485 | Global Marketing | 3 |
| or MKTG 440 | Export Management | |
| Area of Emphasis * | | 12 |
| Total Hours | | 30 |

*

Students may opt to complete 12 additional hours of 300/400 level MKTG coursework for instances where an Area of Emphasis cannot be achieved.

**

MKTG 491, Professional Field Experience, may be used to fulfill marketing elective credit. A maximum of three credit hours of professional field experience may be counted.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| MATH 124 (GEF 3) | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| ENTR 102 | 3 | Minor or General Elective | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| ECON 225 (GEF 8) | 3 | BCOR 320 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 330 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 6 | BCOR 350 | 3 |
| | | BCOR 370 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 340 | 3 | BCOR 380 | 3 |
| BCOR 360 | 3 | MKTG 325 | 3 |
| MKTG 315 | 3 | MKTG 330 | 3 |
| MKTG 320 | 3 | Area of Emphasis Course | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MKTG 350 | 3 | BCOR 460 | 3 |
| Area of Emphasis Courses | 6 | MKTG 485 or 440 | 3 |
| Minor or General Electives | 6 | Area of Emphasis Course | 3 |
| | | Minor or General Electives | 6 |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis Offered:

- Digital Marketing Promotions (p. 457)
- Professional Sales (p. 458)
- Start Up/High Tech Marketing (p. 458)

## DIGITAL MARKETING PROMOTIONS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| MKTG 380 | Integrated Promotions | 3 |
| MKTG 389 | Online Analytics | 3 |
| MKTG 474 | Integrated Promotions Campaign | 3 |

| | | |
|---|---|---|
| MKTG 475 | Social Media and Marketing | 3 |
| Total Hours | | 12 |

## PROFESSIONAL SALES AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| MKTG 321 | Professional Selling 2 | 3 |
| MKTG 345 | Selling with Digital Media | 3 |
| MKTG 420 | Sales Management | 3 |
| MKTG 415 | Customer Relationship Marketing | 3 |
| Total Hours | | 12 |

## START UP/HIGH TECH MARKETING AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| MKTG 435 | Artificial Intelligence and Its Application in Marketing | 3 |
| MKTG 445 | Start Up Marketing Promotions | 3 |
| ENTR 400 | Advanced Concepts in Entrepreneurship | 3 |
| DSGN 220 | Design Thinking | 3 |
| Total Hours | | 12 |

## Major Learning Outcomes

### MARKETING

The overall goal of the undergraduate marketing program at the College of Business and Economics is to provide students with a rigorous education that prepares them for successful careers as professional marketing executives in industry, and for further graduate studies. More specifically, the marketing program has the following Learning Goals:

- Students will develop an understanding of the strategic marketing management planning process, and be able to integrate the various facets of marketing and apply these concepts to marketing decisions and the development of marketing plans.
- Students will demonstrate quantitative marketing techniques and be able to conduct, analyze and interpret marketing research
- Students will be able to describe the major types of consumer buying behavior, the stages in the buyer decision process and how the firms' marketing strategy and marketing mix must evolve and adapt to match consumer behavior.
- Students will be able to describe major bases for segmenting consumer and business markets; define and be able to apply the concepts of market segmentation, target marketing, and market positioning to a marketing situation.
- Students will be able to demonstrate the ability to develop marketing strategies based on product, price, place and promotion objectives.
- Students will be able to evaluate and assess the legal, ethical and social responsibility ramifications of marketing actions and decisions.
- Students will be able to demonstrate an understanding of global marketing and how to adapt domestic marketing programs to the global market.

# Supply Chain Management, B.S.B.AD.

## Degree Offered

- Bachelor of Science in Business Administration

## Nature of the Program

Supply Chain Management (SCM) is a challenging and rewarding professional field that is critical to the success of any firm across all industries. SCM is a unique business function that is operationally essential, tactically critical and strategically of great consequence offering a broad range of career opportunities across any industry. Supply chain roles and responsibilities comprise a vast array of business functions, such as demand planning, inventory control, customer fulfillment, logistics, freight, warehousing, production planning, purchasing, sourcing, among others. The SCM program at WVU provides an integrated end-to-end perspective and prepares students to view all activities within the supply chain as a complex system, which often spans the globe. Through experiential learning activities, capstone projects with industry and government, and interaction with industry professionals, the program prepares students to identify critical interdependencies to succeed in their SCM roles. Including, cultivating a process view of SCM, understanding the opportunities and challenges of technology, innovatively deploying critical analytical skills that realize a competitive advantage while making ethical SCM decisions. The curriculum and activities focus not only on the core technical knowledge but also on the essential leadership skills needed for a successful career in the exciting and critical field of SCM.

Entry-level job opportunities include:

- Category analyst
- Distribution manager
- Inventory manager
- Logistics manager
- Materials planner
- Operations management analyst
- Operations supervisor
- Procurement manager
- Production planner
- Project manager
- Quality assurance manager
- Sourcing manager
- Supply chain analyst
- Supply chain consultant
- Supply chain manager
- Traffic manager

## FACULTY

### CHAIR

- Michael F. Walsh - Ph.D., University of Pittsburgh
  Chair of General Business Department

### PROFESSOR

- John Saldanha - Ph.D., The Pennsylvania State University
  Sears Chair in Global Supply Chain Management, and Faculty Director, Wehrle Global Supply Chain Lab

### ASSOCIATE PROFESSOR

- Bernie F. Quiroga - Ph.D., The Pennsylvania State University
  Program Coordinator, Supply Chain Management

### ASSISTANT PROFESSORS

- Molly Hughes - Ph.D., The Ohio State University
- Bo (Larry) Lan - Ph.D., Iowa State University of Science and Technology
- Ashesh Sinha - Ph.D., University of Wisconsin-Madison

### SERVICE ASSISTANT PROFESSOR

- Quinn Jones - B.S., West Virginia University
  Director, Wehrle Global Supply Chain Lab

### TEACHING ASSISTANT PROFESSOR

- Jeremy Roberts - D.M., University of Phoenix

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below.  Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201<br>& ECON 202 | Principles of Microeconomics<br>and Principles of Macroeconomics | 6 |
| ECON 225 | Elementary Business and Economics Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Choose one of the following: | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Choose one of the following; a minimum of C- is needed in MATH 150 or D- in MATH 154 or MATH 155 | | 3-4 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 * | |
| MATH 150 | Applied Calculus * | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 * | |
| Total Hours | | 20-24 |

*****

A minimum grade of C- in MATH 150 is required for admission to the program.  A grade of D- in MATH 154 or a higher college calculus course satisfies the calculus requirement.

Major Code: 2169

Click here to view the Suggested Plan of Study (p. 462)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 34 |
| Program Requirements | | 23 |
| Business Core Requirements | | 33 |
| Supply Chain Management Major Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, 7 and 8 | | 16 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 34 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; may fulfill GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; may fulfill GEF 8) | 3 |
| Select one of the following (Minimum grade of C-; may fulfill GEF 1): | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| ENGL 103 | Accelerated Academic Writing | |
| Select one of the following (Minimum grade of C-; may fulfill GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Select one of the following; minimum grade of C- in MATH 150 or D- in MATH 154 or higher; (may fulfill GEF 3): | | 3-8 |
| MATH 124<br>& MATH 150 | Algebra with Applications<br>and Applied Calculus | |
| MATH 129<br>& MATH 155 | Pre-Calculus Mathematics<br>and Calculus 1 | |
| MATH 150 | Applied Calculus | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 155 | Calculus 1 | |
| Total Hours | | 23 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| ENTR 102 | Fundamentals of Entrepreneurship | 3 |
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication (Fulfills Writing and Communication Skills Requirement) | 3 |
| BCOR 320 | Legal Environment of Business | 3 |
| BCOR 330 | Information Systems and Technology | 3 |
| BCOR 340 | Principles of Finance | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 360 | Supply Chain Management | 3 |
| BCOR 370 | Principles of Management | 3 |

| | | |
|---|---|---|
| BCOR 380 | Business Ethics | 3 |
| BCOR 460 | Contemporary Business Strategy | 3 |
| Total Hours | | 33 |

## Supply Chain Management Major Requirements

| Code | Title | Hours |
|---|---|---|
| Possess a minimum GPA of 2.0 for all major courses calculated using all attempted GPA hours unless excluded by the D/F repeat policy. | | |
| GSCM 350 | Sourcing and Supply Management | 3 |
| GSCM 355 | Logistics and Distribution Management | 3 |
| GSCM 360 | Supply Chain Analytics | 3 |
| GSCM 370 | Transportation Management | 3 |
| GSCM 425 | Supply Chain Network Design | 3 |
| GSCM 430 | Supply Chain Technology | 3 |
| GSCM 450 | Supply Chain Quality Management | 3 |
| GSCM 455 | Project Management | 3 |
| GSCM 470 | Global Supply Chain Systems | 3 |
| MIST 351 | Database Management Systems | 3 |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 199 | 3 | ACCT 201 | 3 |
| BCOR 191 | 1 | ECON 201 (GEF 4) | 3 |
| BCOR 121 | 2 | ENGL 101 (GEF 1) | 3 |
| Select one of the following (GEF 3): | 3 | Select one of the following: | 3 |
| MATH 124 | | MATH 150 | |
| MATH 129 | | MATH 154 | |
| MATH 150 | | MATH 155 | |
| MATH 153 | | MATH 156 | |
| MATH 155 | | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| ENTR 102 | 3 | | |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| ECON 225 (GEF 8) | 3 | BCOR 330 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 340 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | BCOR 350 | 3 |
| Minor or General Elective | 3 | BCOR 370 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 360 | 3 | BCOR 380 | 3 |
| GSCM 350 | 3 | GSCM 360 | 3 |
| GSCM 355 | 3 | GSCM 370 | 3 |
| GEF (Choose from F2, F5, F6, F7 or F8) | 3 | MIST 351 | 3 |
| Minor or General Elective | 3 | GEF (Choose from F2, F5, F6, F7 or F8) | 3 |
| | 15 | | 15 |

| Fourth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| BCOR 320 | 3 | BCOR 460 | 3 |
| GSCM 425 | 3 | GSCM 455 | 3 |
| GSCM 430 | 3 | GSCM 470 | 3 |
| GSCM 450 | 3 | Minor or General Elective | 6 |
| Minor or General Elective | 3 | | |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### SUPPLY CHAIN MANAGEMENT

Students who successfully complete the program will be prepared and competitive for entry-level positions in areas pertaining to supply chain management. These jobs include areas such as materials project manager, sourcing leader, supply chain analyst, production analyst, logistics planning, shipping and delivery management, among others.

- Graduates from the program will have the knowledge and skills to manage and coordinate all supply chain functions in an enterprise, from overseeing acquisition, internal allocation of resources, movement and storage of raw materials and inventory, to managing complex networks of supply and demand.
- They will have the knowledge and skills to lead supply chain improvement projects, to function in supply chain teams, and to perform or lead supply chain activities.
- Graduates will be able to recognize the systemic and global nature of supply chain processes and activities in the decision-making process, the interdependencies critical to effectively manage and improve performance, the role of supply chain information technology in the effective management and improvement of supply chain activities, and the complexities of global supply chain operations and related ethical issues.
- In addition, students will recognize the great potential that supply chain activities and decisions offer in terms of making a positive contribution not only to the improvement of business performance but also to society.

# Supply Chain Management Science, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Management Science is an interdisciplinary study of applying scientific approaches to solving complex management problems. It is highly specialized field of analytics. The Supply Chain Management Science program will prepare students in the application of management science and data science techniques to managing the integrated end-to-end perspective of supply chain systems. Students will receive a grounding in operations research, operations analyses using applied mathematical modeling such as optimization and stochastic modeling applied to all stages of the supply chain management including, sourcing, production, distribution and reverse logistics. Complementing these skills students will be given a strong grounding in data science techniques such as data warehousing, data mining data base management and data visualization to enhance data insights and facilitate improved decision making. This is a STEM designated major. Career opportunities include:

- Business Analyst
- Forecast Engineer
- Logistics Engineer
- Management Scientist
- Operations Analyst
- Operations Management Consultant
- Operations Research Analyst
- Operations Researcher
- Research Analyst
- Supply Chain Control Analyst
- Supply Chain Data Analyst
- Supply Chain Intelligence Business Analyst
- Supply Chain Management Consultant

- Supply Chain Systems Analyst
- Transportation Analyst

## Admissions for 2026-2027

**For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit** Chambers admissions **(**http://catalog.wvu.edu/undergraduate/collegeofbusinessandeconomics/#admissionstext**).**

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 121 | Introduction to Business Applications | 2 |
| ECON 201 | Principles of Microeconomics | 3 |
| ECON 202 | Principles of Macroeconomics | 3 |
| ENGL 101 | Introduction to Composition and Rhetoric | 3 |
| ENGL 102 | Composition, Rhetoric, and Research | 3 |
| MATH 155 | Calculus 1 | 4 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| Total Hours | | 24 |

Major Code: 2172

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 24 |
| Program Requirements | | 24 |
| Math and Data Requirements | | 18 |
| Business Core Requirements | | 24 |

| | |
|---|---|
| Supply Chain Management Science Major Requirements | 30 |
| Total Hours | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 2, 5, 6, and 7 | | 13 |
| BCOR 191 | First-Year Seminar | 1 |
| General Electives | | 10 |
| Total Hours | | 24 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| ACCT 201 | Principles of Accounting 1 (Minimum grade of C-) | 3 |
| BCOR 121 | Introduction to Business Applications (Minimum grade of C-) | 2 |
| ECON 201 | Principles of Microeconomics (Minimum grade of C-; GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics (Minimum grade of C-; GEF 8) | 3 |
| ENGL 101 | Introduction to Composition and Rhetoric (Minimum grade of C-; GEF 1) | 3 |
| ENGL 102 | Composition, Rhetoric, and Research (Minimum grade of C-; GEF 1) | 3 |
| MATH 155 | Calculus 1 (Minimum grade of C-; GEF 3) | 4 |
| STAT 215 | Introduction to Probability and Statistics (Minimum grade of C-; GEF 8) | 3 |
| Total Hours | | 24 |

## Math and Data Requirements

| Code | Title | Hours |
|---|---|---|
| MATH 156 | Calculus 2 (Minimum grade of C-; GEF 8) | 4 |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| MIST 351 | Database Management Systems | 3 |
| BUDA 450 | Business Data Mining and Visualization | 3 |
| Total Hours | | 18 |

## Business Core Requirements

| Code | Title | Hours |
|---|---|---|
| BCOR 199 | Introduction to Business | 3 |
| BCOR 299 | Business Communication | 3 |
| BCOR 330 | Information Systems and Technology (Minimum grade of C-) | 3 |
| BCOR 340 | Principles of Finance (Minimum grade of B-) | 3 |
| BCOR 360 | Supply Chain Management (Minimum grade of C-) | 3 |
| ECON 301 | Intermediate Micro-Economic Theory | 3 |
| ECON 425 | Introductory Econometrics | 3 |
| FIN 305 | Intermediate Finance | 3 |
| Total Hours | | 24 |

## Supply Chain Management Science Major Requirements

| Code | Title | Hours |
|---|---|---|
| GSCM 350 | Sourcing and Supply Management (Minimum grade of C-) | 3 |
| GSCM 355 | Logistics and Distribution Management (Minimum grade of C-) | 3 |
| GSCM 360 | Supply Chain Analytics (Minimum grade of C-) | 3 |

| | | |
|---|---|---|
| GSCM 370 | Transportation Management (Minimum grade of C-) | 3 |
| GSCM 425 | Supply Chain Network Design (Minimum grade of C-) | 3 |
| GSCM 430 | Supply Chain Technology | 3 |
| GSCM 450 | Supply Chain Quality Management (Minimum grade of C-) | 3 |
| GSCM 455 | Project Management | 3 |
| GSCM 470 | Global Supply Chain Systems | 3 |
| BUDA 451 | Advanced Business Data Mining | 3 |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BCOR 121 | 2 | ECON 201 (GEF 4) | 3 |
| BCOR 191 | 1 | ENGL 101 (GEF 1) | 3 |
| BCOR 199 | 3 | MATH 156 (GEF 8) | 4 |
| ACCT 201 | 3 | CS 110 | 3 |
| MATH 155 (GEF 3) | 4 | CS 110L | 1 |
| GEF 2, 5, 6, or 7 | 3 | | |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 202 (GEF 8) | 3 | BCOR 299 | 3 |
| ENGL 102 (GEF 1) | 3 | BCOR 330 | 3 |
| STAT 215 (GEF 8) | 3 | BCOR 340 | 3 |
| CS 111 | 3 | BCOR 360 | 3 |
| CS 111L | 1 | ECON 301 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FIN 305 | 3 | ECON 425 | 3 |
| GSCM 350 | 3 | GSCM 360 | 3 |
| GSCM 355 | 3 | GSCM 370 | 3 |
| GEF 2, 5, 6, or 7 | 3 | MIST 351 | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BUDA 450 | 3 | GSCM 455 | 3 |
| GSCM 425 | 3 | GSCM 470 | 3 |
| GSCM 430 | 3 | BUDA 451 | 3 |
| GSCM 450 | 3 | GEF 2, 5, 6, or 7 | 3 |
| GEF 2, 5, 6, or 7 | 3 | General Elective | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### SUPPLY CHAIN MANAGEMENT SCIENCE

- Students use data warehousing, data mining and data visualization techniques to compile, manipulate and present insights from data to inform supply chain management decision making.

- Students employ statistical modeling tools to forecast supply chain activities such as customer demand and asset utilization for supply chain planning.
- Students apply optimization theory and operations research techniques to model and find the best feasible solutions to improve supply chain processes spanning procurement, operations, demand and returns management.
- Students apply operations analysis to the improvement of systems in supply chain processes.
- Students design, test and evaluate stochastic and dynamic models of prototypical supply chain systems.
- Students use coding platforms including R and Python to program statistical, mathematical and simulation models of supply chain systems.

# Center for Learning, Advising and Student Success

## Center for Learning, Advising and Student Success

The Center for Learning, Advising and Student Success (https://advisingcenter.wvu.edu/) (CLASS) exists for the purpose of supporting students who are exploratory or need to complete prerequisite requirements for admission to their desired major. Professional staff equipped with various academic resources and tools guide first- and second-year students on their journey filled with exploration, passion, engagement and success. The CLASS team is committed to helping every student transition to college, select a major aligning with their career interests, build an academic plan of study and eventually declare a major offered by one of West Virginia University's (WVU) 11 colleges and schools. This is accomplished through a combination of appreciative advising, coaching/mentoring and instruction.

## ACADEMIC ADVISING

The Advising Center (https://advisingcenter.wvu.edu/advising/) is home to students in one of WVU's guided pathways. Students enroll in one of eight guided pathways designed to promote exploration, complete the General Education Foundations requirements and work toward satisfying requirements for admission to a major. Every student is assigned a professional academic adviser who specializes in one or more pathways. In addition, the conditional admission program supports students who are provisionally admitted to WVU. All CLASS students are supported by the Advising Center until they reach junior class standing or are admitted to an academic college or school. Once admitted to an academic college or school, a student is assigned a faculty or professional adviser in the college or school that confers their intended degree and major.

## FIRST-YEAR EXPERIENCE

The First-Year Experience (https://firstyearexperience.wvu.edu/) office assists students in transitioning to college by providing tools and resources to establish a foundation for academic success. This is accomplished through building professional and social relationships, developing critical thinking skills and creating a holistic plan for success. The staff serves as the central contact for all First-Year Seminar faculty, including curriculum consultation, instructor resources and professional development.

## HIGH SCHOOL ACCESS EARLY COLLEGE PROGRAM

The High School ACCESS (https://www.access.wvu.edu/) Early College program offers traditional or home-schooled high school sophomores, juniors and seniors the opportunity to jump start their college career by enrolling in college courses. Students who possess a 3.0 or higher high school GPA may complete courses online, on campus or on-site in participating high schools. Students may enroll in courses that fulfill general education requirements at most West Virginia public colleges and universities.

## REACH STUDENT SUCCESS OFFICE

The REACH Student Success (https://studentsuccess.wvu.edu/) office helps all WVU students regardless of major reach their potential through free academic support including success coaching, outreach, peer study groups and workshops. REACH also offers live chat (via website and text) with peer assistants to help answer students' questions. Programming and outreach is provided for specific populations including students in CLASS, first-generation college students (neither parent has graduated from a four-year institution in the US), rural students, and students receiving the Pell grant.

## STUDENT SUPPORT SERVICES/TRIO

Student Support Services (https://sss.wvu.edu/) (SSS) is a federally funded TRIO program sponsored by the U.S. Department of Education. SSS helps eligible students persist and graduate from WVU. To qualify for the program, students must meet at least one of the following eligibility criteria: Be a first-generation college attendee (neither parent/guardian has earned a four-year college degree); be income eligible as determined by the federal government; have a documented disability (and registered with the WVU Office of Accessibility Services). SSS provides participants with academic instruction and tutoring, advising, mentoring, financial aid application assistance, financial literacy education, graduate school preparation and other supports necessary to earn a post-secondary education. The program is voluntary and participants are selected through an application process, as spaces are limited.

## UPWARD BOUND/TRIO

Upward Bound (https://upwardbound.wvu.edu/) (UB) is a federally funded TRIO program sponsored by the U.S. Department of Education. UB assists income-eligible high school students who will be the first in their families to go to college. Specifically, UB assists high school students with overcoming academic, social and cultural barriers to higher education, with the goals of being successful in high school and college enrollment, persistence and completion. UB must meet federally established objectives and provides both academic year and summer services to the students in the program.

## ADMINISTRATION

### EXECUTIVE DIRECTOR

- Joseph Seiaman
  Advising and Student Success

### DIRECTORS

- Rhonda Black
  First-Year Experience
- Regan Bruni-Swan
  Student Success
- Tyler Collie
  TRIO Student Support Services
- Rishira Dille
  High School ACCESS
- Frederick McDonald
  Advising and Recruitment
- Landon Southerly
  TRIO Upward Bound

## Admissions

First-time freshmen, continuing students or first-time transfer students who are exploratory (undecided) or not eligible for admission directly into the college or school that houses their intended major may enroll in CLASS.

### FIRST-TIME FRESHMEN

Students apply to WVU as either an undecided student or directly to the major they are interested in pursuing. All undecided students, as well as students not directly admitted into a college or school, are supported in one of the eight guided pathways within CLASS. Students may remain in a guided pathway until they have accumulated 45 earned credit hours. By the end of the next regular term of study, students have to enroll in a college or school for which they meet admission requirements. If students do not meet admission requirements for their preferred major, college or school, their academic adviser will assist them in identifying one for which they do. Students in the Exploratory Pathway may remain undecided for up to one year or until they have accumulated 30 earned credit hours. Once an undecided student earns 30 credit hours, they must transition into a guided pathway within CLASS or transition to a college or school.

### CURRENT STUDENTS (CHANGING MAJORS WITHIN WVU)

Current WVU students changing their major may be admitted into a guided pathway within CLASS if they have fewer than 45 earned credit hours. Students with 45 - 60 earned credit hours may be admitted to CLASS at the discretion of Director of Advising and Recruitment.

### FIRST-TIME TRANSFERS

First-time transfer students with 45 or fewer earned credit hours may be admitted into one of the guided pathways within CLASS. Students with 45 - 60 earned credit hours may be admitted to CLASS at the discretion of Director of Advising and Recruitment

## Guided Pathways

The eight guided pathways are designed to help students explore complementary majors and careers. Students receive professional academic advising and other support services to ensure they are enrolling in and successfully completing courses that count toward their intended or a parallel major.

Guided pathways provide students with the latitude to explore a variety of different majors at WVU, earn a bachelor's or professional degree and begin a professional career. Many majors can lead to desired career ambitions; therefore, some majors may fall under multiple pathways. CLASS's website (https://advisingcenter.wvu.edu/about/guided-pathways/) has additional information on guided pathways, including majors and careers to help students who are uncertain about their academic journey at WVU.

### AGRICULTURE AND NATURAL SCIENCES PATHWAY

From sustainable crop and food production to protecting natural resources, Agriculture and Natural Sciences Pathway students can start their own business, launch their own product lines, or work in growing industries like food science, veterinary medicine and soil and water conservation.

### BUSINESS AND COMMUNICATIONS PATHWAY

Majors in this pathway prepare for rapidly evolving business and media fields. Graduates can pursue their own business ventures, climb the corporate ladder or innovate new products and services. Career paths include accounting, information technology, project management, fundraising and technical writing.

### EXPLORATORY PATHWAY

Many students start college as undecided/undeclared students, and all of them explore their paths to fit their interests. With over 120 undergraduate majors, a CLASS adviser will assist students along their journey.

## HEALTHCARE PATHWAY

Students entering this pathway want to help people, whether they are diagnosing medical conditions, treating patients, curing diseases, or analyzing health data. This pathway is the academic home for students completing admission requirements for biomedical laboratory diagnostics, immunology and medical microbiology, occupational therapy or pharmacy.

## LIBERAL ARTS AND HUMANITIES PATHWAY

This broad range of majors is the gateway to an even broader range of careers. Students gain in-depth knowledge in one area, plus skills like communication, problem-solving, and critical thinking that apply to many disciplines. Career fields in copy writing, translating, law and museum conservation are all popular.

## SCIENCE, TECHNOLOGY, ENGINEERING AND MATH (STEM) PATHWAY

STEM majors solve everyday problems and help build a better future. From aerospace engineering to physics to cybersecurity, these majors require a passion for thinking outside the box and the willingness to tackle big questions. Careers include petroleum engineering, software development, fraud examination, chemistry and physics.

## SOCIAL SCIENCES PATHWAY

One part science and one part art, this pathway is for students who want to help change lives for the better. These majors are all about studying and analyzing human behavior and society while looking for ways to improve how we think and act. Careers vary from clinical psychology to human resources to politics.

## VISUAL AND PERFORMING ARTS PATHWAY

These majors fit every dream, from the future record producer to the budding Oscar winner. With a museum and creative arts center, students have plenty of inspiration. Graduates work across a broad spectrum of fields, from creating art to performing on a stage to education.

# College of Creative Arts and Media

## Introduction

The College of Creative Arts and Media offers innovative curricula and real-world experiences that prepare students for careers in today's creative and media-focused professions. Graduates are well prepared to positively affect the quality of life in the community in which they live, work, and serve.

The College has an enrollment of over 2,000 students and is made up of four professionally accredited and nationally recognized Schools of Art & Design, Media & Communications, Music, and Theatre & Dance. Each School offers a range of undergraduate and graduate degrees addressing such fields as the creative and performing arts, advertising and communications, arts education and scholarship, design disciplines, journalism, marketing and public relations, museum studies, the recording industry, theatre technology, and the intersection of art and health.

Distinguished and credentialed faculty offer instruction in multiple, state-of-the-art facilities across campus and are committed to supporting students beyond the classroom to secure internships, study aboard experiences, mentorship programs, workshops, and research trips necessary to make them competitive. As a result, graduates of the College of Creative Arts and Media are ready to use their imaginative skills to create, educate, evaluate, communicate, and produce art, experiences, events, products, spaces, and services that have the potential to transform lives.

## Undergraduate Degrees Offered

### BACHELOR OF ARTS

- Art History and Museum Professions
- Art Therapy
- Dance
- Game Design and Interactive Media
- Multidisciplinary Media Studies
- Music
- Music Business and Industry
- Theatre

### BACHELOR OF FINE ARTS

- `Acting`
- Art and Design
- Art Education
- Musical Theatre
- Theatre Design & Technology

### BACHELOR OF MULTIDISCIPLINARY STUDIES

- Multidisciplinary Studies

### BACHELOR OF MUSIC

- Music Composition
- Music Education
- Music Performance
- Music Therapy

### BACHELOR OF SCIENCE

- Design Studies
- Fashion Design and Merchandising
- Integrated Marketing Communications
- Interior Architecture
- Music and Health

## BACHELOR OF SCIENCE IN JOURNALISM

- Advertising and Public Relations
- Direct Admit Journalism
- Sports and Adventure Media

## Our Purpose/Mission Statement

The College of Creative Arts and Media serves students, our university, community and state through innovation, teaching, research, scholarship and creative activity in the arts, media, strategic communications and sustainable design. We engage students to become principled, creative, ethical, curious, courageous and inclusive thinkers, leaders and contributors to society through free expression, experiential learning and interdisciplinary collaboration.

## Values

In addition to WVU's values of:
Accountability, Appreciation, Curiosity, Respect and Service.

We Value:
Connection, Creativity, Diversity, Ethics, Excellence, Free expression, Innovation, Integrity, Public scholarship, Relevance and Sustainability.

## Artistic and Scholarly Achievement

The College of Creative Arts and Media is committed to supporting students in external opportunities, internships, and jobs important to their discipline at the national and international levels through individualized advising to determine professional goals fand travel grants, if needed. Students receive mentoring to create specific plans to apply for targeted opportunities and receive support, encouragement, expertise, and resource guidance for successful applications. We are dedicated to an ever-increasing positive presence of current West Virginia University College of Creative Arts and Media students beyond campus in the local, state, national and even international context.

## Study Abroad

The College of Creative Arts and Media realizes the importance of the personal and professional benefits of studying abroad. Through WVU's international programs, students can gain a global perspective, broaden their experiences, and discover new career paths. College of Creative Arts and Media students have the opportunity to study abroad through one of the programs coordinated by the College or by the Office of International Programs.

Interested students should work with their academic advisor to develop a program of study that includes a study abroad experience.

For more information about international programs, see each School’s individual program descriptions in this catalog, visit each School’s website, or go to West Virginia University’s International Programs website at http://internationalstudies.wvu.edu/.

## Graduation Requirements

Each School in the College of Creative Arts and Medica has specific graduation requirements for its programs. Students should refer to the individual program descriptions for graduation.

## Scholarship and Financial Aid Resources

The College of Creative Arts and Media offers several special scholarship awards for incoming students and students currently enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and the student’s potential for success in their chosen area of study. To receive and maintain an award from the College, a student must plan to enroll or be enrolled as a full-time major in one of the College’s programs of study.

For general information on College-based scholarships, please contact the College of Creative Arts and Media Recruitment Office. Because each School in the College of Creative Arts and Media has specific scholarship criteria, students should refer to the School's individual program descriptions in this catalog and on the School’s website.

Students who receive a scholarship should note that any award from the College may impact one’s overall financial aid package. Recipients of other forms of financial aid who also receive a scholarship award from the College should consult with the WVU Financial Aid office to discuss the parameters of their complete financial aid package. For more information about financial aid and other University-based scholarships, please visit the WVU Financial Aid website at http://financialaid.wvu.edu/.

## For More Information

Additional information on programs of study and areas of emphasis within each degree can be found in the individual School’s description in this catalog and/or on the School’s website.

For more information about studying at the College of Creative Arts and Media, please contact our Recruitment Office:

Dr. James Froemel, Recruitment Specialist
Phone: (304) 293-4339
Email: ccarecruitment@mail.wvu.edu.

Payton Litton, Recruitment Specialist
Phone: (304) 293-3489
Email: payton.litton@mail.wvu.edu

## ADMINISTRATION

### DEAN

- Keith Jackson - D.M.A. (Arizona State University)
  Philip J. Faini/Falbo Family Dean

### ASSOCIATE DEAN OF ACADEMIC AFFAIRS

- Sandra Schwartz - Ph.D. (University of Miami)

### ASSOCIATE DEAN OF RESEARCH AND CREATIVE ACTIVITY

- Mikylah Myers - D.M.A. (University of Houston)

### ASSOCIATE DEAN OF STUDENT SUCCESS AND ENROLLMENT

- Gina Martino Dahlia - M.S.J. (West Virginia University)

### ASSISTANT DEAN OF ONLINE PROGRAMS

- Cindy Hart - M.S. (West Virginia University)

### ASSISTANT DEAN OF PRODUCTION, PRESENTATION, OPERATIONS, & CULTURAL ENGAGEMENT

- Jamie Whoolery - B.F.A. and B.S.J. (West Virginia University)

### DEANS AND PROFESSORS EMERITI

- Philip J. Faini - College of Creative Arts
- Maryanne Reed - Reed College of Media
- J. Bernard Schultz - College of Creative Arts

**Learning Outcomes**

**Specific learning goals for individual programs are listed under each School's section of the catalog.** Due to the nature of the College's specialized degrees, none of these goals listed are intended to be comprehensive.

## Admissions Requirements

Acceptance into the College of Creative Arts and Media and/or one of its Schools is contingent upon admission to WVU as an undergraduate student.

Some schools within the College also have individual admission requirements, such as an audition, portfolio review, or interview. Prospective students should refer to the specific admission criteria of each school found in their program descriptions in this catalog and on the School's website. Students should also check the College's website for audition dates which are held throughout the year.

Students transferring to the College of Creative Arts and Media from other colleges and universities must present a minimum grade point average (GPA) of 2.0 in addition to the standard auditions or portfolio reviews. Programs may have other specific transfer requirements.

Some students may be admitted under the individual consideration clause of the University's general admission policy. This category allows admission of exceptionally talented students in art, dance, music, and theatre who might not meet the criteria for grade point averages and standardized test scores to be admitted to one of the College's programs of study.

## Tuition

In addition to University tuition and fees, College of Creative Art and Media students will also be charged College tuition. Students should refer to information related to their intended major for additional related information.

# College of Creative Arts and Media Minors

## COLLEGE MINOR

- Arts Entrepreneurship (https://updatecatalog.wvu.edu/undergraduate/minors/arts_entrepreneurship/)

## SCHOOL OF ART & DESIGN

- Art History (https://updatecatalog.wvu.edu/undergraduate/minors/art_history/)
- Ceramics (https://updatecatalog.wvu.edu/undergraduate/minors/ceramics/)
- Design Thinking (http://catalog.wvu.edu/undergraduate/minors/designthinking/)
- Digital Art and Animation (http://catalog.wvu.edu/undergraduate/minors/digitalartanimation/)
- Fashion Merchandising (http://catalog.wvu.edu/undergraduate/minors/fashion_merchandising/)
- Painting (https://updatecatalog.wvu.edu/undergraduate/minors/painting/)
- Photography (https://updatecatalog.wvu.edu/undergraduate/minors/photography/)
- Printmaking (https://updatecatalog.wvu.edu/undergraduate/minors/printmaking/)
- Sculpture (https://updatecatalog.wvu.edu/undergraduate/minors/sculpture/)
- Sustainable Design (http://catalog.wvu.edu/undergraduate/minors/sustainable_design/)
- Therapeutic Art (https://updatecatalog.wvu.edu/undergraduate/minors/therapeutic_art/)

## SCHOOL OF MEDIA AND COMMUNICATIONS - REED

- Advertising (http://catalog.wvu.edu/undergraduate/minors/advertising/)
- Entertainment Media (http://catalog.wvu.edu/undergraduate/minors/entertainmentmedia/)
- Event Planning (http://catalog.wvu.edu/undergraduate/minors/eventplanning/)
- Health Promotion (http://catalog.wvu.edu/undergraduate/minors/health_promotion/)
- Journalism (http://catalog.wvu.edu/undergraduate/minors/journalism/)
- Public Relations (http://catalog.wvu.edu/undergraduate/minors/public_relations/)
- Sport Communication (http://catalog.wvu.edu/undergraduate/minors/sports_communication/)
- Strategic Social Media (http://catalog.wvu.edu/undergraduate/minors/strategicsocialmedia/)

## SCHOOL OF MUSIC

- Appalachian Music (https://updatecatalog.wvu.edu/undergraduate/minors/appalachianmusic/)
- Jazz Studies (https://updatecatalog.wvu.edu/undergraduate/minors/jazz_studies/)
- Music (https://updatecatalog.wvu.edu/undergraduate/minors/general_musicianship/)
- Music Industry (https://updatecatalog.wvu.edu/undergraduate/minors/musicindustry/)
- Music Performance (https://updatecatalog.wvu.edu/undergraduate/minors/performance/)
- Music Technology (https://updatecatalog.wvu.edu/undergraduate/minors/music_technology/)
- World Music (https://updatecatalog.wvu.edu/undergraduate/minors/world_music/)

## SCHOOL OF THEATRE & DANCE

- Dance (https://updatecatalog.wvu.edu/undergraduate/minors/dance/)
- Theatre (https://updatecatalog.wvu.edu/undergraduate/minors/theatre/)
- Theatre Production (https://updatecatalog.wvu.edu/undergraduate/minors/theatreproduction/)

# Accreditation

West Virginia University and College of Creative Arts and Media degree programs are accredited by

- *National Association of Schools of Art and Design* (NASAD)
- *National Association of Schools of Music* (NASM)
- *National Association of Schools of Theatre* (NAST)

The Music Education program is fully accredited by the Council for the Accreditation of Educator Preparation (CAEP) and the West Virginia Department of Education

The Music Therapy program is fully accredited by the American Music Therapy Association (AMTA).

The Journalism program is accredited by *Accrediting Council for Education in Journalism and Mass Communication* (ACEJMC).

Certification in Public Relations is by the *Public Relations Society of America* (PRSA).

The Fashion Design & Merchandising program is an affiliate member of the Textile and Apparel Programs Accreditation Commission (TAPAC).

# School of Art and Design

## Degrees Offered

### BACHELOR OF ARTS

- Art History and Museum Professions
- Art Therapy
- Game Design and Interactive Media

### BACHELOR OF FINE ARTS

- Art and Design
- Art Education

### BACHELOR OF SCIENCE

- Design Studies
- Fashion Design & Merchandising
- Interior Architecture

## Nature of Program

The curriculum of the School of Art & Design is designed to afford students an opportunity to explore the visual art and design disciplines broadly. Undergraduate programs offer scholarly and studio experiences to potential artists, designers, educators, entrepreneurs, museum professionals, and researchers. In-depth instruction is enhanced by the close working relationship between students and faculty, allowing for shared insights and investigations into the creative processes.

## Accreditation

West Virginia University is an accredited institutional member of the National Association of Schools of Art and Design (NASAD) and the School of Art & Design's degree programs are regularly evaluated to ensure they are meeting these national standards. The Fashion Design & Merchandising program is also an affiliate member of the Textile and Apparel Programs Accreditation Commission (TAPAC).

## Global Positioning Studies (GPS)

Global Positioning Studies (GPS) is an interdisciplinary initiative within the School of Art & Design. It positions students at the crossroads between a local sense of place and a global understanding of that place in the world. Through direct experience, GPS courses encourage students to engage the world as a fertile ground for creative making and critical research. GPS courses are open to all majors and BFA Art and Design and BA Art History and Museum Professions majors are required to take at least one GPS-designated course to count toward regular degree requirements.

## International Study Opportunities

Study abroad is strongly encouraged in all of our programs and is required for the BS Interior Architecture major. The School of Art & Design has established excellent international educational programs. These include summer study, short term, and semester-break options. These international programs travel to Chile, China, England, Ireland, France, and Italy. Students should consult with their academic mentor about taking language courses and other liberal studies courses that support international studies.

## Scholarships

The College of Creative Arts and Media offers a limited number of special College-based scholarship awards for in-coming freshman and current students enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and potential success in the Art and Design program.

For more information about financial aid and other University-based scholarships, please visit the WVU Financial Aid website at http://financialaid.wvu.edu/.

For more information about studying at the College of Creative Arts and Media, please contact our Recruitment Office:

Dr. James Froemel, Recruitment Specialist
Phone: (304) 293-4339

Email: JFroemel@mail.wvu.edu

# FACULTY

## DIRECTOR

- Kristina Olson - M.A. (Stony Brook University)
  Art History-Modern and Contemporary

## ASSOCIATE DIRECTOR AND GRADUATE ADVISOR

- Joseph Lupo - M.F.A. (University of Georgia)
  Printmaking

## PROFESSORS

- Jason Lee - M.F.A. (University of Wisconsin-Madison)
  Sculpture, Foundations
- Joseph Lupo - M.F.A. (University of Georgia)
  Printmaking
- Kristina Olson - M.A. (Stony Brook University)
  Art History-Modern and Contemporary
- Michael Sherwin - M.F.A. (University of Oregon)
  Photography, Digital Imaging
- Naijun Zhang - M.F.A. (West Virginia University)
  Painting

## ASSOCIATE PROFESSORS

- Dylan Collins - M.F.A. (Kent State University)
  Sculpture, Drawing, Public Art
- Debanjan Das - Ph.D. (University of Missouri)
  Fashion Design and Merchandising
- Joseph Galbreath - M.F.A. (Maryland Institute College of Art)
  Graphic Design
- Terese Giobbia - Ph.D. (Northern Illinois University)
  Art Education
- Gerald Habarth - M.F.A. (University of South Florida)
  Digital Art, Animation
- J. Chris Haddox - Ph.D. (West Virginia University)
  Design Studies, Sustainable Design
- Katie Baker Jones - Ph.D. (University of Missouri)
  Fashion Design & Merchandising
- Robert Moore - M.F.A. (Utah State University)
  Ceramics, Public Art
- Colleen Moretz - M.F.A. (Marywood University)
  Fashion Design & Merchandising
- Jeffrey Moser - M.F.A. (University of Delaware)
  Game Design, Interactive Media
- Kofi Opoku - M.F.A. (West Virginia University)
  Graphic Design
- Rhonda Reymond - Ph.D. (University of Georgia)
  Art History-American, African American, 17th-19th century European art

## TEACHING ASSOCIATE PROFESSORS

- Heather Cole - M.F.A. (Goddard College)
  Game Design

## ASSISTANT PROFESSORS

- Kent Kerr - M.F.A. (Radford University)
  Graphic Design
- Nicole Kreidler - Ph.D. (Auburn University)
  Interior Architecture
- Angela Uriyo - Ph.D. (University of Missouri)
  Fashion Design & Merchandising

## TEACHING ASSISTANT PROFESSOR

- Rachel Beach - B.A. (University of Charleston)
  Interior Architecture
- Megan Leight - Ph.D. candidate (City University of New York)
  Art History-Ancient, Anthropology, Archaeology, Mesoamerican
- Anne McFarland - Ph.D. (Florida State University)
  Art Therapy, Therapeutic Art
- Elizabeth Shorrock - M.S. (Rhode Island School of Design)
  Fashion Design & Merchandising
- Lianne (Lulu) Williamson - Ph.D. (University of Alaska, Fairbanks)
  Design Studies, Design Thinking

## SERVICE ASSISTANT PROFESSOR

- Heather Harris - Ph.D. (University of Illinois at Urbana-Champaign)
  Museum Professions
- Jason Zeh - M.F.A (University of Kansas)
  Digital Art, Film

## VISITING ASSISTANT PROFESSOR

- Nichole van Beek - M.F.A. (University of California, Santa Barbara)
  Painting, Foundations

## PROFESSORS EMERITI

- Eve Faulkes
  Graphic Design
- William H. Hagerty
  Interior Design
- Alison Helm
  Sculpture
- Nora MacDonald
  Fashion Design & Merchandising
- J. Bernard Schultz
  Art History
- Janet Snyder
  Art History

## ASSOCIATE PROFESSORS EMERITI

- Victoria Fergus
  Art Education
- Lee Mullett
  Interior Architecture
- Janice Yeager
  Fashion Design & Merchandising

# Admissions

## BA AND BS DEGREES

There are no additional entrance requirements for applicants to the Bachelor of Arts programs in Art History and Museum Professions, Art Therapy, and Game Design and Interactive Media. There are no additional entrance requirements for applicants to the Bachelor of Science programs in Design Studies, Fashion Design & Merchandising, and Interior Architecture.

- First-Time Freshmen are admitted directly into the major.
- Students transferring from another major within WVU or from another institution are directly admitted to the major if they are in good academic standing (2.0 or higher GPA) or with departmental approval.

## BS INTERIOR ARCHITECTURE

- Students who have design courses from other institutions and who wish to transfer directly into the second year must submit to the Interior Architecture program coordinator the following: complete transcript, syllabi of design courses, portfolio showing coursework from previous design courses, and completion of the Gateway Project. Admission to the second year is contingent upon available space and evaluation of the submitted materials.

## BFA ENTRANCE PORTFOLIO

All students applying for admission into the BFA Art and Design and BFA Art Education majors must submit a portfolio of work for review in addition to meeting university admission standards. This evaluation is conducted by the art faculty and is designed to ensure that all students entering the studio program have certain basic competencies and skills. Students are encouraged to apply and complete the portfolio review at the earliest possible date. Applicants should contact the College of Creative Arts and Media Recruitment Specialist to receive detailed instructions and portfolio review application material: Dr. James Froemel, Recruitment Specialist, (304) 293-4339, ccarecruitment@mail.wvu.edu.

- BFA Art and Design students transferring from another major within WVU or from another institution must also be in good academic standing (2.0 or higher GPA) or with departmental approval.
- BFA Art Education students transferring from another major within WVU or from another institution must also be in good academic standing and have a 2.5 or higher GPA.
- BFA students who have art and design courses from other institutions must submit syllabi and a portfolio of coursework for review to be considered for major credit.

# Policies


- Advising (p. 478)
- Audit, Credit by Examination, Pass/Fail, and Non-Major Courses (p. 478)
- Grade Point Average (p. 478)
- Student Work (p. 479)
- Materials and Supplies (p. 479)
- Additional Program Standards (p. 479)


## ADVISING

The College of Creative Arts and Media requires all art and design majors to confer each semester with their academic mentor and staff advisor in order to maintain the correct distribution of coursework, to plan schedules for future semesters, and to prepare for graduation. Ultimately, it is the student's responsibility to ensure that all requirements for graduation are met.

## AUDIT, CREDIT BY EXAMINATION, PASS/FAIL, AND NON-MAJOR COURSES

No major courses are available on an audit or credit by examination basis for degree-seeking students. Students enrolled in the School of Art & Design may not take major classes on a pass/fail basis. Courses designated for non-majors may not be substituted for major credit without approval of the program coordinator, or director of the School of Art & Design.

## GRADE POINT AVERAGE

Minimum GPA requirements vary based on major. Consult the major information for individual programs. In addition, students may be requested to present a portfolio of selected works for examination and evaluation by a faculty committee. The committee is empowered to make recommendations regarding the student's status as a major in the School and their continuation toward a degree in art and design.

## STUDENT WORK

Every effort is made to protect student work and property. The School of Art & Design and the College of Creative Arts and Media does not accept responsibility for damage or losses under any circumstances. The School of Art & Design reserves the right to retain examples of student work for reproduction and exhibition purposes and accreditation reviews.

**Materials and Supplies**

The School of Art & Design provides some supplies for course projects. Students will also need to purchase materials for individual or specialized projects.

**Additional Program Standards**

The Art Education major, Graphic Design area of emphasis, and Interior Architecture major have additional requirements for degree standing and progression. Consult the specific information for each major.

# Art and Design, B.F.A.

## Degree Offered

- Bachelor of Fine Arts

## Nature of the Program

This cross-disciplinary studio major is designed to allow students to gain experience in all areas of the visual arts while pursuing a focused Area of Emphasis (AoE choices include: 2D Studio Painting/Photography/Print Media, 3D Studio and Public Art, Digital Art and Animation, and Graphic Design) to prepare them for the visual arts professions or graduate study. Students take a common Studio Foundation Core of basic drawing and visual foundations, five beginning courses of their choice for the Studio Foundation Exploration along with the second introductory course in their Area of Emphasis, a minimum of four courses in art history, 18 hours of intermediate-level courses in their studio Area of Emphasis along with 21 hours of ART or ARHS electives, and a six-hour senior capstone in their studio emphasis. Including the variable 36 hours of General Education Foundation requirements, the major can be completed in 120 hours. Studio courses must be taken sequentially and students are advised to take no more than three studio credits (9 hours) per semester. BFA majors are required to take one GPS (Global Positioning Studies) course as a regular credit and assemble a Writing Portfolio to be eligible for graduation. Students must pass all major courses with a grade of C- or higher.

## GRAPHIC DESIGN PORTFOLIO REVIEW

Students in the Graphic Design area of emphasis must pass a portfolio review following the completion of the Foundation Core and ART 223S Introduction to Graphic Design and ART 224S Graphic Design 2. Students can contact the area coordinator for further information. Those who do not pass the review can transfer their credits into a new Area of Emphasis in the BFA major (such as 2D Studio-Painting/Photography/Print Media or Digital Art and Animation) or may want to consider the BA in Game Design and Interactive Media or the BS in Design Studies.

## Admissions for 2026-2027

The School of Art and Design requires a portfolio review for the Bachelor of Fine Arts program. This evaluation is conducted by the art faculty and is designed to ensure that all students entering the BFA program have certain basic competencies and skills. Students are encouraged to apply and complete the portfolio review at the earliest possible date. Applicants should visit the School website: http://artanddesign.wvu.edu/academics (https://artanddesign.wvu.edu/academics/) or phone the School office at (304) 293-2552 to receive detailed instructions and portfolio review application material. Applicants are to contact the CCA Office of Recruitment at (304) 293-4339 to schedule an audition.

Major Code: 3709

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |

| | |
|---|---|
| F3 - Math & Quantitative Reasoning | 3-4 |
| F4 - Society & Connections | 3 |
| F5 - Human Inquiry & the Past | 3 |
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 36 |
| School of Art and Design Program Requirements | | 30 |
| Art and Design Major Requirements | | 54 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 7, and 8 | | 28 |
| ART 191 | First-Year Seminar | 2 |
| General Electives | | 6 |
| Total Hours | | 36 |

## School of Art and Design Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all ART and ARHS courses. | | |
| ARHS 120 | Survey of Art History 1 (GEF 6) | 3 |
| ARHS 160 | Survey of Art History 2 (GEF 8) | 3 |
| **Studio Foundation Core** | | |
| ART 111S | Drawing 1 | 3 |
| ART 121S | Visual Foundations 1 | 3 |
| ART 122S | Visual Foundations 2 | 3 |
| **Studio Foundation Exploration** | | |
| Select five of the following: * | | 15 |
| ART 213S | Painting 1 | |
| ART 223S | Introduction to Graphic Design | |
| ART 226S | Introduction to Sculpture | |
| ART 230S | Printmaking - Intaglio and Relief | |
| ART 232S | Photography 1 | |
| ART 235S | Introduction to Silkscreen | |
| ART 240S | Ceramics | |
| ART 270S | Introduction to Electronic Media 1 | |
| ART 273S | Beginning 3D Animation | |
| Global Positioning Studies (GPS) Requirement ** | | |
| Writing Portfolio Requirement *** | | |
| Total Hours | | 30 |

*

For students enrolled in the Area of Emphasis in Graphic Design, three-hours must include ART 232S.

**

Global Positioning Studies (GPS) is an interdisciplinary visual arts initiative within the School of Art and Design. It positions students at the crossroads between a local sense of place and a global understanding of that place in the world. Through direct experience, GPS courses encourage students to engage the world as a fertile ground for art making and critical research. BFA Art and Design majors are required to take at least one GPS-designated course to count toward degree requirements. See course details at artanddesign.wvu.edu/gps.

***

The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their ART and ARHS courses.

## Art and Design Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all ARHS and ART courses. | | |
| ARHS at the 200/300/400 Level * | | 6 |
| ART 200 Level (Dependent on Area of Emphasis) ** | | |
| Select one of the following: | | 3 |
| ART 214S | Painting 2 | |
| ART 224S | Graphic Design 2 | |
| ART 227S | Sculpture | |
| ART 231S | Printmaking - Lithography | |
| ART 234S | Photography 2 | |
| ART 241S | Ceramics | |
| ART 271S | Introduction to Electronic Media 2 | |
| ART or ARHS at the 200/300/400 Level *** | | 21 |
| **ART Senior Capstone** | | **6** |
| ART 413S | Senior Projects in Painting | |
| ART 425S | Graphic Design: Senior Project | |
| ART 426S | Senior Projects in Sculpture | |
| ART 430S | Senior Projects in Printmaking | |
| ART 435S | Senior Projects in Photography | |
| ART 440S | Senior Projects in Ceramics | |
| ART 470S | Senior Projects in Intermedia | |
| **Studio Area of Emphasis** | | **18** |
| 2D Studio Painting, Photography, and Print Media | | |
| 3D Studio and Public Art | | |
| Digital Art and Animation | | |
| Graphic Design | | |
| Total Hours | | 54 |

*

Excludes ARHS 411, ARHS 412, ARHS 413 and ARHS 414. For students enrolled in the Area of Emphasis in Graphic Design, three-hours must include ARHS 406.

**

Must be second 200-level ART course in Area of Emphasis.

***

For students enrolled in the Area of Emphasis in Graphic Design, three-hours must include ART 234S.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 191 | | 2 ART Foundations Exploration | 3 |
| ART 111S | | 3 ART Foundations Exploration | 3 |
| ART 121S | | 3 ARHS 160 (GEF 8) | 3 |

| | | | |
|---|---|---|---|
| ART 122S | | 3 GEF 2A or 2B | 3 |
| ARHS 120 (GEF 6) | | 3 GEF 4 | 3 |
| ENGL 101 | | 3 | |
| | | 17 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART Foundations Exploration | | 3 ART Foundations Exploration | 3 |
| ART Foundations Exploration | | 3 ART Studio Major Area 2 | 3 |
| ARHS 200/300/400 Level | | 3 ART/ARHS 200+ Studio Elective | 3 |
| GEF 5 | | 3 GEF 3 | 3 |
| ENGL 102 (GEF 1) | | 3 ARHS 200+ | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 300 Level (AOE) | | 6 ART 300 Level (AOE) | 6 |
| GEF 2A or Elective | | 3 ART or ARHS 200+ Studio Elective | 6 |
| GEF 7 | | 3 Elective | 4 |
| | | 12 | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 300 Level (AOE) | | 6 Senior Project | 6 |
| ART or ARHS 200/300/400 Level | | 6 ART or ARHS 200/300/400 Level | 6 |
| GEF 8 | | 3 GEF 8 | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Areas of Emphasis

- 2D Studio Painting, Photography, Print Media (p. 482)
- 3D Studio and Public Art (p. 482)
- Digital Art and Animation (p. 483)
- Graphic Design (p. 483)

## 2D Studio Painting, Photography, Print Media Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| **Art 300-level Studio Emphasis Area** | | **18** |
| ART 313S | Painting 3 | |
| or ART 330S | Printmaking | |
| or ART 331 | GPS-Jackson Hole Photography Workshop | |
| or ART 332S | Intermediate Photography | |
| or ART 333S | Alternative Photography | |
| or ART 335S | Advanced Photography | |
| Total Hours | | 18 |

## 3D Studio and Public Art Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| **Art 300-level Studio Emphasis Area** | | **18** |
| ART 326S | Sculpture | |
| or ART 340S | Ceramics | |
| or ART 341S | Ceramic Production Methods | |
| Total Hours | | 18 |

## Digital Art and Animation

| Code | Title | Hours |
|---|---|---|
| Minimum grade of C- or higher for all ART and ARHS courses required. | | |
| Art 300-level Studio Emphasis Area | | 18 |
| ART 370S | Intermediate Electronic Media | |
| or ART 371S | Interactive Art | |
| or ART 372S | Interactive Design | |
| Total Hours | | 18 |

## Graphic Design Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| ART 323S | Graphic Design 3 | 6 |
| ART 324S | Graphic Design 4 | 6 |
| or ART 425S | Graphic Design: Senior Project | |
| ART 328S | Advanced Typography | 3 |
| ART 337S | Design for Web and Screen | 3 |
| Total Hours | | 18 |

## Major Learning Outcomes

### ART AND DESIGN

Students graduating from the BFA Art and Design program will be able to:

- Understand basic principles of two- and three-dimensional design, color, concepts, media and formats, and demonstrate the ability to apply them to a specific aesthetic and conceptual intent.
- Explore the expressive possibilities of various media, and the diverse conceptual modes available to the visual artist.
- Have a functional knowledge of the diverse histories, traditions, conventions, and evolution of the visual arts in a global context.
- Demonstrate advanced knowledge and skills in the use of essential tools, techniques, and processes sufficient to work from concept to finished product in a studio area of emphasis.
- Present compositional principles and conceptual ideas from visual work effectively in oral and written forms.

# Art Education, B.F.A.

## Degree Offered

- Bachelor of Fine Arts

## Nature of the Program

This professional-track, BFA program in Art Education allows students to earn teacher certification for PreK-21 while mastering a studio Area of Emphasis within the fine arts curriculum.  Degree requirements are designed by the West Virginia Department of Education and WVU. Students need to plan to take a full course load every semester and closely follow the plan of study to complete studio coursework, education requirements, and student teaching hours within four years. Studio and art education courses must be taken sequentially and students are advised to take no more than three studio credits (9 hours) per semester. Art Education majors must maintain a 2.5 GPA, pass the PRAXIS ART CONTENT exam no later than the semester before taking ART 491D for their teaching placement, and assemble a Writing Portfolio to be eligible for graduation.

## Admissions for 2026-2027

### BFA ENTRANCE PORTFOLIO

Students must meet all WVU Undergraduate Admissions entrance requirements. The School of Art and Design requires a portfolio review for all applicants to the Bachelor of Fine Arts programs including the Art Education major.  This evaluation is conducted by the art faculty and is designed to ensure that all students entering the studio program have certain basic competencies and skills.  Students are encouraged to apply and complete the portfolio review at the earliest possible date.  Applicants should visit the School website:  http://artanddesign.wvu.edu/academics (http://artanddesign.wvu.edu/academics/) or phone the School office at (304) 293-2552 to receive detailed instructions and portfolio review application material. Applicants are to contact the CCA Office of Recruitment at (304) 293-4339 to schedule an audition.

## TRANSFER

Transfer applicants in studio art must undergo a portfolio review to gain admittance in the program. Evaluation for advanced standing or transfer credit in studio subjects is not made solely upon the presentation of a transcript but may also depend on the evaluation of a portfolio of artwork. Transfer applicants to the Art Education major must have a GPA of 2.5.

Major Code: 3710

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## B.F.A. with Teacher Certification Curriculum

Students wishing certification to teach PreK–adult in West Virginia must complete competency requirements established by the state in addition to School of Art and Design B.F.A. Art Education degree requirements. Admission to the teacher certification program requires a 2.5 GPA overall.

The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a Writing Portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses. Please contact your advisor for more information.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 27 |
| School of Art and Design Program Requirements | | 30 |
| Art Education Major Requirements | | 73 |
| Total Hours | | 130 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 7, and 8 | | 25 |
| ART 191 | First-Year Seminar | 2 |
| Total Hours | | 27 |

## School of Art and Design Program Requirements

| Code | Title | Hours |
|---|---|---|
| A grade of C- or higher required in all ART and ARHS courses in the program requirements. | | |
| ARHS 120 | Survey of Art History 1 (May fulfill GEF 6) | 3 |
| ARHS 160 | Survey of Art History 2 (May fulfill GEF 8) | 3 |
| **Studio Foundation Core** | | |
| ART 111S | Drawing 1 | 3 |
| ART 121S | Visual Foundations 1 | 3 |
| ART 122S | Visual Foundations 2 | 3 |
| **Studio Foundation Exploration** | | |
| Select five of the following: * | | 15 |
| ART 213S | Painting 1 | |
| ART 223S | Introduction to Graphic Design | |
| ART 226S | Introduction to Sculpture | |
| ART 230S | Printmaking - Intaglio and Relief | |
| ART 232S | Photography 1 | |
| ART 235S | Introduction to Silkscreen | |
| ART 240S | Ceramics | |
| ART 270S | Introduction to Electronic Media 1 | |
| ART 273S | Beginning 3D Animation | |
| Writing Portfolio Requirement ** | | |
| Total Hours | | 30 |

*

For students enrolled in the Area of Emphasis in Graphic Design, three-hours must include ART 232S.

**

Please see your advisor for details on this requirement.

## Art Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| A grade of C- or higher required in all ART and ARHS courses in the major requirements. | | |
| ARHS at the 200/300/400 Level * | | 3 |
| ART 200 Level (Dependent on Area of Emphasis) | | 3 |
| Select one of the following: | | |
| ART 214S | Painting 2 | |
| ART 224S | Graphic Design 2 | |
| ART 227S | Sculpture | |
| ART 231S | Printmaking - Lithography | |
| ART 234S | Photography 2 | |
| ART 241S | Ceramics | |
| ART 271S | Introduction to Electronic Media 2 | |
| **Art Education** | | |
| ART 264 | Introduction to Art Education | 3 |
| ART 365 | Art Education Elementary | 3 |
| ART 366 | Art Education: Secondary | 3 |
| ART 367 | Technology Methods in Art Education | 3 |
| **Education** | | |
| EDP 301 | Learning in PreK-Adult Educational Settings | 3 |
| SPED 404 | Special Education in Contemporary Society (GEF 4) | 3 |
| SPED 460 | Differentiation of Instruction | 3 |
| ARHS 389 | Contemporary | 3 |
| **Professional Practice (Student Teaching)** | | |

| | | |
|---|---|---|
| ART 489 | Residency 1 | 4 |
| ART 491D | Professional Field Experience *** | 15 |
| **ART Senior Capstone** | | **6** |
| ART 413S | Senior Projects in Painting | |
| ART 425S | Graphic Design: Senior Project | |
| ART 426S | Senior Projects in Sculpture | |
| ART 430S | Senior Projects in Printmaking | |
| ART 435S | Senior Projects in Photography | |
| ART 440S | Senior Projects in Ceramics | |
| ART 470S | Senior Projects in Intermedia | |
| **Studio Area of Emphasis** | | **18** |
| 2D Studio Painting, Photography, Print Media | | |
| Graphic Design ** | | |
| 3D Studio and Public Art | | |
| Digital Art and Animation | | |
| PRAXIS CONTENT - Must be completed before enrolling in ART 491D. *** | | |
| Total Hours | | 73 |

*****

Excludes ARHS 411, ARHS 412 AND ARHS 414. For students enrolled in the Area of Emphasis in Graphic Design, three-hours must include ARHS 406.

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Students enrolled in the Area of Emphasis in Graphic Design must complete ART 234S.

*******

PRAXIS Content - Must be successfully completed before enrolling in ART 491D.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | GEF 2 | 4 |
| ART 111S | 3 | ART 2XX Studio Studio Emphasis AOE | 3 |
| ART 121S | 3 | Foundations Exploration | 3 |
| ART 122S | 3 | Foundations Exploration | 3 |
| ARHS 120 (GEF 6) | 3 | ARHS 160 (GEF 8) | 3 |
| ART 191 | 2 | | |
| | 17 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 2nd Studio Emphasis | 3 | ART 264 | 3 |
| Foundations Exploration | 3 | ARHS 389 | 3 |
| Foundations Exploration | 3 | Area of Emphasis Course | 6 |
| ARHS 200+ | 3 | EDP 301 | 3 |
| GEF 3 | 3 | GEF 8 | 3 |
| ENGL 102 (GEF 1) | 3 | | |
| | 18 | | 18 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 365 | 3 | ART 366 | 3 |
| SPED 404 (GEF 4) | 3 | GEF 5 | 3 |
| Area of Emphasis Course | 6 | Area of Emphasis Course | 6 |
| GEF 8 | 3 | GEF 7 | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 489 | | 4 ART 491D | 15 |
| SPED 460 | | 3 | |
| Senior Project | | 6 | |
| ART 367 | | 3 | |
| | | 16 | 15 |

Total credit hours: 130

## Areas of Emphasis

- 2D Studio Painting, Photography, Print Media (p. 487)
- 3D Studio and Public Art (p. 487)
- Digital Art and Animation (p. 487)
- Graphic Design (p. 487)

## 2D Studio Painting, Photography, Print Media Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| **Art 300-level Studio Emphasis Area** | | **18** |
| ART 313S | Painting 3 | |
| or ART 330S | Printmaking | |
| or ART 331 | GPS-Jackson Hole Photography Workshop | |
| or ART 332S | Intermediate Photography | |
| or ART 333S | Alternative Photography | |
| or ART 335S | Advanced Photography | |
| Total Hours | | 18 |

## 3D Studio and Public Art Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| **Art 300-level Studio Emphasis Area** | | **18** |
| ART 326S | Sculpture | |
| or ART 340S | Ceramics | |
| or ART 341S | Ceramic Production Methods | |
| Total Hours | | 18 |

## Digital Art and Animation

| Code | Title | Hours |
|---|---|---|
| Minimum grade of C- or higher for all ART and ARHS courses required. | | |
| Art 300-level Studio Emphasis Area | | 18 |
| ART 370S | Intermediate Electronic Media | |
| or ART 371S | Interactive Art | |
| or ART 372S | Interactive Design | |
| Total Hours | | 18 |

## Graphic Design Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| ART 323S | Graphic Design 3 | 6 |
| ART 324S | Graphic Design 4 | 6 |
| or ART 425S | Graphic Design: Senior Project | |
| ART 328S | Advanced Typography | 3 |

| | | |
|---|---|---|
| ART 337S | Design for Web and Screen | 3 |
| Total Hours | | 18 |

# Major Learning Outcomes

## ART EDUCATION

The Bachelor of Fine Arts (B.F.A.) is a professional degree with an intensive focus on an area of the Arts supported by a program in general studies. The intent of the B.F.A. is to prepare for professional practice in the area of the degree.

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.

Additional specific goals related to the art education major:

- Studio Art-The prospective art teacher must be familiar with the basic expressive, technical, procedural and organizational skills, and conceptual insights which can be developed through studio art and design experiences.
- Art History and Analysis-The prospective art teacher must have an understanding of: (1) The major styles and periods of art history, analytical methods, and theories of criticism. (2) The development of past and contemporary art forms. (3) Contending philosophies of art. (4) The fundamental and integral relationships of all these to the making of art.
- Teaching Competencies-The artist-teacher must be able to connect an understanding of educational processes and structures with an understanding of relationships among the arts, sciences, and humanities, in order to apply art competencies in teaching situations and to integrate art/design instruction into the total process of education. Specific competencies include:

  a. An understanding of child development and the identification and understanding of psychological principles of learning as they relate to art education.

  b. An understanding of the philosophical and social foundation underlying art in education and the ability to express a rationale for personal attitudes and beliefs.

  c. Ability to assess aptitudes, experiential backgrounds, and interests of individuals and groups of students, and to devise learning experiences to meet assessed needs.

  d. Knowledge of current methods and materials available in all fields and levels of art education.

  e. Basic understanding of the principles and methods of developing curricula and the short- and long-term instructional units that comprise them.

  f. The ability to accept, amend, or reject methods and materials based on personal assessment of specific teaching situations.

  g. An understanding of evaluative techniques and the ability to apply them in assessing both the progress of students and the objectives and procedures of the curriculum.

  h. Ability to organize continuing study and to incorporate knowledge gained into self-evaluation and professional growth.

# Policies

Art Education majors must:

- maintain a 2.5 or higher GPA,
- earn a C- or higher in all ART and ARHS courses,
- complete 125 clinical observation hours prior to their fourth year of enrollment to obtain a student teaching permit, as mandated by the State of WV Department of Education; students can discuss details regarding steps to attain these observation hours with the coordinator of the Art Education program,
- pass the PRAXIS ART CONTENT exam no later than the semester before taking ART 491D for their teaching placement, and
- assemble a Writing Portfolio to be eligible for graduation.

# Art History and Museum Professions, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The BA in Art History and Museum Professions provides a foundation in the history of art and architecture in a global context while introducing students to the range of museum professions and collection care and management. Students gain hands-on experience at the Art Museum of WVU and have access to four other campus museums. Majors have the option to take a series of technical art history courses to prepare them for further study in art conservation. Additionally, students can choose to earn their BA Art History and Museum Professions degree with a JD in Law in six years in an accelerated program. Students are required to take one Global Positioning Studies (GPS) place-based study course, such as *Disegno Italia*, San Gemini Preservation Studies in Italy, or 19th Century Painting and Photography in France. These GPS courses fulfill a regular degree requirement (see more information and a complete list of courses on the School web page).

## LANGUAGE REQUIREMENT

BA Art History and Museum Professions students are required to demonstrate adequate mastery of a second language to meet accreditation standards. This can be accomplished through a variety of language options that may or may not involve credit hours. Students should consult with their faculty mentor about appropriate options.

## Admissions for 2026-2027

Students must meet the requirements for University admission. There are no additional entrance requirements (e.g., portfolio review) for the Bachelor of Arts programs in Art History and Museum Professions, Art Therapy, and Game Design and Interactive Media.

A research paper is recommended for applicants seeking scholarship consideration by the Art History and Museum Professions program.

For further information, please consult the College's website or call the College's Recruitment Office at (304) 293-4339. Applicants can also visit the School of Art and Design's website or phone the School office at (304) 293-2552.

Major Code: 3752

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 51 |
| School of Art and Design Requirements | | 6 |
| Art History Major Requirements | | 63 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, and 5 | | 19 |
| ART 191 | First-Year Seminar | 2 |
| General Electives | | 30 |
| Total Hours | | 51 |

## School of Art and Design Requirements

| Code | Title | Hours |
|---|---|---|
| **A grade of C- or higher required in all ART and ARHS courses in the program requirements.** | | |
| ARHS 120 | Survey of Art History 1 (may fulfill GEF 6) | 3 |
| ARHS 160 | Survey of Art History 2 (may fulfill GEF 8) | 3 |
| Global Positioning Studies (GPS) Requirement * | | |
| Writing Portfolio Requirement ** | | |
| Total Hours | | 6 |

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Global Positioning Studies (GPS) Requirement - At least one ART or ARHS course must fulfill the GPS requirement.

******

The School of Art and Design values and supports written communication abilities and critical thinking skills developed through iterative writing experiences across the curriculum and within the discipline. To meet this goal students must pass with a B- or better a writing portfolio requirement that includes examples of academic, professional, and reflective writing they have produced in their regular courses.  Please contact your advisor for more information.

## Art History Major Requirements

| Code | Title | Hours |
|---|---|---|
| **A grade of C- or higher required in all ART and ARHS courses in the major requirements.** | | |
| Studio (Any ART course) | | 6 |
| **Art History & Museum Professions: Restricted Electives I-IV** | | |
| I: Prehistory to 1300: Select 1 from the following | | 3 |
| ARHS 304 | Asian Art | |
| ARHS 320 | Greek and Roman | |
| ARHS 321 | Ancient Greek Art and Architecture | |
| ARHS 325 | Ancient Roman Art and Architecture | |
| ARHS 331 | Medieval | |
| ARHS 333 | Medieval Architecture | |
| II: 1300-1750: Select 1 from the following | | 3 |
| ARHS 350 | Northern Renaissance | |
| ARHS 354 | Italian Renaissance | |
| ARHS 360 | Baroque | |
| ARHS Semester in Italy | | |
| III: 1750-Present: Select 1 from the following | | 3 |
| ARHS 370 | American | |
| ARHS 375 | Nineteenth Century | |

| | | |
|---|---|---|
| ARHS 380 | Modern | |
| ARHS 381 | Modern Architecture | |
| ARHS 389 | Contemporary | |
| IV: Museums Professions: Select 2 from the following | | 6 |
| ARHS 310 | Introduction to Curatorial Practices | |
| ARHS 317 | Gallery Studies | |
| ARHS 411 | Conservation Practices: Digital Documentation, Treatment, Condition Assessment | |
| ARHS 412 | Collections Care and Preservation of Material Objects | |
| ARHS 413 | Material Objects Investigations 1 (2-D) | |
| ARHS 414 | Material Objects Investigation 2 (3-D) | |
| ARHS 491: Professional Field Experience (may take for 3 CR HRS as Practicum/Lab beyond Required 3 CR HRS) | | |
| San Gemini, Italy GPS (co-requisite courses) | | |
| ARHS 421 | Professional Field Experience: Analysis of Archaeological Ceramics | |
| ARHS 422 | Professional Field Experience: Restoration of Archaeological Ceramics | |
| ARHS 451 | Professional Field Experience: Introduction to the History and Craft of Book Bindings | |
| ARHS 452 | Professional Field Experience: Intro to Preservation and Preventive Conservation of Books | |
| ARHS 453 | Professional Field Experience: Restoration of Traditional Masonry Buildings in Italy | |
| ARHS 454 | Professional Field Experience: Sketching and Analyzing Historic Buildings in Italy | |
| ARHS 455 | Professional Field Experience: Paper Media and Restoration Methods for Artworks | |
| ARHS 456 | Professional Field Experience:Handwritten & Printed Archival Materials Restoration Methods | |
| ARHS 457 | Professional Field Experience:Traditional Painting Materials, Methods, &Restoration Issues | |
| ARHS 458 | Professional Field Experience: Traditional Painting Workshop | |
| ARHS 459 | Professional Field Experience: Restoration: Theory, Ethics, and Issues | |
| ARHS 300/400-level Electives from ARHS I, II, III | | 12 |
| **Art History & Museum Professions Required Courses** | | |
| ARHS 240 | Research, Writing, & Methods in Art History *** | 3 |
| ARHS 345 | Modern Art Theory | 3 |
| ARHS 401 | Senior Project-Capstone | 3 |
| ARHS 311 | Museums and Society | 3 |
| ARHS 312 | Museums in Action | 3 |
| ARHS 491 | Professional Field Experience | 3 |
| Foreign Language Requirement **** | | 0-12 |
| Total Hours | | 63 |

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ARHS 240 fulfills writing requirement

****

The foreign language requirement typically completes GEF areas 7 and 8. Cognate: Language other than English for reading knowledge (NASAD Required, "adequate mastery" of 0-12 CR HRS).

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Studio Arts | 3 | GEF 3 | 3 |
| ARHS 120 (GEF 6) | 3 | ARHS 160 | 3 |
| Foreign Language (GEF 7) | 3 | Foreign Language (GEF 8) | 3 |
| ENGL 101 (GEF 1) | 3 | General Elective | 3 |
| ART 191 (University Requirement) | 2 | GEF 2 | 4 |
| GEF 4 | 3 | | |
| | 17 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARHS 240 | 3 | ARHS I | 3 |

| | | | |
|---|---|---|---|
| Foreign Language (GEF 8) | | 3 Foreign Language (GEF 8) | 3 |
| ENGL 102 (GEF 1) | | 3 ARHS 312 | 3 |
| ARHS 311 | | 3 ARHS I-III 300/400 Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARHS 345 | | 3 ARHS III | 3 |
| ARHS IV | | 3 ARHS IV | 3 |
| ARHS II | | 3 GEF 5 | 3 |
| General Elective | | 3 ARHS I-III 300/400 Elective | 3 |
| Studio Art | | 3 General Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARHS I-III 300/400 Elective | | 3 ARHS 491 | 3 |
| ARHS I-III 300/400 Elective | | 3 ARHS 401 | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 | |
| | | 15 | 12 |

Total credit hours: 120

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 36 |
| School of Art and Design Requirements | | 6 |
| Art History Major Requirements | | 48 |
| Law Requirements | | 30 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, and 5 | | 19 |
| ART 191 | First-Year Seminar | 2 |
| General Electives | | 15 |
| Total Hours | | 36 |

## School of Art and Design Requirements

| Code | Title | Hours |
|---|---|---|
| ARHS 120 | Survey of Art History 1 | 3 |
| ARHS 160 | Survey of Art History 2 | 3 |
| Total Hours | | 6 |

## Art History Major Requirements

| Code | Title | Hours |
|---|---|---|
| **A grade of C- or higher required in all ART and ARHS courses in the major requirements.** | | |
| Studio (Any ART course) | | 6 |
| Art History Core | | |
| Prehistory to 1300: Select 1 from the following | | 3 |

| | | |
|---|---|---|
| ARHS 320 | Greek and Roman | |
| ARHS 325 | Ancient Roman Art and Architecture | |
| ARHS 331 | Medieval | |
| ARHS 333 | Medieval Architecture | |
| 1300-1750: Select 1 from the following | | 3 |
| ARHS 350 | Northern Renaissance | |
| ARHS 354 | Italian Renaissance | |
| ARHS 360 | Baroque | |
| ARHS Semester in Italy | | |
| 1750-Present: Select 1 from the following | | 3 |
| ARHS 370 | American | |
| ARHS 375 | Nineteenth Century | |
| ARHS 380 | Modern | |
| ARHS 381 | Modern Architecture | |
| ARHS 389 | Contemporary | |
| Art History Major Courses | | |
| ARHS 240 | Research, Writing, & Methods in Art History | 3 |
| ARHS 345 | Modern Art Theory | 3 |
| ARHS 494 | Seminar | 3 |
| ARHS 401 | Senior Project-Capstone | 3 |
| ARHS 300/400 level (excluding Special Topics courses) | | 9 |
| Foreign Language (fulfills GEFs 7 and 8) | | 12 |
| Total Hours | | 48 |

## Doctor of Jurisprudence Requirements

| Code | Title | Hours |
|---|---|---|
| LAW 641 | Introduction to Legal Research | 1 |
| LAW 675 | Introduction to the Profession | 1 |
| LAW 686 | Civil Procedure | 4 |
| LAW 700 | Legal Analysis, Research and Writing 1 | 3 |
| LAW 703 | Contracts 1 | 4 |
| LAW 705 | Criminal Law | 3 |
| LAW 707 | Property | 4 |
| LAW 709 | Torts 1 | 4 |
| LAW 711 | Legal Analysis, Research and Writing 2 | 2 |
| LAW 725 | Constitutional Law 1 | 4 |
| Total Hours | | 30 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 191 | | 2 ENGL 102 (GEF 1) | 3 |
| ARHS 120 (GEF 6) | | 3 ARHS 160 (GEF 8) | 3 |
| ENGL 101 (GEF 1) | | 3 ARHS 312 | 3 |
| Studio Art Course | | 3 Language Course 102 | 3 |
| Language Course 101 (GEF 7) | | 3 GEF 2A/B, F3, F4, or F5 | 3-4 |
| GEF F3, F4, or F5 | | 3 | |
| | | 17 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARHS 240 | | 3 ARHS Restricted Electives | 3 |
| ARHS 311 | | 3 ARHS Restricted Electives | 3 |

| | | | |
|---|---|---|---|
| Studio Art Course | | 3 ARHS Restricted Electives | 3 |
| GEF 8 | | 3 ARHS Restricted Electives | 3 |
| Language Course 203 | | 3 GEF 2A/B, F3, F4, or F5 | 3-4 |
| | | 15 | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARHS 345 | | 3 ARHS 401 | 3 |
| ARHS Restricted Electives | | 3 ARHS Restricted Electives | 3 |
| ARHS Restricted Electives | | 3 ARHS Restricted Electives | 3 |
| ARHS Restricted Electives | | 3 GEF 2A/B, F3, F4, or F5 | 3-4 |
| GEF 8 | | 3 | |
| | | 15 | 12 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| LAW 641 | | 1 LAW 675 | 1 |
| LAW 686 | | 4 LAW 703 | 4 |
| LAW 700 | | 3 LAW 707 | 4 |
| LAW 705 | | 3 LAW 711 | 2 |
| LAW 709 | | 4 LAW 725 | 4 |
| | | 15 | 15 |

Total credit hours: 120

Once accepted to the College of Law, students will complete all of the requirements of the Doctor of Jurisprudence degree (http://catalog.wvu.edu/graduate/law/academic_policies_and_procedures/academic_programs/jd/#majortext) as are in effect when the student begins at the College of Law. The classes taken during the first year at the College of Law will count toward both the student's undergraduate degree and Doctor of Jurisprudence degree. During their second and third years at the College of Law, students shall be responsible for fulfilling all of the other requirements in order to graduate with the Doctor of Jurisprudence as in effect when the student began at the College of Law. Students should communicate with their undergraduate program during their 4th year of undergraduate/1st year of law school to coordinate graduating with their undergraduate degree in the August following the completion of their first year of law classes.

## Major Learning Outcomes

### ART HISTORY AND MUSEUM PROFESSIONS

Students graduating with a BA in Art History and Museum Professions will:

- Demonstrate visual literacy by visually analyzing objects, art, and images and situating them within applicable contexts.
- Demonstrate a general knowledge of representative monuments and artists of all major art periods of the past, including a broad understanding of the art of the contemporary and modern periods and global cultures, augmented by developing more in-depth competencies and knowledge across a broad geographical and temporal range of cultures and periods in art history.
- Analyze and evaluate the roles: of museums in society, that objects play in society; of patrons and collectors; of sites of exhibition and display; of the interplay of ethical issues.
- Communicate complex information clearly and effectively in writing, speaking, and public presentations adapted to different audiences.
- Produce research applying problem-solving skills in locating, evaluating, and synthesizing primary and secondary sources, and developing interpretations and thesis-driven arguments using properly documented evidence.
- Apply theory and critical thinking skills to generate original ideas.

# Art Therapy, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The undergraduate Bachelor of Arts degree in Art Therapy provides students with foundational skills and preparation for graduate work in the high-demand field of art therapy. Students are reminded that the minimum educational requirement to become a licensed art therapist is a Master's degree in art therapy. This BA program allows students to explore a variety of psychology, counseling, and therapeutic artmaking coursework necessary for continued education in the field of art therapy. Students are required to complete a minor in Human Services which affords them the opportunity to learn valuable interpersonal skills and engage in community-based art practice. They must also maintain a GPA of 2.75 or higher to continue in the program and pass all required ART, ARHS, COUN, and PSYC courses with a grade of C- or higher.

## Admissions for 2026-2027

Students must meet the requirements for University admission. There are no additional entrance requirements (e.g., portfolio review) for the Bachelor of Arts programs in Art History and Museum Professions, Art Therapy, or Game Design and Interactive Media.

A portfolio review is recommended for applicants seeking scholarship consideration into the Art Therapy program.

For further information, please consult the College's website or call the College's Recruitment Office at (304) 293-4339. Applicants can also visit the School of Art and Design's website or phone the School office at (304) 293-2552.

Major Code: 3702

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| Students must maintain a minimum GPA of 2.75. | | |
| Students must pass all ART, ARHS, COUN, and PSYC classes with a grade of "C-" or higher. | | |
| **GEF Requirements (1, 2, 3 and 5)** | | **18** |
| ART 191 | First-Year Seminar | 2 |
| **Required Art Studio Coursework** | | |
| ART 111S | Drawing 1 | 3 |
| ART 121S | Visual Foundations 1 | 3 |
| ART 122S | Visual Foundations 2 | 3 |
| ART 213S | Painting 1 | 3 |
| ART 240S | Ceramics | 3 |
| **Additional 200-level Studio Art Course** | | **3** |

| | | |
|---|---|---|
| Select one of the following: | | |
| ART 112S | Drawing 2 | |
| ART 211S | Figure Drawing | |
| ART 212S | Visual Foundations 3 | |
| ART 223S | Introduction to Graphic Design | |
| ART 226S | Introduction to Sculpture | |
| ART 230S | Printmaking - Intaglio and Relief | |
| ART 232S | Photography 1 | |
| ART 241S | Ceramics | |
| ARHS 120 | Survey of Art History 1 (GEF 6) | 3 |
| ARHS 160 | Survey of Art History 2 | 3 |
| ARHS 240 | Research, Writing, & Methods in Art History | 3 |
| ART 410 | Introduction to Visual Arts Therapy | 3 |
| ART 411 | Theory of Art Education & Art Therapy | 3 |
| ART 412 | Art Methods/Materials for Special Populations | 3 |
| ART 420 | Advanced Problems in Art-Making | 3 |
| ART 422 | Art Therapy Media & Materials | 3 |
| **Required Psychology Coursework** | | |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| PSYC 241 | Introduction to Human Development | 3 |
| PSYC 281 | Introduction to Psychological Disorders (GEF 7) | 3 |
| One Additional 200- or 300-level PSYC Course | | 3 |
| **Human Services Minor** | | **15** |
| **Capstone Coursework** | | |
| ART 445 | Senior Capstone | 3 |
| **General Electives** | | **28** |
| Total Hours | | 120 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 101 (GEF 4) | 3 | ENGL 102 (GEF 1) | 3 |
| ENGL 101 (GEF 1) | 3 | ART 122S | 3 |
| ART 121S | 3 | ARHS 120 (GEF 6) | 3 |
| ART 191 | 2 | GEF 5 | 3 |
| General Elective | 3 | PSYC 281 (GEF 7) | 3 |
| | 14 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 3 | 3 | COUN 400 | 3 |
| COUN 303 | 3 | ARHS 160 | 3 |
| GEF 2 | 3 | PSYC 241 | 3 |
| ART 111S | 3 | GEF 2 | 3 |
| General Elective | 4 | General Elective | 3 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ARHS 240 | 3 | ART 411 | 3 |
| ART 240S | 3 | COUN 301 | 3 |
| ART 410 | 3 | PSYC 300+ Elective | 3 |
| ART 213S | 3 | General Elective | 3 |

| | | | |
|---|---|---|---|
| Additional Studio Art Course | | 3 General Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 412 | | 3 ART 420 | 3 |
| COUN 405 | | 3 COUN 415 | 3 |
| ART 445 | | 3 ART 422 | 3 |
| General Elective | | 3 General Elective | 3 |
| General Elective | | 3 General Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Major Learning Outcomes

### ART THERAPY

At the end of this program, students will be able to:

- Construct a personal art making philosophy that analyzes individual strengths and skills.
- Develop strong communication and interpersonal skills through engagement in studio art, art therapy, psychology, and human service coursework
- Describe and define primary principles of visual art therapy modalities and the roles of visual art therapists in human service professions.
- Demonstrate proficiency in a variety of studio art methods, materials, and practices necessary for careers in art therapy, community arts programs, and human services professions.
- Cultivate social and emotional learning (SEL) instructional methods into artmaking practices in order to address physical, social-emotional, behavioral, and mental health needs of students, clients, and local communities.
- Complete prerequisite coursework (as defined by the American Art Therapy Association) for admission to graduate school art therapy programs.

# Design Studies, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The BS Design Studies program provides the opportunity for cross-disciplinary study by pairing design thinking and design process courses with an approved minor or approved area of concentration of the student's choice. Students meet with their faculty mentor and academic advisor upon entering the program to determine a plan of study for their major.  Students must participate in a minimum of three credit hours of professional field experience. Professional field experience is allowed only after completion of a minimum of 50% of the minor coursework, completion of the required third-year design studies coursework, and typically occurs during the summer between the student's third and fourth years. Students must maintain an overall GPA of 2.0 or higher.

## Admissions for 2026-2027

- First-Time Freshmen are admitted directly into the major.
- Students transferring from another major within WVU are directly admitted to the major if they are in good academic standing (2.0 overall GPA) or with departmental approval.
- Students transferring from another institution are directly admitted to the major if they are in good academic standing (2.0 overall GPA) or with departmental approval.

Major Code: 3719

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 63 |
| Design Studies Major Requirements | | 57 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 | | |
| Outstanding GEF Requirements 1, 2, 3, 5, and 6 | | 19 |
| ART 191 | First-Year Seminar | 2 |
| General Electives | | 42 |
| Total Hours | | 63 |

## Design Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| **A minimum grade of C- and minimum GPA of 2.25 is required for all Design Studies Major Requirements.** | | |
| ART 121S | Visual Foundations 1 | 3 |
| ART 122S | Visual Foundations 2 | 3 |
| DSGN 140 | Sustainable Living (GEF 7) | 3 |
| DSGN 220 | Design Thinking | 3 |
| DSGN 320 | Design Ethics and Social Responsibility | 3 |
| DSGN 480 | Designing Innovative Futures (fulfills Capstone requirements) | 3 |
| DSGN 491 | Professional Field Experience: Capstone | 3 |
| JRL 432 | Social Media Strategy | 3 |
| COMM 270 & 270S | Presentational Speaking and Effective Public Speaking Studio (GEF 4) | 3 |
| **Minor** * | | **15** |
| **Recommended Electives** ** | | **15** |
| Total Hours | | 57 |

*

Minors are chosen in consultation with your Advisor and are intended to broaden/enhance your experience in relation to your anticipated career path. Depending on the minor, more than 15 credit hours may be required.

**

In consultation with your Advisor and in accordance with your career objectives, select a minimum of 15 hours from courses within the College of Creative Arts and Media with a maximum of six hours at the 100/200 level and minimum of nine hours at the 300/400 level.

## Suggested Plan of Study

The following minimum requirements are set to insure that students who graduate from the program will have the appropriate skill level and knowledge to succeed in their chosen field of professional work. Design studies require a minimum of 120 credit hours for graduation.

| **First Year** | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| ART 191 | 2 | ART 122S | 3 |
| ART 121S | 3 | GEF 3 | 3 |
| DSGN 140 (GEF 7) | 3 | GEF 5 | 3 |
| ENGL 101 (GEF 1) | 3 | Minor Course | 3 |
| GEF 2 | 4 | General Elective | 3 |
| | 15 | | 15 |
| **Second Year** | | | |
| **Fall** | **Hours** | **Spring** | **Hours** |
| DSGN 220 | 3 | DSGN 320 | 3 |
| ENGL 102 (GEF 1) | 3 | Minor Course | 3 |
| COMM 270 & 270S (GEF 4) | 3 | Recommended Elective | 3 |
| GEF 6 | 3 | General Elective | 3 |
| Minor Course | 3 | General Elective | 3 |
| | 15 | | 15 |
| **Third Year** | | | |
| **Fall** | **Hours** | **Spring** | **Hours** |
| Recommended Elective | 9 | JRL 432 | 3 |
| Minor Course | 3 | Minor Course | 3 |
| General Elective | 3 | General Elective | 6 |
| | | Recommended Elective | 3 |
| | 15 | | 15 |
| **Fourth Year** | | | |
| **Fall** | **Hours** | **Spring** | **Hours** |
| DSGN 480 | 3 | General Electives | 15 |
| DSGN 491 | 3 | | |
| General Electives | 9 | | |
| | 15 | | 15 |

Total credit hours: 120

## Program Requirements

Students take a core of design courses to learn and understand the design language. A minor, chosen in consultation with the student's Advisor based on the student's career interests, is required to focus their area of study and provide a context for their design thinking. Finally, design-related requirements and recommended electives are chosen to support the understanding of design in a variety of contexts. The capstone requirement will be met with a three-hour professional field experience and a final course where students synthesize and present their experiences in the work environment. Each student meets individually with her/his advisor to determine the most appropriate coursework choices for all requirements at the beginning of the semester in which they declare Design Studies their major.

Curriculum for the Design Studies major is determined by the area of interest chosen by the student's career interests. That career interest is explored through an appropriate minor. Minors are reviewed and selected in consultation with your Advisor and are intended to broaden/enhance your experience in relation to your anticipated career path. Additionally, students may also pursue a second minor or certificate program in consultation with an advisor.

## NOTES

1. Minors may require courses to be taken in summer. Some minors are fully online. Check your specific minor for schedule requirements.

## FIRST-YEAR LEVEL

Students should begin the Design Studies program with an introduction to design and first-year courses. Students should make an appointment with the program academic advisor at the end of the first semester to determine course selection based on a chosen required minor, certificate or concentration area. Design studies is an open-enrollment major for incoming freshmen. Students may also transfer into the major during either fall or spring semesters as long as they meet the minimum entry requirements. Transfer students must have an overall GPA of a 2.5, or department approval, to apply for acceptance into the Design Studies major.

## SECOND-, THIRD-, AND FOURTH-YEAR LEVELS

All design studies students are required to maintain at least an overall 2.25 GPA to remain in the program with good academic standing.

- Students' grades will be monitored each semester.
- Any student who has an overall GPA below 2.25 will be notified and put on academic probation for the upcoming semester. It will be necessary for the student to raise their GPA to the required 2.25 in order to continue in the design studies major coursework.
- Students who have an overall GPA below the required 2.25 will not be allowed to enroll in DSGN coursework until the GPA has returned to the minimum required.
- Students who have not been permitted to enroll in design courses because of a low GPA may enroll in design courses after they have met the appropriate GPA, space permitting.
- All Design Studies students are required to earn at least a C- in each required course.
- Students' grades will be monitored each semester.
- Any student who has earned a grade of "D" or lower in any of the DSGN courses will be notified of the problem and will be expected to repeat the course and earn a grade of C- or above prior to graduation.

## Major Learning Outcomes

### DESIGN STUDIES

The primary student learning outcomes for the Design Studies major include preparing students to:

1. Integrate design thinking into the business context provided by their minor course of study,
2. Synthesize knowledge gained through coursework and experiential activities effectively, and explain its application to real work situations within the design profession and selected area(s) of interest in verbal and written formats,
3. Effectively evaluate and use research in the context of a design problem,
4. Share work experience with others and gain a greater understanding of design in a variety of contexts,
5. Understand the daily realities of their professional design area and how those realities relate to the expectations of other design contexts.

# Fashion Design and Merchandising, B.S.

## Degree Offered

- Bachelor of Science

## Areas of Emphasis Offered

- Fashion Design
- Fashion Merchandising

## Program Vision and Mission

### VISION

Fashion Design & Merchandising envisions a world where loved clothes last and people find joy, a sense of self, and human connection through dress.

### MISSION

Fashion Design & Merchandising prepares students to be changemakers in the fashion industry. We aim to improve the quality of life of individuals and groups through fashion as product, process, and concept. This includes developing and producing transformative, culturally relevant, environmentally conscious, and socially responsible fashion goods and services. We cultivate creativity, question the status quo, and innovate new ways of doing through design thinking, research, experiential learning, and community-engaged projects.

## Nature of the Program

Students in the BS Fashion Design & Merchandising (FDM) program explore a broad view of the fashion industry and all the career opportunities it has to offer. From textile production, product design, sourcing, and manufacturing, to retail merchandising and consumer behavior, students learn to appreciate and understand the complexity and dynamism of the modern fashion supply chain. Students must complete a Fashion Design or Fashion Merchandising Area of Emphasis (AOE). The Fashion Merchandising AOE also requires a minor (selected by the student with guidance from their faculty mentor and advisor) in Advertising, Journalism, Public Relations, Strategic Social Media, Event Planning, Entrepreneurship, General Business, Marketing, or Professional Sales. Both AOEs require a 6-hour internship - typically completed in the summer, between junior and senior year - in which students apply textile, apparel, and/or merchandising subject matter with mentorship in a professional setting. Students are required to pass MATH 124 or a higher-level MATH credit and must maintain a GPA of 2.25 or higher and earn a C- or higher in all FDM courses. FDM courses are sequential and progress is dependent on meeting the minimum grade and GPA requirements (see details in the Policies tab).

## Program Opportunities

FDM students may elect to participate in a faculty-led, study abroad summer program to observe the textile, apparel, and retail industries in Italy, preferably in the summer after freshman or sophomore year. This 6-hour program, *Disegno Italia*, has established connections with fashion schools in Milan, the design capital of Italy. An elective fashion study tour to New York enables students to observe fashion industry and retail sites, view historic costume displays and collections, and network with graduates of the FDM program.

## Admissions for 2026-2027

- First-Time Freshmen are admitted directly into major.
- Students transferring from another major within WVU are directly admitted to the  major if they are in good academic standing (2.0 overall GPA) or with departmental approval.
- Students transferring from another institution are directly admitted to the major if they are in good academic standing (2.0 overall GPA) or with departmental approval.

Major Code: 3720

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.25 is required for the degree. | | |
| University Requirements | | 54 |

| | |
|---|---|
| Fashion, Dress, and Merchandising Major Requirements | 66 |
| Total Hours | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 4, 5, 6, 7, and 8 | | 31 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 22 |
| Total Hours | | 54 |

## Fashion Design & Merchandising Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all FDM courses required in the Fashion, Dress, and Merchandising Major Requirements. | | |
| A minimum GPA of 2.25 is required in the Fashion, Dress, and Merchandising Major Requirements. | | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| ADV 215 | Principles of Advertising | 3 |
| WRIT 304 | Business and Professional Writing | 3 |
| **Fashion, Dress & Merchandising Core Courses:** | | |
| FDM 110 | Introduction to Fashion Business | 3 |
| FDM 130 | Design Concepts of Dress | 3 |
| FDM 211 | Introduction to Textiles | 3 |
| FDM 220 | Fashion, the Body, and Culture | 3 |
| FDM 221 | Dress History: 1850-Present | 3 |
| FDM 360 | Retail Merchandising | 3 |
| FDM 411 | Fashion Consumer Behavior | 3 |
| FDM 491 | Professional Field Experience | 6 |
| Required Area of Emphasis * | | 12-18 |
| Fashion Design | | |
| Fashion Merchandising | | |
| Minor Selection Required for Fashion Merchandising Students ** | | 15-18 |
| **Restricted Electives (Hours vary depending on Area of Emphasis) *** | | **12-15** |
| Restricted Electives: | | |
| FDM 260 | Visual Merchandising | |
| FDM 311 | Fashion Study Tour | |
| FDM 370 | Quality Analysis | |
| FDM 412 | Fashion Sourcing and Supply Chain Management | |
| FDM 421 | Dress History: Prehistory-1850 | |
| FDM 460 | Sustainability in Fashion | |
| FDM 461 | Omni-Channel Fashion Retailing | |
| FDM 490 | Teaching Practicum | |
| Study Abroad: Disegno Italia | | |
| DSGN 140 | Sustainable Living | |
| DSGN 220 | Design Thinking | |
| DSGN 310 | Product Design-Footwear | |
| DSGN 320 | Design Ethics and Social Responsibility | |
| THET 105 | Costuming | |
| THET 219S | Intermediate Costume Construction | |
| THET 425S | Advanced Costume Construction | |
| **Capstone Experience** | | |

| | | |
|---|---|---|
| FDM 435S | Product Development Studio | 3 |
| Total Hours | | 66 |

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Students in the Fashion Design Area of Emphasis will be required to complete 18 hours and those in the Fashion Merchandising Area of Emphasis will be required to complete 12 hours. In addition, Fashion Design students will be required to complete FDM 132S and FDM 432 with a minimum grade of C- in each course, which will be completed as part of their General Electives.

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Students in the Fashion Merchandising Area of Emphasis will be required to complete a minor in consultation with their academic advisor.

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Students in the Fashion Design Area of Emphasis will be required to complete 14-15 hours of Restricted Electives, while students in the Fashion Merchandising Area of Emphasis will be required to complete 12-13 hours of Restricted Electives. Restricted Electives should be chosen in consultation with academic advisors.

## INTERNSHIP REQUIREMENT

All Fashion, Dress, and Merchandising students must complete an internship as part of their degree. Once a site has been selected by the student, students will need to contact the FDM 491 instructor be cleared to register. Instructor site approval is required before registering. You and your on-site supervisor will need to complete some forms provided by the department before the hold is released. FDM 491 is a six-credit hour course offered through WVU and counts towards the completion of the degree. Students must work a minimum of 240 **supervised and documented hours during the term enrolled at their agreed upon site** to earn six credits hours (40 hours of work = 1 cr. Hour) at a fashion-industry-related business.

*Site Selection:* It is up to each student to select and secure their own internship site. Faculty are here to advise and support this process but will not "place" students. Do not wait until the last minute to seek faculty assistance. Be prepared for all interview opportunities by having a resume ready to submit or hand to a prospective employer or campus recruiter. All resumes should be reviewed by at least one FDM faculty member before being sent to a potential employer.

*Procedure:* Students may take the internship after successfully completing FDM 360. An application and approval form, signed contract, and resume are required for registration. This paperwork needs to be submitted by the course registration deadlines of the semester in which the internship hours will be completed. All internship work hours must be completed within the semester the student is enrolled in FDM 491. Prior to embarking on the internship, all students must participate in the mandatory orientation session(s).

# Areas of Emphasis Offered:

- Fashion Design (p. 503)
- Fashion Merchandising (p. 504)

## FASHION DESIGN AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| **Fashion Design Emphasis Requirements** | | |
| FDM 135S | Fashion Illustration and Tech Design 1 Studio | 3 |
| FDM 250S | Apparel Design 1 Studio | 3 |
| FDM 330S | Fashion Illustration and Tech Design 2 Studio | 3 |
| FDM 335S | Apparel Design 2 Studio | 3 |
| FDM 350S | Apparel Design 3 Studio | 3 |
| FDM 430S | Senior Studio | 3 |
| Total Hours | | 18 |

## SUGGESTED PLAN OF STUDY FOR FASHION DESIGN AREA OF EMPHASIS

Students may enter the FDM program as first-semester freshmen. Enrollment in the required first-year FDM courses is not limited. The following courses have open enrollment and should be taken by all students the first year in the major: FDM 110 and FDM 130. FDM courses are to be taken in sequence. Therefore, it is important that students follow the Suggested Plan of Study that follows. Selected outside courses must be completed prior to enrolling in certain FDM courses.

| **First Year** | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| ANRD 191 | | 1 FDM 130 | 3 |
| FDM 110 | | 3 MATH 124 (GEF 3) | 3 |

| | | | |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | GEF 5 | 3 |
| GEF 2 | 4 | GEF 8 | |
| GEF 7 | 3 | General Elective | 3 |
| | 14 | | 12 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FDM 135S | 3 | FDM 250S | 3 |
| FDM 211 | 3 | FDM 221 | 3 |
| FDM 220 | 3 | Restricted Elective | 3 |
| ADV 215 | 3 | GEF 6 | 3 |
| ENGL 102 (GEF 1) | 3 | GEF 8 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| FDM 330S | 3 | FDM 350S | 3 | FDM 491 | 6 |
| FDM 335S | 3 | FDM 411 | 3 | | |
| FDM 360 | 3 | WRIT 304 | 3 | | |
| GEF 8 | 3 | GEF 4 | 3 | | |
| Restricted Elective | 3 | Restricted Elective | 3 | | |
| | 15 | | 15 | | 6 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| FDM 430S | 3 | FDM 435S | 3 |
| FDM 432 | 1 | General Electives | 9 |
| Restricted Electives | 6 | | |
| General Electives | 6 | | |
| | 16 | | 12 |

Total credit hours: 120

## FASHION MERCHANDISING AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| **Merchandising Emphasis Requirements** | | |
| FDM 361 | Merchandise Planning and Control | 3 |
| FDM 412 | Fashion Sourcing and Supply Chain Management | 3 |
| or FDM 460 | Sustainability in Fashion | |
| FDM 461 | Omni-Channel Fashion Retailing | 3 |
| FDM 471 | Fashion Promotion | 3 |
| Total Hours | | 12 |

## SUGGESTED PLAN OF STUDY FOR FASHION MERCHANDISING AREA OF EMPHASIS

Students may enter the FDM program as first-semester freshmen. Enrollment in the required first-year FDM courses is not limited. The following courses have open enrollment and should be taken by all students the first year in the major: FDM 110 and FDM 130. FDM courses are to be taken in sequence. Therefore, it is important that students follow the Suggested Plan of Study that follows. Selected outside courses must be completed prior to enrolling in certain FDM courses.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | FDM 130 | 3 |
| FDM 110 | 3 | MATH 124 (GEF 3) | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 6 | 3 |
| GEF 2 | 4 | GEF 5 | 3 |

| | | | | | |
|---|---|---|---|---|---|
| GEF 7 | | 3 General Elective | | 3 | |
| | | 14 | | 15 | |

**Second Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| FDM 211 | | 3 FDM 221 | | 3 | |
| FDM 220 | | 3 Minor Course | | 3 | |
| ADV 215 | | 3 Restricted Elective | | 3 | |
| ENGL 102 (GEF 1) | | 3 General Elective | | 3 | |
| Minor Course | | 3 General Elective | | 3 | |
| | | 15 | | 15 | |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| FDM 360 | | 3 FDM 361 | | 3 FDM 491 | 6 |
| Restricted Elective | | 3 FDM 411 | | 3 | |
| GEF 4 | | 3 WRIT 304 | | 3 | |
| Minor Course | | 3 Restricted Elective | | 3 | |
| General Elective | | 3 Minor Course | | 3 | |
| | | 15 | | 15 | 6 |

**Fourth Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| FDM 412 or 460 | | 3 FDM 435S | | 3 | |
| FDM 461 | | 3 FDM 471 | | 3 | |
| Minor Course | | 3 Minor Course | | 3 | |
| Restricted Elective | | 3 General Elective | | 3 | |
| General Elective | | 1 | | | |
| | | 13 | | 12 | |

Total credit hours: 120

# Major Learning Outcomes

## FASHION, DRESS AND MERCHANDISING

Fashion, Dress and Merchandising programs vision is to develop creative, knowledgeable, and effective professionals who are able to contribute to organizations in the global textile and apparel complex and to society, and who are able to continue to grow personally and professionally following graduation. Upon graduation from the FDM program at WVU, students will be able to demonstrate the following knowledge and skills:

1. INDUSTRY PROCESSES, including the ability to:

- Understand and apply knowledge about the roles and functions of various industry sectors in which products are developed, produced, marketed, sold, and consumed, including construction, sourcing, manufacturing, marketing, and merchandising processes.
- Identify and interpret needs and wants of consumers and how industry processes are applied to plan, develop, produce, communicate, and sell profitable product lines.
- Evaluate product quality, serviceability, and regulatory compliance standards.
- Use industry terminology in appropriate ways.
- Understand social, economic, and political boundaries as they relate to the diffusion of products, services, and ideas.

2. APPEARANCE AND HUMAN BEHAVIOR, including the ability to:

- Apply theories, concepts, and research regarding appearance and human behavior to industry and societal problems.
- Understand and apply knowledge about the role of dress as it reflects and shapes intra and inter-cultural interactions.
- Understand and apply knowledge about the interrelationships among historical, sociocultural, and psychological factors of dress and their impact on human behavior, including the effects of life stages, change across time, and culture.

3. AESTHETICS AND THE DESIGN PROCESS, including the ability to:

- Understand and apply knowledge about aesthetics and the design process in relation to dress and appearance management.
- Use the design process to create products that meet marketplace needs.

- Understand how aesthetics and the design process can support quality of life, social responsibility, and sustainability
- Relate the elements and principles of design to product development, use, and evaluation.
- Understand the role of historical, socio-cultural, and psychological factors in aesthetic expression.

4. GLOBAL INTERDEPENDENCE, including the ability to:

- Understand how dynamic and diverse political, cultural, and economic systems impact industry processes.
- Understand how theoretical perspectives on markets, trade, and economic development can be applied to historical and current data on production, consumption, and disposal of products.

5. ETHICS, SOCIAL RESPONSIBILITY, AND SUSTAINABILITY, including the ability to:

- Identify and evaluate issues of social responsibility, professional behavior, and ethics related to the impact of individual, organizational, and corporate decision making.
- Analyze and evaluate issues related to environmental sustainability and environmental impact as they relate to industry activities and processes.

6. CRITICAL AND CREATIVE THINKING, including the ability to:

- Demonstrate critical and creative thinking skills, including the ability to critically evaluate and compare diverse perspectives.
- Identify and understand social, cultural, economic, technological, ethical, political, educational, language, and individual influences on industry issues.
- Apply quantitative and qualitative skills to problem solving within the textile and apparel complex.
- Use appropriate technology to facilitate critical, creative, quantitative, and qualitative thinking within the textile and apparel complex.

7. PROFESSIONAL DEVELOPMENT, including the ability to:

- Communicate ideas in written, oral, and visual forms using appropriate technology.
- Function as team members and leaders within professional and culturally diverse environments.
- Demonstrate the ability to critique oneself and others constructively.
- Apply career planning concepts and job search strategies to the diverse industry opportunities.

These competencies are incorporated across the FDM program curriculum. Students are introduced to these learning goals incrementally as they progress from entry-level courses to and including the capstone internship.

## Program Requirements

Students must meet the following requirements in order to continue in the program beyond the first year:

1. Maintain a 2.25 overall GPA.
2. Earn a C- or above in all FDM courses and successfully pass MATH 124 (or higher) in a timely manner.
3. Any student who has an overall GPA below 2.25 will be notified of the deficiency and will not be permitted to enroll in FDM courses.
4. Students who have not been permitted to enroll in FDM courses because of a low GPA may enroll in FDM courses after meeting the 2.25 minimum overall GPA, space permitting.
5. Any student who has earned a grade of D+ or lower in any of the FDM courses will be notified of the problem and will not be permitted to enroll in the next sequence of FDM courses.
6. Students who have not been permitted to enroll in the next sequence of FDM courses because of receiving a grade of D+ or lower for one of the required FDM courses may correct the problem by repeating the course(s) the next time it is offered, space permitting, and earning a C- or above. Please note that most FDM courses are offered only once per academic year.
7. All FDM students must complete an approved internship consisting of 240 hours of mentored work experience. The student is responsible for securing their internship and enrolling in FDM 491 (6 credits), preferably during the summer between their junior and senior year. Students should work with their faculty mentor and advisor to select an internship site that meets departmental requirements and sets them on a path towards their career goals. Students may elect to complete all WVU campus coursework and complete their internship as their last degree requirement in the summer after their senior year. This results in the student officially graduating in August rather than May.

# Game Design and Interactive Media, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Game Design and Interactive Media major provides students with the skills and knowledge needed to create engaging interactive experiences including video games, dynamic websites, and interactive experiences. The program begins with foundational skills in art and design in traditional media and introduces coding and interactive design using digital tools and software. Core classes encompass 2D and 3D video game design, coding for web interactivity, and digital narrative production, with a choice of capstone experiences in narrative web design or advanced game design. A diverse selection of electives allows for specialization in areas such as digital art and animation, user-experience design, interactive audio, and physical interactive objects. Students can gain real-world experience in project development and management through our community-based, not-for-profit game studio, where interdisciplinary teams of students and members of the public conceive, design, develop, playtest, and publish original video games. Students must earn a C- or higher in all major required coursework.

## Admissions for 2026-2027

Admission requirements for the Game Design and Interactive Media program are the same as to the university.  Visit the WVU undergraduate admissions page for details on general WVU admission.

**Students not meeting the above requirements will be admitted to WVU as either a pre-Art or pre-Media student through CLASS.**

Major Code: 3751

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 60 |
| Interactive Design for Media Program Requirements | | 27 |
| Interactive Design for Media Major Requirements | | 33 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 7, and 8 | | 25 |
| ART 191 | First-Year Seminar | 2 |

| | |
|---|---|
| General Electives | 33 |
| Total Hours | 60 |

## Game Design and Interactive Media Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- or better is required in all program coursework. | | |
| ARHS 120 | Survey of Art History 1 | 3 |
| ARHS 160 | Survey of Art History 2 | 3 |
| ART 121S | Visual Foundations 1 | 3 |
| ART 122S | Visual Foundations 2 | 3 |
| ART 270S | Introduction to Electronic Media 1 | 3 |
| ART 287 | Coding for Media Applications | 3 |
| MDIA 101 | Media and Society | 3 |
| MDIA 215S | Media Writing | 3 |
| MDIA 328 | Media Ethics and Law | 3 |
| Total Hours | | 27 |

## Game Design and Interactive Media Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- or better is required in all major coursework. | | |
| **Art Requirements** | | |
| ART 272S | Designing for Multimedia | 3 |
| ART 273S | Beginning 3D Animation | 3 |
| ART 285S | Interactive Audio Design | 3 |
| ART 286S | Layout for Digital Media | 3 |
| ART 372S | Interactive Design | 3 |
| ART 472S | Advanced Interactive Design (Capstone) | 3 |
| or ART 487S | Advanced Game Design | |
| **Media Requirements** | | |
| ART 386S | Gaming Design and Digital Narrative | 3 |
| ART 387 | UI/UX Design for Media Applications | 3 |
| ART 486S | Intermediate Game Design | 3 |
| MDIA or ADV or JRL or ART or ARHS elective at 200 level or higher | | 3 |
| MDIA or ADV or JRL or ART or ARHS elective at 200 level or higher | | 3 |
| Total Hours | | 33 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 191 | 2 | MDIA 215S | 3 |
| MDIA 101 (GEF 4) | 3 | ART 122S | 3 |
| ART 121S | 3 | ARHS 160 (GEF 8) | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 2 | 4 |
| ARHS 120 (GEF 6) | 3 | Elective or Minor | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 287 | 3 | ART 270S | 3 |
| ART 272S | 3 | ART 286S | 3 |
| ART 285S | 3 | ENGL 102 (GEF 1) | 3 |
| GEF 3 | 3 | Elective or Minor | 3 |

| | | | |
|---|---|---|---|
| Elective or Minor | | 3 Elective or Minor | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 386S | | 3 MDIA 328 | 3 |
| ART 273S | | 3 ART 486S | 3 |
| ART 372S | | 3 ART or ARHS or MDIA or JRL elective at 200 level or above | 3 |
| GEF 5 | | 3 GEF 7 | 3 |
| Elective or Minor | | 3 Elective or Minor | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 487S (or General Elective) | | 3 ART 472S (or General Elective) | 3 |
| GEF 8 | | 3 ART 387 | 3 |
| ART or ARHS or MDIA or JRL elective at 200 level or above | | 3 GEF 8 | 3 |
| Elective or Minor | | 3 Elective or Minor | 3 |
| Elective or Minor | | 3 Elective or Minor | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Accelerated Program

- B.A. Game Design and Interactive Media and M.A. Game Design (p. 509)

## Accelerated Bachelor's/Master's BA in Game Design and Interactive Media and MA in Game Design

Students must fulfill all degree requirements for the B.A .in Game Design and Interactive Media and all the requirements for the M.A. in Game Design. Students must also meet all the requirements of the A.B.M. in Game Design.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 111 |
| Shared B.A. / M.A. Coursework | | 9 |
| Graduate Coursework | | 21 |
| Total Hours | | 141 |

## Shared Bachelor's/Master's Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- or better is required in all major coursework. | | |
| ART 502S | Game Design | 3 |
| ART 503 | Game Theory | 3 |
| ART 505S | Game Production | 3 |
| Total Hours | | 9 |

## Suggest Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 191 | | 2 MDIA 215S | 3 |
| ART 121S | | 3 ART 122S | 3 |
| MDIA 101 (GEF 4) | | 3 ARHS 160 (GEF 6) | 3 |
| ENGL 101 (GEF 1) | | 3 GEF 2 | 4 |

| | | | |
|---|---|---|---|
| ARHS 120 (GEF 6) | | 3 Elective or Minor course | 3 |
| | | 14 | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 287 | | 3 ART 270S | 3 |
| ART 272S | | 3 ART 286S | 3 |
| ART 285S | | 3 ENGL 102 (GEF 1) | 3 |
| GEF 3 | | 3 Elective or Minor course | 3 |
| Elective or Minor course | | 3 Elective or Minor course | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 273S | | 3 MDIA 328 | 3 |
| ART 372S | | 3 ART 486S | 3 |
| ART 386S | | 3 GEF 7 | 3 |
| GEF 5 | | 3 ART or ARHS or MDIA or JRL elective at 200 level or above | 3 |
| Elective or Minor course | | 3 ART 503 | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 487S (or General Elective) | | 3 ART 387 | 3 |
| ART 502S | | 3 ART 472S | 3 |
| Elective or Minor course | | 3 ART 505S | 3 |
| GEF 8 | | 3 GEF 8 | 3 |
| ART or ARHS or MDIA or JRL elective at 200 level or above | | 3 Elective or Minor course | 3 |
| | | 15 | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ART 507, ART 608, or Electives | | 6 ART 606S | 3 |
| ART 603S | | 3 ART 607S | 6 |
| ART 604S | | 3 | |
| | | 12 | 9 |

Total credit hours: 141

# Major Learning Outcomes

## GAME DESIGN AND INTERACTIVE MEDIA

Upon completion of the Game Design and Interactive Media major, graduates must have attained the following;

1. Apply basic principles of two and three-dimensional design, color theory, and concept development to various media types and digital formats, with a specific aesthetic and conceptual intent.
2. Analyze and integrate key elements of digital media, including visual, spatial, sound, motion, and interactivity, with an emphasis on understanding narrative and temporal structures.
3. Develop and refine expertise in game design principles, such as mechanics, sound, level-design, and playtesting, to build engaging, narrative-driven games.
4. Foster collaborative development of interactive experiences by engaging in iterative workflows with individuals from diverse disciplines who bring specialized skill sets.
5. Critically examine the history and evolution of game design and audiovisual art to create works that are responsive to technological, social, and cultural systems.

# Interior Architecture, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

In response to professional industry trends, the Interior Architecture program has been expanded to include coursework in building and construction systems with an updated major name (it was formerly called Interior Design). Graduates still practice interior design but now have a wider range of skills. The program prepares students for entry-level interior design practice and meets the education requirement for National Council for Interior Design Qualification (NCIDQ) certification (https://www.cidq.org/paths/). (https://www.cidq.org/eligibility-requirements/) NCIDQ certification is the basic credential required by most states that license interior design/interior architecture professionals. In addition to an educational requirement, NCIDQ certification requires the completion of two years of professional practice as an interior designer and passing the NCIDQ examination.

In addition to all major requirements, BS Interior Architecture students are required to take either a 3-hour approved summer study-abroad credit through a WVU authorized program or a 3-hour summer internship of at least 120 hours. Normally, this credit is taken the summer after the third year. Students must maintain a GPA of 2.0 or higher. Major courses must be taken sequentially and students must earn a C- or higher in all ID courses. See further details about program standards and progression on the Policies tab.

## Program Opportunities

In addition to study abroad and/or internships, students have opportunities to enroll in courses associated with Interior Architecture's allied programs. Courses in product design, sustainability, landscape architecture, and global economies are regularly offered, and a minor in Sustainable Design (http://catalog.wvu.edu/undergraduate/minors/sustainable_design/) is available. Other common minors include Landscape Studies (http://catalog.wvu.edu/undergraduate/minors/landscape_studies/), Entrepreneurship (http://catalog.wvu.edu/undergraduate/minors/entrepreneurship/), Event Planning (http://catalog.wvu.edu/undergraduate/minors/eventplanning/), Marketing (http://catalog.wvu.edu/undergraduate/minors/marketing/), Studio Art (http://catalog.wvu.edu/undergraduate/collegeofcreativeartsandmedia/#minorstext), and Strategic Social Media (http://catalog.wvu.edu/undergraduate/minors/strategicsocialmedia/).

## Admissions for 2026-2027

First-Time Freshmen are admitted directly into the major.

Students transferring from another major within WVU are directly admitted into the major as a first year student if they are in good academic standing (2.0 or higher GPA), or with departmental approval.

Students transferring from another institution are directly admitted into the major as a first year student if they are in good academic standing (2.0 or higher GPA), or with departmental approval. Students who have design courses from other institutions and who wish to transfer directly into the second year must submit to the Interior Architecture program coordinator the following: complete transcript, syllabi of design courses, portfolio showing coursework from previous design courses, and completion of the Gateway Project. Admission into the second year is contingent upon available space and evaluation of the submitted materials.

Interior Architecture Major Code: 3722

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |

| | |
|---|---|
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 31 |
| Interior Architecture Major Requirements | | 89 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, and 8 | | 21 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 9 |
| Total Hours | | 31 |

## Interior Architecture Major Requirements

| Code | Title | Hours |
|---|---|---|
| Minimum GPA of 2.67 in all ID major coursework is required | | |
| Minimum grade of C- in all ID major coursework is required | | |
| DSGN 340 | Design for Energy Efficiency | 3 |
| COMM 270<br>& 270S | Presentational Speaking<br>and Effective Public Speaking Studio (GEF 4) | 3 |
| ARHS 120 | Survey of Art History 1 (GEF 6) | 3 |
| ARHS 160 | Survey of Art History 2 (GEF 8) | 3 |
| Foreign Language (6 credits in the same language - GEF 7 & GEF 8) | | 6 |
| ID 105 | Introduction to Interior Architecture | 3 |
| ID 115S | Introduction to Architectural Design and Graphics Studio | 4 |
| ID 165S | Architecture and Design Foundations Studio | 4 |
| ID 205 | Introduction to Architectural Building Technologies | 3 |
| ID 215S | Architectural Interior Design and Graphics 1 Studio | 6 |
| ID 250 | History of the Architectural Interior 1 | 3 |
| ID 265S | Architectural Interior Design and Graphics 2 Studio | 6 |
| ID 280 | History of the Architectural Interior 2 | 3 |
| ID 305 | Architectural Interior Building Systems and Construction | 3 |
| ID 310 | Interior Finishes, Furnishings, and Fixtures | 3 |
| ID 315S | Advanced Architectural Interior Design 1 Studio | 4 |
| ID 316S | Advanced Architectural Graphics 1 Studio | 2 |
| ID 335 | Light & Color in Architectural Interiors | 3 |
| ID 365S | Advanced Architectural Interior Design 2 Studio | 4 |
| ID 366S | Advanced Architectural Graphics 2 Studio | 2 |
| ID 400 | Interior Design Internship (120 work hours; OR 3 week Study Abroad Experience) | 3 |
| ID 415S | Advanced Architectural Interior Design 3 Studio | 6 |
| ID 425 | Professional Practices in Architectural Interior Design | 3 |
| ID 465S | Advanced Architectural Interior Design 4 Studio | 6 |
| Total Hours | | 89 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ID 105 | 3 | ID 165S | 4 |
| ID 115S | 4 | ARHS 160 (partially satisfies GEF 8) | 3 |
| ARHS 120 (GEF 6) | 3 | ENGL 101 (GEF 1) | 3 |
| ANRD 191 | 1 | GEF | 3 |
| GEF | 3 | GEF | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ID 215S | 6 | ID 265S | 6 |
| ID 250 | 3 | ID 205 | 3 |
| ENGL 102 (partially satisfies GEF 1) | 3 | ID 280 | 3 |
| Foreign Language (GEF 7) | 3 | Foreign Language (partially satisfies GEF 8) | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| ID 315S | 4 | ID 365S | 4 | ID 400 (120 hours; OR 3 week Study Abroad Experience) | 3 |
| ID 316S | 2 | ID 366S | 2 | | |
| ID 335 | 3 | ID 425 | 3 | | |
| ID 305 | 3 | ID 310 | 3 | | |
| DSGN 340 | 3 | COMM 270 & 270S (GEF 4) | 3 | | |
| | 15 | | 15 | | 3 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ID 415S | 6 | ID 465S | 6 |
| GEF | 6 | Free Electives | 6 |
| Free Electives | 3 | | |
| | 15 | | 12 |

Total credit hours: 120

# Major Learning Outcomes

## INTERIOR ARCHITECTURE

Interior designers create architectural interiors that improve inhabitants' quality of life and protect the health, safety, and welfare of the public. Upon graduation from the interior design program at WVU, students will be able to demonstrate entry-level professional competencies that include:

- applying the elements and principles of design to the analysis and development of architectural interiors;
- understanding relationships between architecture, architectural interiors, interior artifacts, and the human condition – through historical, theoretical, social, and scientific lenses;
- utilizing hand and computer drawing and modeling technologies, techniques and conventions in the study, visualization, and presentation of architectural interiors;
- selecting and integrating appropriate building materials and construction assemblies; building systems; finishes, furnishings & equipment (FFE); and codes during the design of architectural interiors;
- understanding professional and ethical responsibilities, opportunities, and constraints associated with interior design practices.

These competencies are introduced in both design studio and lecture courses and are developed and expanded incrementally along the curriculum. The holistic integration and synthesis of these competencies in the design of architectural interiors are centered in design studio courses which are rigorous laboratories and typically have a high number of contact/meeting hours in relation to credit hours.

## Maintaining Good Standing

The interior architecture program is a competitive access major with required sequential studio course offerings in interior design. Three (3) qualifying courses must be taken in the first year of study. These are:

- ID 105S Introduction to Interior Architecture, 3 credit hours (Fall Semester)
- ID 115S Introduction to Architectural Design & Graphics, 4 credit hours (Fall Semester)
- ID 165S Architecture & Design Foundations, 4 credit hours (Spring Semester)

To continue in the major beyond the first year, students must successfully complete all three courses with a grade of C- or higher. Additionally, in order to become eligible for selection to continue in the second year, a cumulative grade point average (GPA) of 2.0 must be earned in the first-year qualifying courses.

If more than twenty students apply to move forward into the second year, only the top twenty students will be allowed to continue in the major. The top twenty students will be determined based upon:

- Cumulative GPA ranking in the first year qualifying courses
- Performance in the Gateway Project conducted at the end of the first year. This is a two-hour common design challenge presented to all first year interior architecture students at the end of the second semester.
- Overall GPA
- A Faculty Interview, if requested by the faculty (Fall Semester)

As students progress in the major, GPAs will be monitored each semester. Any student who has an ID GPA below 2.0 will be notified of the deficiency and will have one semester to raise their ID GPA to 2.0 or above. Students who do not raise their ID GPA to 2.0 or above after one semester may not be permitted to enroll again in interior design courses.

Students are required to earn at least a C- in all ID courses.

Typically, only one section of each interior architecture course is offered annually.  Therefore, needing to repeat a studio course adds one year to the student's college career.

## Computer Expectation Policy

All students are expected to have, upon the first day of the ID 115S course (typically in the fall of 1st year), a computer that meets the Interior Architecture program's hardware and software specifications. These specifications are updated annually for incoming first year students and published online by the end of May. Please consult this page (https://designcomm.wvu.edu/undergraduate/majors/interior-architecture/computer-requirements/) for a full copy of the current computer requirements.

## Internships and Studying Abroad

Graduation from the Interior Architecture program requires 3 credits (ID 401) in an approved summer, three-week, WVU-authorized study abroad program or 3 credits (ID 400) through an approved summer internship of at least 120 hours. These credits should be taken in the summer after the third year.

# Reed School of Media and Communications

## Degrees Offered

- **Bachelor of Science in Journalism** with majors in Advertising and Public Relations, Journalism and Sport and Adventure Media
- **Bachelor of Arts** with majors in Multidisciplinary Media Studies
- **Bachelor of Science** with a major in Integrated Marketing Communications

## Areas of Emphasis

Advertising and Public Relations:

- Advertising
- Public Relations

Sports and Adventure Media:

- Adventure Media
- Sports Media

## Minors

- Advertising
- Entertainment Media
- Event Planning
- Health Promotion
- Journalism
- Public Relations
- Sport Communication (offered jointly with the College of Applied Human Sciences)
- Strategic Social Media

## Nature of the Program

The School of Media and Communications is a student-centered media school that has been graduating journalists and strategic communicators since 1939. While rooted in tradition, the School of Media and Communications offers an innovative curriculum and real-world experiences that prepare students for careers in today's media industries. The College is known for its innovative course projects and ability to build community in the classroom and beyond.

In all programs at the School of Media and Communications, our students learn by doing, producing stories and projects using the latest digital media technology. Our graduates work in top news organizations and communication agencies around the world, leading the industry and transforming the media landscape.

We believe that robust, independent media are fundamental to a democratic society in which individuals are empowered as critical thinkers, creative problem-solvers and engaged citizens. We expect our students, faculty and staff to use their communications skills and expertise to help our communities adapt and thrive in a complex global society. We aspire to be a catalyst for positive change in our region and a national leader in modern media education.

The School of Media and Communications currently offers a bachelor of science in journalism (BSJ) degree in 1) advertising and public relations; 2) journalism, which includes multimedia storytelling and broadcast production coursework; and 3) sports and adventure media. The School also offers a bachelor of arts (BA) degree in multidisciplinary media studies and an online major in integrated marketing communications.

While they are still in school, students intern at various on- and off-campus locations, including top regional and national TV stations, sports programs, newspapers and advertising and public relations firms. Students also have the opportunity to work for campus media, including U-92 (the campus radio station) and The Daily Athenaeum (the student newspaper). Many students also build their skills by working part-time at local media outlets, agencies, non-profit organizations and within programs and departments across the WVU campus, such as athletics and health sciences, as well as by taking active roles in one of our School’s many professionally affiliated student organizations.

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# FACULTY

## DIRECTOR

- Emily Hughes Corio - M.S.J. (West Virginia University)
  Teaching Professor, Television Journalism and Podcasting

## ASSOCIATE DIRECTOR

- Rita Colistra - Ph.D. (University of North Carolina at Chapel Hill)
  Associate Professor, Public Relations, Community Branding, Strategic Communications

## PROFESSORS

- Dana Coester - M.A. (University of Missouri-Columbia)
  Media Innovation, Entrepreneurship, Audience Engagement
- Diana Martinelli - Ph.D. (University of North Carolina at Chapel Hill)
  Widmeyer Professor in Public Relations
- Geah Pressgrove - Ph.D. (University of South Carolina)
  Public Relations, Advocacy, Strategic Communications

## TEACHING PROFESSORS

- Robert Britten - Ph.D. (University of Missouri)
  Data and Visual Journalism, Media Literacy
- Gina Martino Dahlia - M.S.J. (West Virginia University)
  Television Journalism
- Elizabeth Oppe - Ph.D. (Ohio University)
  Media and Society, Public Relations, Sports

## ASSOCIATE PROFESSORS

- Julia Fraustino - Ph.D. (University of Maryland)
  Public Interest Communications, Public Relations, Strategic Communications

## TEACHING ASSOCIATE PROFESSORS

- Ashton Marra - M.S. (West Virginia University)
  Integrated Marketing Communication
- Catherine Mezera - M.S.J. (West Virginia University)
  Advertising, Public Relations
- David Smith - M.A. (West Virginia University)
  Experimental, Augmented and Virtual Reality Storytelling

## ASSISTANT PROFESSORS

- Joseph Jones - Ph.D. (University of Missouri)
  Ethics, Law, Media and Society

## TEACHING ASSISTANT PROFESSORS

- Chuck Scatterday - M.S.J. (West Virginia University)
  Shott Teaching Assistant Professor, Sports and Adventure Media
- Judith Warner - M.A. (Columbia University)
  Visiting Shott Chair of Journalism
- Jesse Wright - B.S.J. (West Virginia University)
  Audio Broadcasting and Reporting

## INSTRUCTORS

- Aaron Hawley - M.S.J. (West Virginia University)
  Multidisciplinary Media Studies

## PROFESSORS EMERITI

- Paul Atkins
  Journalism
- Joel Beeson
  Visual Journalism and Documentary
- John H. Boyer
  Newspaper Management, Media Law
- Charles F. Cremer
  Broadcast Journalism
- Robert M. Ours
  Journalism
- Ivan Pinnell
  Public Relations
- Maryanne Reed
  Television Journalism
- William R. Summers, Jr.
  Journalism
- Steve Urbanski
  Journalism
- Pamela D. Yagle
  Journalism

## Admissions


- Admission to the School of Media and Communications (p. 517)
- Choosing a Major (p. 517)
- Accelerated Bachelor's/Master's Program (p. 517)


## Admission to the School of Media and Communications

The School of Media and Communications uses the same undergraduate admission standards for first-time freshmen as West Virginia University (WVU). Visit the WVU undergraduate admissions page for details on general WVU admission.

Students who have completed at least one full-time semester of college work (either at WVU or elsewhere) with a cumulative GPA of 2.0 or higher may also qualify for direct admission into the School of Media and Communications irrespective of standardized test scores. Students who do not meet these criteria will automatically be enrolled in WVU's Center for Learning, Advising and Student Success (CLASS). Students advised in CLASS may declare a major in the School of Media and Communications once they have earned a cumulative GPA of 2.0 at WVU.

## Choosing a Major

The School of Media and Communications offers five majors: advertising and public relations; integrated marketing communications (online); journalism; sports and adventure media; and multidisciplinary media studies.

Direct admission students are admitted to the School upon admission to the University and declare their majors at that time.

## Accelerated Programs

ABM for Master of Science in Journalism

Students in the advertising and public relations or journalism BSJ programs in the School of Media and Communications with a minimum cumulative GPA of 3.4 are eligible for admission to the Accelerated Master’s of Science in Journalism program. The accelerated MSJ program allows students to customize a research project that is relevant to their interests, whether they are advertising and public relations or journalism majors. Interested students must meet with the Director of Graduate Studies, by the fall of their junior year. Students will be admitted to the program no later than the second semester of their junior year and begin taking graduate courses during the first semester of their senior year. Information is posted on the School’s website.

ABM for Master of Science in Integrated Marketing Communications

Students in the advertising and public relations, integrated marketing communication, journalism or multidisciplinary media studies undergraduate programs in the School of Media and Communications and with a minimum cumulative GPA of 3.4 are eligible for admission to the Accelerated Master of Science in Integrated Marketing Communications program or Media Innovation and Solution program beginning the first semester of their junior year. They will meet with Aaron Hawley in the School of Media and Communications by fall of their junior year. Students will be admitted to the program no later than the second semester of their junior year and begin taking graduate courses during the first semester of their senior year. Information is posted on the School’s website.

Accelerated 3+3 BSJ and JD Degrees

The School of Media and Communications and WVU College of Law cooperate on a 3+3 degree program, where qualified students may earn a BSJ and J.D. in six years. Details about this program's requirements may be found on the School of Media and Communications website.

## Policies


- Graduation Requirements (p. 517)
- Scholastic Requirements (p. 518)
- Academic Minors (p. 518)
- Full-Time Load/Probation (p. 518)
- Priorities for Admission to MDIA 215 and Major Program Specific Courses (p. 518)


## Graduation Requirements

School of Media and Communications students majoring in advertising and public relations, journalism or sport and adventure media earn a Bachelor of Science in Journalism (BSJ) degree that requires a minimum of 120 credit hours. Of the 120 credit hours required to graduate, advertising and public relations and journalism majors must take a minimum of 72 credit hours outside of the School of Media and Communications in non journalism/non-mass communications courses.  Please review the major requirements for each major in the Undergraduate Catalog for specific information.

Students majoring in interactive design for media or multidisciplinary media studies earn a Bachelor of Arts (B.A.) degree that requires a minimum of 120 hours. Please review those major requirements in the Undergraduate Catalog for specific information.

Students majoring in integrated marketing and communications earn a Bachelor of Science (B.S.) degree that requires a minimum of 120 hours. Please review those major requirements in the Undergraduate Catalog for specific information.

Some courses are available only once a year; it is the student's responsibility to arrange their schedule accordingly. Please note that while some classes can count in more than one category, students still need to complete at least 120 credit hours.

The School of Media and Communications will accept no more than fifteen hours of journalism/mass-communication courses from community colleges.

Students may not double major or dual degree within the School of Media and Communications, but they can pursue a dual-degree program with another academic unit on campus.

## Scholastic Requirements

To be eligible for graduation, students must earn a minimum 2.0 cumulative grade point average. Students also must earn a grade of C- or better in all major pre-requisite courses to advance. Students who do not earn a C- or better will not be allowed to remain enrolled in subsequent courses until the required grade has been earned in the pre-requisite course. Students must earn a grade of C- or better in all major courses that are counted toward graduation requirements. Minor requirements are set by the College(s) where the minor is housed.

To help ensure timely progression toward a WVU degree, if a student earns D/F/W grades in three attempts at any single major course, even if the student's overall GPA is 2.0 or greater, they must meet with the assistant and/or associate dean to assess progress toward graduation and the likelihood of success within their current major. If, after consultation with the student, it is deemed that the major is not the right academic program, the student will be referred to WVU's Center for Learning, Advising and Student Success (CLASS) to explore other possible majors.

Students found guilty of violating the University's Student Conduct Code may be dismissed from the School of Media and Communications.

All students must see their respective advisors each semester to schedule classes and ensure they are progressing appropriately. In addition, during the semester prior to applying for graduation, students must complete a graduation audit with their advisor during the registration advising session.

## Academic Minors

Students pursuing the advertising and public relations or journalism major must complete an officially sanctioned minor outside the School of Media and Communications. However, students may pursue the sport communication minor, which is offered jointly by the School of Media and Communications and the College of Applied Human Sciences, or the interactive media design minor within the College of Creative Arts and Media. Students in the School of Media and Communications may add a second minor in event planning or strategic social media; however, these minors will not fulfill the requirement of having a minor outside of the School. Students completing a dual-degree are exempt from the requirement to complete a minor. Students should consult their advisor before starting a minor, as many minors require at least four semesters to complete. The minor will also fulfill the University's GEF 8 requirement.

## Full-Time Load

Students may not enroll for more than 20 hours in a single term or 14 hours in two summer sessions without permission from the College's Associate Dean for Academic Affairs. For requests to register for more than 21 credit hours during the fall/spring and more than 15 credits during the summer, the request must also be approved by the Associate Provost for Undergraduate Academic Affairs.

## Priorities for Admission to MDIA 215 and Major Program Specific Courses

MDIA 215 is restricted to School of Media and Communications students. Pre-media majors with at least a 2.0 cumulative GPA may enroll in MDIA 215 if space permits after School of Media and Communications students have received their registration priority. Major courses are restricted to School of Media and Communications majors, with priority given to those students pursuing that specific area of study.

## Career


- Professional Relationships (p. 518)
- Experiential Learning (p. 519)
- Journalism Organizations (p. 519)
- Internship/Practicum Credit (p. 519)
- Job Placement (p. 520)


## Professional Relationships

Relationships are maintained with state and national communications and journalism professionals through the West Virginia Press Association, the West Virginia Broadcasters Association, the West Virginia Associated Press Broadcasters Association, Public Relations Society of America, American Advertising Federation, National Press Photographers Association, the National Association of Black Journalists, the Broadcast Education Association,

the Association for Women in Sports Media and the Society of Professional Journalists. These groups have provided educational and financial support to the College along with internships and job opportunities.

Every year, the School provides opportunities for students to get advice on how to find jobs, write resumes, produce professional portfolios and broadcast clips, and conduct themselves on job interviews. Employers also regularly visit campus to interview School of Media and Communications students for internships and permanent positions.

The School also hosts events to spur innovation and creativity in media, including workshops and panel discussions on such themes as journalists' safety, social documentary storytelling, social justice reporting, misinformation, sport communication and storytelling through augmented and virtual reality and digital and mobile media.

## Experiential Learning

Students gain real-world experience through service-learning and senior capstone courses, as well as with special projects and student organizations. For example, advertising and public relations students work with local nonprofit organizations to help plan campaigns and special events and they work through Martin Hall Agency to assist regional and statewide clients. Journalism students write, report, and produce multimedia content for newspapers, television, and other media and sports networks across the state and region. Faculty and students work together on high-profile projects that impact the community and give students valuable hands-on experience. These have included research-based community branding campaigns to support regional tourism; local television news and public affairs shows; public broadcasting podcasts; special sports packages for the Big 12 and ESPN+; courses with Pulitzer Prize–winning investigative journalists and collaborative courses and multimedia content production with faculty and students from other institutions including George Washington University, the University of Oklahoma and Morgan State University.

Students also develop their professional skills and portfolios through internships at news organizations and advertising and public relations agencies, as well as in the communications departments of companies and nonprofit organizations. College of Media students have interned at such organizations as the Charleston Gazette-Mail, Porter-Novelli, the Washington Nationals, DEC PR (Sydney, Australia), Fox Sports, the Smithsonian Institute, WTAE-TV Pittsburgh, ReedPOP Events, Spectrum News, PepsiCo and West Virginia Public Broadcasting among others.

## Advertising and Public Relations, Journalism and Sports and Adventure Media Organizations

Several organizations affiliated with the School of Media and Communications provide honor and recognition as well as fellowship and education. They include:

- American Advertising Federation (AAF), the nation’s oldest national advertising trade association, and the only association representing all facets of the advertising industry
- Association for Women in Sports Media, an organization supporting the advancement of women in sports media
- Her Campus, a media site for college women, written entirely by the world’s top college journalists
- Kappa Tau Alpha, a national scholastic honorary for students with exceptional academic records in journalism
- Martin Hall Agency, a student-run professional advertising/public relations agency
- Mirage Magazine, a student-run lifestyle and fashion publication
- National Association of Black Journalists, an organization dedicated to strengthening ties among African-American journalists and promoting diversity in newsrooms
- Online News Association, a nonprofit membership organization of digital journalists
- Public Relations Student Society of America, the student arm of the largest professional organization devoted to public relations
- Radio Television Digital News Association, the world’s largest organization exclusively serving the electronic news profession
- RAPID, an organization that explores emerging media and technology
- Society of Professional Journalists, the journalism profession's most broad-based organization
- WVU Film Club, a student-run group that helps people learn more about film, its production and creation process

## Internship/Practicum Credit

Students may choose any of the following options when taking an internship or practicum:

- Resume experience—no College credit or monetary compensation
- Experience—paid, but not for credit
- Experience—College credit plus monetary compensation
- Experience—College credit but no monetary compensation

Typically, students choose to do an internship/practicum for credit because the employer requires it or the student needs the elective credit(s). Students who wish to do an internship/practicum for credit must see the School of Media and Communications director of student careers and opportunities to complete a contract and to be registered for JRL 441 (3 credits, typically done in the summer) or JRL 442 (1–2 credits). Students in the Sport and

Adventure Media major take MDIA 441 (1-3 credits) which a graded course required in the Area of Emphasis for the major. (Students cannot receive credit retroactively, per School policy). Fifty hours on the job equals one credit hour. If internship/practicum is graded as pass/fail, it may be used for general elective credit, but cannot be used to fulfill major course elective requirements.

## Job Placement

The School of Media and Communications director of student careers and opportunities assists future graduates in finding professional positions by acting as a placement clearinghouse for current students and alumni. School of Media and Communications faculty also advise and assist students in the preparation of resumes and portfolios. Representatives of newspapers, magazines, public relations, broadcasting, advertising firms and many units on campus frequently request that School of Media and Communications faculty provide applicants for job openings and internships.

# Advertising and Public Relations, B.S.J.

## Degree Offered

- Bachelor of Science in Journalism

## Nature of the Program

The advertising and public relations major teaches students how to ethically serve and engage diverse audiences in all sectors of society. Students learn how to develop and manage creative, integrated and strategic campaigns. Students in this major select an area of emphasis (AOE) in either advertising or public relations to complement their strategic communications coursework. Both majors require creativity and critical thinking.

Students build skills in writing, research, strategy, design, digital and social media, as well as the ethics, history and laws that provide a foundation for their field. They may further their expertise through such courses as Martin Hall Agency, crisis communication, international communication, event planning, advocacy communication, visual storytelling, media planning, influencer marketing and study abroad experiences. Students plan and produce promotional and educational campaigns and materials for actual clients, which include local businesses, nonprofits and communities, as well as larger grant-funded projects that impact the state. As a result, students gain real-world experience that can lead to careers in advertising and public relations agencies, corporations, nonprofits, government, education, entertainment, sports, healthcare, and other fields.

### ADVERTISING AREA OF EMPHASIS

Students who select the advertising AOE within the advertising and public relations major obtain a solid foundation in creative copywriting and design, media planning, audience insights and analysis, and campaigns. Additional courses in ideation, strategic social media and account management are available to round out students' individual interests. They go on to work at advertising and marketing agencies, within corporate communications offices, as media planners, or as consultants and business owners. The advertising curriculum also affords a solid foundation for law or other specialized graduate programs. The School of Media and Communications offers a 3 + 3 degree in collaboration with the College of Law for high-achieving students.

### PUBLIC RELATIONS AREA OF EMPHASIS

Students who select the public relations AOE within the advertising and public relations major take courses in strategic writing and social media, design, audience research and analysis, and campaigns. Additional courses that apply to the major include special event planning, crisis communication, multi- and interactive media, international public relations and influencer marketing. Students go on to work at communications agencies, in government, healthcare organizations, nonprofits, corporations and politics. Those students who wish to go on to law or graduate school have a solid grounding in writing, research, analysis and communications. The School of Media and Communications offers a 3 + 3 degree in collaboration with the College of Law for high-achieving students.

## Admissions for 2026-2027


- Admission to the School of Media and Communications (p. 520)
- Scholarships (p. 521)
- Choosing a Major (p. 521)
- Accelerated Bachelor's/Master's Program (p. 521)


## Admission to the School of Media and Communications

**For specific information regarding the admissions requirements for First Time Freshmen to the School of Media and Communications, please visit** Admission to the School of Media and Communications **(**p. 517**).** WVU students with a cumulative GPA of 2.0 or higher can declare a major in the School of Media.

Students who do not meet these criteria will automatically be enrolled in WVU's Center for Learning, Advising and Student Success (CLASS). Students advised in CLASS may declare a major in the School of Media and Communications once they have earned a cumulative GPA of 2.0 at WVU.

## Scholarships

In addition to financial aid from West Virginia University, the School of Media and Communications offers a number of scholarships each year to incoming freshmen.  All students applying for scholarships must file a FAFSA form by the deadline, even if they are not eligible for need-based aid.

## Choosing a Major

The School of Media and Communications offers five majors: advertising and public relations, integrated marketing communication, journalism, sports and adventure media and multidisciplinary media studies.

Direct admission students are admitted to the School upon admission to the University and declare their majors at that time.

## Accelerated Bachelor's/Master's Programs

Students in the advertising and public relations or journalism undergraduate programs in the School of Media and Communications with a minimum cumulative GPA of 3.3 are eligible for the Accelerated Masters of Science in Journalism program. This allows students to customize a research project that is relevant to their interests, whether they are Advertising and Public Relations or Journalism majors. Interested students are identified during their initial year or two at the School, and, if interested, must meet with their academic advisor, by the fall of their junior year. Freshmen and sophomores are welcome to stop by to discuss the program as well.

Students in the advertising and public relations, integrated marketing communications, journalism or multidisciplinary media studies undergraduate programs in the School of Media and Communications and with a GPA in excess of 3.3 will be eligible for admission to the Accelerated Masters of Science in Integrated Marketing Communications program beginning in first semester of their junior year. They will meet with the School of Media and Communications undergraduate online programs advisor, Aaron Hawley, and work closely with him to apply for admission to the  program. Students will be admitted to the program no later than the second semester of their junior year and begin taking graduate courses during the first semester of their senior year.

### 3+3 BSJ/JD

Qualifying students also may apply for the 3+3 BSJ/JD degree program, which is a collaborative program of the WVU School of Media and Communications and the College of Law. More information about accelerated programs can be found on the School of Media and Communications website.

Major Code: 3724

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 42 |
| Non-Journalism/Media Requirements | | 27 |
| School of Media and Communications Core Requirements | | 15 |
| Advertising and Public Relations Major Requirements | | 36 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 6, and 7 | | 16 |
| MDIA 191 | First-Year Seminar | 2 |
| **General Electives** ** | | **24** |
| Total Hours | | 42 |

## Non-Journalism/Media Requirements

| Code | Title | Hours |
|---|---|---|
| POLS 102 | Introduction to American Government | 3 |
| STAT 111 | Understanding Statistics (GEF 3) | 3 |
| HIST 153 | Making of Modern America: 1865 to the Present (GEF 5) | 3 |
| ECON 200 | Survey of Economics | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| English literature or Creative Writing course | | 3 |
| Two semesters of any foreign language/computer coding course or one language/coding course +study abroad | | 6 |
| Select one of the following: | | 3 |
| PSYC 101 | Introduction to Psychology | |
| SOC 101 | Introduction to Sociology | |
| ANTH 105 | Introduction to Anthropology | |
| Total Hours | | 27 |

## School of Media and Communications Core Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in School of Media and Communications Core Requirements. | | |
| MDIA 101 | Media and Society (may fulfill GEF 4) | 3 |
| MDIA 215S | Media Writing | 3 |
| MDIA 225S | Media Tools & Applications | 3 |
| MDIA 328 | Media Ethics and Law | 3 |
| MDIA 427 | History of American Journalism, Media & Pop Culture | 3 |
| or MDIA 555 | Media, Identity, and Power | |
| Total Hours | | 15 |

## Advertising and Public Relations Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in Advertising and Public Relations Major Requirements. | | |
| ADPR 215 | Introduction to Advertising and Public Relations | 3 |
| ADPR 421S | Advertising & PR Audience Insights & Analysis | 3 |
| Select one of the following capstone courses: | | 3 |
| ADPR 457S | Martin Hall Agency Experience | |
| ADPR 459S | Strategic Communication Campaigns for Public Relations and Advertising | |

| | |
|---|---|
| **Required Area of Emphasis (12 credits)** | **12** |
| Select one of the following Areas of Emphasis (details below): | |
| Advertising (ADV) | |
| Public Relations (PR) | |
| **Required Minor** * | **15** |
| Total Hours | 36 |

| Code | Title | Hours |
|---|---|---|
| **English Literature or Creative Writing Courses** | | |
| English Literature | | |
| ENGL 131 | Poetry and Drama | 3 |
| ENGL 132 | Short Story and Novel | 3 |
| ENGL 139 | Contemporary African Literature | 3 |
| ENGL 154 | African American Literature | 3 |
| ENGL 156 | Literature of Native America | 3 |
| ENGL 226 | World Literature | 3 |
| ENGL 232 | Poetry | 3 |
| ENGL 233 | The Short Story | 3 |
| ENGL 234 | Drama | 3 |
| ENGL 235 | Novel | 3 |
| ENGL 236 | The Bible as Literature | 3 |
| ENGL 241 | American Literature 1 | 3 |
| ENGL 242 | American Literature 2 | 3 |
| ENGL 251 | American Folklore and Culture | 3 |
| ENGL 252 | Appalachian Fiction | 3 |
| ENGL 254 | African American Literature | 3 |
| ENGL 257 | Science Fiction and Fantasy | 3 |
| ENGL 258 | Popular American Culture | 3 |
| ENGL 261 | British Literature before 1800 | 3 |
| ENGL 262 | British Literature 2 | 3 |
| ENGL 263 | Shakespeare 1 | 3 |
| ENGL 272 | Modern Literature | 3 |
| ENGL 273 | Contemporary Literature | 3 |
| ENGL 285 | Images of Women in Literature | 3 |
| Creative Writing | | |
| ENGL 111 | Introduction to Creative Writing | 3 |
| ENGL 212 | Creative Writing: Fiction | 3 |
| ENGL 213 | Creative Writing: Poetry | 3 |
| ENGL 214 | Creative Writing: Non-Fiction | 3 |

*****

Minors must have 9 hours of unique coursework. Note that some minors require online coursework for which additional fees apply. Students must complete an officially sanctioned minor outside the School of Media and Communications. However, students may pursue the Sport Communication minor, which is offered jointly by the College of Creative Arts and Media and the College of Applied Human Sciences. Students completing a dual-degree are exempt from the requirement to complete a minor. Students should consult their advisor before starting a minor. Some minors require 18 hours of coursework instead of 15 hours.

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General Education and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | MDIA 215S | 3 |
| MDIA 101 (GEF 4) | 3 | MDIA 225S | 3 |
| MDIA 191 | 2 | Language Course | 3 |
| ADPR 215 | 3 | GEF 2B | 4 |
| Language Course | 3 | Select one of the following: | 3 |
| | | PSYC 101 | |
| | | SOC 101 | |
| | | ANTH 105 | |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Select one of the following according to AOE: | 3 | MDIA 328 | 3 |
| ADV 315S | | ENGL 102 (GEF 1) | 3 |
| PR 324S | | STAT 111 (GEF 3) | 3 |
| ECON 200 | 3 | Minor Course | 3 |
| Minor Course | 3 | Elective | 3 |
| Elective | 3 | | |
| Elective | 3 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIST 153 (GEF 5) | 3 | ENGL Literature or Creative Writing Course | 3 |
| ADPR 421S | 3 | Minor Course | 3 |
| MDIA 427 or 555 | 3 | BCOR 350 | 3 |
| Select one of the following according to AOE: | 3 | AOE Elective | 3 |
| ADV Elective | | Elective | 3 |
| ADPR 319S | | | |
| Minor Course | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 102 | 3 | Choose one of the following capstones: | 3 |
| Minor Course | 3 | ADPR 457S | |
| GEF 6 | 3 | ADPR 459S | |
| Electives | 6 | AOE Elective | 3 |
| | | Electives | 6 |
| | | GEF 7 | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis

- Advertising (p. 525)
- Public Relations (p. 526)

## Advertising (ADV) Area of Emphasis Requirements

Students learn how to develop and produce persuasive messages and advertising campaigns. Students build skills in writing, research, media planning, and campaign management. Advertising students plan and produce advertising campaigns for actual clients, gaining real-world experience that can lead to careers in advertising agencies, corporations and public-sector fields.

| Code | Title | Hours |
|---|---|---|
| A grade of C- or higher must be earned in all emphasis courses. | | |
| ADV 315S | Advertising Copywriting | 3 |
| ADPR 319S | Creative Design and Strategy | 3 |
| Two courses (six hours) of 300- or 400-level ADV, ADPR or advisor-approved Course Electives | | 6 |
| ADV 401S | Creative 1 | |
| ADV 403 | Media Planning/Strategy | |
| ADV 451 | Interactive Marketing Commctns | |
| ADV 493 | Special Topics | |
| ADPR 450 | Audience Psychology and Behavior | |
| ADPR 452 | Strategic Communication Strategy and Management | |
| Total Hours | | 12 |

## Suggested Plan of Study for Advertising (ADV) Area of Emphasis

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | MDIA 215S | 3 |
| MDIA 101 (GEF 4) | 3 | ENGL Literature or Creative Writing Course | 3 |
| MDIA 191 (Fulfills WVUE 191 requirement) | 2 | Language Course | 3 |
| ADPR 215 | 3 | Select one of the following: | 3 |
| Language Course | 3 | PSYC 101 | |
| General Elective | 1 | SOC 101 | |
| | | ANTH 105 | |
| | | General Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | HIST 153 (GEF 5) | 3 |
| ECON 200 | 3 | GEF 6 | 3 |
| MDIA 225S | 3 | ADV 315S | 3 |
| GEF 2B | 4 | General Elective | 5 |
| General Elective | 3 | | |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| STAT 111 (GEF 3) | 3 | BCOR 350 | 3 |
| 300- or 400-level AOE Course | 3 | ADPR 421S | 3 |
| Minor Course | 3 | 300- or 400-level AOE Course | 3 |
| General Elective | 3 | Minor Course | 3 |
| GEF 7 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 102 | 3 | MDIA 328 | 3 |
| ADPR 459S | 3 | Minor Course | 3 |
| 300- or 400-level AOE Course | 3 | General Electives | 9 |

| | | |
|---|---|---|
| Minor Courses | 6 | |
| | 15 | 15 |

Total credit hours: 120

## Public Relations (PR) Area of Emphasis Requirements

Students learn how to communicate with multiple stakeholders to achieve business objectives, create media campaigns and plan events for nonprofit organizations, private firms, government agencies and businesses. Public relations students develop traditional and digital communication strategies and tactics, such as communication and social media plans, public service announcements, videos, media kits, brochures, speeches, and press releases. While focusing on public relations, students also receive a solid education in writing, research, interviewing skills, and media and audience analysis.

| Code | Title | Hours |
|---|---|---|
| A grade of C- or higher must be earned in all emphasis courses. | | |
| ADPR 319S | Creative Design and Strategy | 3 |
| PR 324S | Public Relations Writing and Applications | 3 |
| 2 courses (6 hours) of 300- or 400-level PR, ADPR or advisor-approved Course Electives | | 6 |
| ADPR 439 | Strategic Social Media | |
| MDIA 438 | Branded Content and Narrative | |
| PR 333S | Web Development | |
| PR 455S | Strategic Event Planning and Promotion | |
| PR 493 | Special Topics | |
| Total Hours | | 12 |

## Suggested Plan of Study for Public Relations (PR) Area of Emphasis

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | MDIA 215S | 3 |
| MDIA 101 (GEF 4) | 3 | ENGL Literature or Creative Writing Course | 3 |
| MDIA 191 (Fulfills WVUE 191 Requirement) | 2 | Language Course | 3 |
| ADPR 215 | 3 | Select one of the following: | 3 |
| Language Course | 3 | PSYC 101 | |
| General Elective | 1 | SOC 101 | |
| | | ANTH 105 | |
| | | General Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | BCOR 350 | 3 |
| ECON 200 | 3 | HIST 153 (GEF 5) | 3 |
| MDIA 225S | 3 | General Elective | 2 |
| GEF 2B | 4 | GEF 6 | 3 |
| General Elective | 3 | ADPR 319S | 3 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 102 | 3 | STAT 111 (GEF 3) | 3 |
| Minor Course | 3 | 300- or 400-level AOE Course | 3 |
| PR 324S | 3 | Minor Course | 3 |
| General Elective | 3 | Electives | 6 |
| GEF 7 | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ADPR 421S | 3 | MDIA 328 | 3 |
| 300- or 400-level AOE Course | 3 | ADPR 459S | 3 |
| Minor Courses | 6 | Minor Course | 3 |
| General Elective | 3 | General Electives | 6 |
| | 15 | | 15 |

Total credit hours: 120

## Accelerated Bachelor's/Master's Programs

- B.S.J. in Advertising and Public Relations/M.S. in Integrated Marketing Communications (p. 527)
- B.S.J. in Advertising and Public Relations/M.S.J. in Journalism (p. 528)

## Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for the BSJ in Advertising and Public Relations, including earning a minimum grade of C- in School of Media and Communications Core Requirements and Advertising and Public Relations major requirements. In addition to all the requirements of the M.S. in Integrated Marketing Communications. Students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| Advertising and Public Relations Major Requirements | | 108 |
| Shared Bachelor's/Master's Coursework | | 12 |
| M.S. Integrated Marketing Communications Major Requirements | | 18 |
| Total Hours | | 138 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| IMC 410 | Introduction to Integrated Marketing Communications | 3 |
| IMC 511 | Marketing Research and Analysis | 3 |
| IMC 512 | Audience Insight | 3 |
| IMC 513 | Brand Equity Management | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | MDIA 215S | 3 |
| MDIA 101 (GEF 4) | 3 | MDIA 225S | 3 |
| MDIA 191 | 2 | Language Course | 3 |
| ADPR 215 | 3 | GEF 2B | 4 |
| Language Course | 3 | Select one of the following:<br>PSYC 101<br>SOC 101<br>ANTH 105 | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Select one of the following according to AOE:<br>ADV 315S<br>PR 324S | 3 | JRL 328<br>ENGL 102<br>STAT 111 (GEF 3) | 3<br>3<br>3 |
| ECON 200 | 3 | Minor Course | 3 |
| Elective | 3 | Elective | 3 |

| | | | |
|---|---|---|---|
| Minor Course | | 3 | |
| Elective | | 3 | |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIST 153 (GEF 5) | | 3 ENGL Literature or Creative Writing Course | 3 |
| ADPR 421S | | 3 GEF 5 | 3 |
| Select one of the following according to AOE: | | 3 Minor Course | 3 |
| ADV Elective | | BCOR 350 | 3 |
| ADPR 319S | | AOE Elective | 3 |
| Minor Course | | 3 | |
| AOE Elective | | 3 | |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 102 | | 3 Choose one of the following capstones: | 3 |
| Minor Course | | 3 ADPR 457S | |
| GEF 6 | | 3 ADPR 459S | |
| IMC 410 | | 3 IMC 511 | 3 |
| IMC 513 | | 3 IMC 512 | 3 |
| | | GEF 7 | 3 |
| | | Elective | 3 |
| | | 15 | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMC Electives (1 and 2 of 3) | | 6 IMC Specialty Course (2 of 2) | 3 |
| IMC Specialty Course (1 of 2) | | 3 IMC Elective Course (3 of 3) | 3 |
| | | IMC 536 | 3 |
| | | 9 | 9 |

Total credit hours: 138

Students in the ADPR BSJ + IMC MS ABM program can share a total of 12 credits, in IMC 410, IMC 511, IMC 512 and IMC 513 across both their graduate and undergraduate degrees.

## Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for the BSJ in Advertising and Public Relations, including earning a minimum grade of C- in School of Media and Communications Core Requirements and Advertising and Public Relations major requirements. In addition to all the requirements of the M.S.J in Journalism, students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| Advertising and Public Relations Major Requirements | | 108 |
| Shared Bachelor's/Master's Coursework | | 12 |
| M.S.J Journalism | | 18 |
| Total Hours | | 138 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| JRL 500 | Introduction to Graduate Studies | 1 |
| JRL 504 | Mass Media and Society | 3 |
| JRL 520 | Advanced Journalistic Writing and Research | 3 |
| JRL 528 | Media Ethics and Law | 3 |

| | |
|---|---|
| Elective | 3 |
| Total Hours | 13 |

## Suggest Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ADPR 215 | 3 | ANTH 105, PSYC 101, or SOC 101 | 3 |
| ENGL 101 (GEF 1) | 3 | MDIA 215S | 3 |
| JRL 191 | 2 | English Literature or Creative Writing course | 3 |
| MDIA 101 (GEF 4) | 3 | GEF 3 | 3 |
| Language Course | 3 | Lanuguage Course | 3 |
| | 14 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 200 | 3 | ADPR 319S | 3 |
| ENGL 102 | 3 | HIST 153 | 3 |
| MDIA 225S | 3 | STAT 111 | 3 |
| GEF 2B | 4 | GEF 6 | 3 |
| GEF 5 | 3 | Elective | 2 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ADV 315S or PR 324S | 3 | BCOR 350 | 3 |
| POLS 102 | 3 | AOE course at 300 or 400 level | 3 |
| Minor Course | 3 | Minor Course | 3 |
| GEF 7 | 3 | Electives | 6 |
| Elective | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ADPR 421S | 3 | ADPR 559S | 3 |
| JRL 500 | 1 | JRL 520 | 3 |
| JRL 504 | 3 | JRL 528 | 3 |
| AOE Course at 300 or 400 level | 3 | Minor Course | 3 |
| Minor Course | 3 | Elective* | 3 |
| Minor Course | 3 | | |
| | 16 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| JRL 697 | 6 | JRL 689 | 3 |
| Elective* | 3 | JRL 698 | 3 |
| | | Elective* | 3 |
| | 9 | | 9 |

Total credit hours: 138

*****

These electives should be at the 500- or 600-level and may come from within or external to the School of Media and Communications.

## Major Learning Outcomes

### ADVERTISING AND PUBLIC RELATIONS

The Reed School of Media and Communications states as its learning goals the values and competencies of its national accrediting body, the Accrediting Council for Education in Journalism and Mass Communications, which appear under information about the B.S. in Journalism degree. In

addition, the School faculty have set other specific educational outcomes deemed critical for success as professional communicators. These additional educational outcomes for advertising and public relations majors are:

1. Advertising and public relations graduates will understand how to serve, reflect and engage diverse publics and will be prepared to either work in the field or to pursue advanced educational opportunities.
2. Advertising and public relations graduates will demonstrate professional competency in preparing campaign plans, using both traditional and digital means, including obtaining, analyzing and interpreting data; establishing goals and objectives; identifying appropriate strategies; developing creative tactics; and understanding budgeting, timeframes, and success indicators/evaluation.
3. Advertising and public relations graduates will demonstrate an understanding of the history of media, advertising, public relations, and the influence of technology on the communication professions.
4. Advertising and public relations graduates will demonstrate the ability to professionally present ideas in all forms: written, verbal, and with the use of appropriate digital/electronic audio-visual materials.
5. Advertising and public relations graduates will understand the working relationship between advertising and public relations, as well as related marketing communications vehicles and media planning and placement.
6. Advertising and public relations graduates will be able to demonstrate knowledge and understanding of communication ethics and law as it applies to advertising, media and public relations, including privacy in the context of database marketing, artificial intelligence and social media.
7. Advertising and public relations graduates will be able to work effectively and collaboratively in teams to create messages, solve problems and develop and implement integrated communication strategies using human-centered design principles.

# Integrated Marketing Communication, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The Integrated Marketing Communications program is a wholly online major offered by the School of Media and Communications.

This major combines the complementary business and communications fields of advertising, marketing and public relations. As such, students develop an understanding of using traditional, digital/social media and other promotional and marketing techniques to reach and engage consumers and stakeholders. Students will learn about ethical, legal and socially responsible considerations in such efforts and will demonstrate an understanding of research, data, diverse audiences and inclusive practices.

## Admissions for 2026-2027

The Integrated Marketing and Communication Program uses the same undergraduate admission standards for first-time freshmen as West Virginia University (WVU).

Visit the WVU undergraduate admissions (http://apply.wvu.edu/applynow/) page for details on general WVU admission.

Students who have completed at least one full-time semester of college work (either at WVU or elsewhere) with a cumulative GPA of 2.0 or higher may also qualify for direct admission into the School of Media and Communications irrespective of standardized test scores.

Students who do not meet either of these criteria will automatically be enrolled in a pre-media major and advised by WVU's Center for Learning, Advising and Student Success (CLASS). Students advised in CLASS may declare a major in the School of Media and Communications once they have earned an overall GPA of 2.0 at WVU.

For questions contact Aaron Hawley at 304.293.3133 at aaron.hawley@mail.wvu.edu

Major code: 3721

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |

| | | |
|---|---|---|
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 69 |
| Integrated Marketing Communications Major Requirements | | 51 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, and 7 | | 24 |
| General Electives | | 43 |
| IMC 191 | First-Year Seminar | 2 |
| Total Hours | | 69 |

## Integrated Marketing Communications Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in Integrated Marketing Communication Major Requirements. | | |
| IMC 215 | Principles of Integrated Marketing Communications (IMC) | 3 |
| MDIA 101 | Media and Society | 3 |
| MDIA 215S | Media Writing | 3 |
| STCM 315 | Strategic Advertising and Public Relations Writing | 3 |
| or PR 324S | Public Relations Writing and Applications | |
| Select one of the following (GEF 4): | | 3 |
| PSYC 101 | Introduction to Psychology | |
| SOC 101 | Introduction to Sociology | |
| ADPR 421S | Advertising & PR Audience Insights & Analysis | 3 |
| ADPR 439 | Strategic Social Media | 3 |
| ADPR 450 | Audience Psychology and Behavior | 3 |
| ADV 403 | Media Planning/Strategy | 3 |
| MDIA 328 | Media Ethics and Law | 3 |
| MDIA 438 | Branded Content and Narrative | 3 |
| PR 410 | Integrated Marketing Communications for Public Relations | 3 |
| MDIA 401 | Making Media in the Digital Age | 3 |
| IMC 459 | IMC Capstone | 3 |
| Complete one IMC Track of student's choice [*] | | 9 |
| Total Hours | | 51 |

*

I.M.C. track must be selected from the following: Entertainment Media, Event Planning, Health Promotion, Sport Communication or Strategic Social Media. Students must complete nine unique credit hours to complete their selected track.

## I.M.C Tracks

| Code | Title | Hours |
|---|---|---|
| Entertainment Media Track | | 9 |
| PR 431 | Promotion for Entertainment Media | |
| PR 432 | Entertainment Media Branding | |
| PR 433 | Entertainment Media Campaigns | |
| Event Planning Track | | 9 |
| PR 436 | Event Planning | |
| PR 437 | Event Promotion | |
| PR 438 | Event Execution | |
| Health Promotion Track | | 9 |
| JRL 450 | Writing for Health Promotion | |
| JRL 452 | Applied Health Promotion | |
| JRL 454 | Health Promotion Campaigns | |
| Sport Communication Track | | 9 |
| JRL 412 | Sport Journalism | |
| MDIA 361 | Media Relations In Sport | |
| PR 412 | IMC for Sport | |
| Strategic Social Media Track | | 9 |
| JRL 432 | Social Media Strategy | |
| JRL 433 | Social Media Applications | |
| JRL 434 | Social Media Campaigns | |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | MDIA 215S | 3 |
| IMC 215 | 3 | GEF 2 | 3 |
| IMC 191 | 2 | Elective | 3 |
| MDIA 101 (GEF 4) | 3 | Elective | 3 |
| Elective | 3 | Select one of the following (GEF 4): | 3 |
| Elective | 1 | PSYC 101 | |
| | | SOC 101 | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | ADPR 439 | 3 |
| STCM 315 or PR 324S | 3 | GEF 3 | 3 |
| Elective | 3 | PR 410 | 3 |
| GEF 2 | 3 | IMC Track Course #1 | 3 |
| GEF 5 | 3 | Elective | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ADPR 421S | 3 | ADV 403 | 3 |
| IMC Track Course #2 | 3 | GEF 6 | 3 |
| MDIA 401 | 3 | ADPR 450 | 3 |
| Elective | 3 | Elective | 3 |

| | | | |
|---|---|---|---|
| Elective | | 3 Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MDIA 438 | | 3 MDIA 328 | 3 |
| IMC Track Course #3 | | 3 IMC 459 | 3 |
| Elective | | 3 GEF 7 | 3 |
| Elective | | 3 Elective | 3 |
| Elective | | 3 Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

## Accelerated Program

- B.S. Integrated Marketing Communications and M.S. Integrated Marketing Communications (p. 533)

## Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for the B.S. in Integrated Marketing Communications, including earning a minimum grade of C- in Integrated Marketing Communications major requirements. In addition to all the requirements of the M.S. in Integrated Marketing Communications. Students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| B.S. Integrated Marketing Communications Major Requirements | | 108 |
| Shared Bachelor's/Master's Coursework | | 12 |
| M.S. Integrated Marketing Communiations Requirements | | 18 |
| Total Hours | | 138 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| IMC 410 | Introduction to Integrated Marketing Communications | 3 |
| IMC 511 | Marketing Research and Analysis | 3 |
| IMC 512 | Audience Insight | 3 |
| IMC 513 | Brand Equity Management | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMC 191 | | 2 ACCT 201 | 3 |
| ENGL 101 (GEF 1) | | 3 MDIA 215S | 3 |
| MDIA 101 (GEF 4) | | 3 GEF 2 | 3 |
| IMC 215 | | 3 Minor Course 1 | 3 |
| Elective | | 3 Elective | 3 |
| Elective | | 1 | |
| | | 15 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | | 3 ECON 225 (GEF 3) | 3 |
| BCOR 350 | | 3 ADPR 439 | 3 |
| STCM 315 or PR 324S | | 3 BCOR 380 | 3 |
| GEF 2 | | 3 MKTG 330 | 3 |

| | | | |
|---|---|---|---|
| GEF 4 | 3 | Minor Course 2 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ADPR 421S or MKTG 325 | 3 | ADV 403 | 3 |
| MKTG 350 | 3 | MKTG 315 or ADPR 450 | 3 |
| Minor Course 3 | 3 | Minor Course 4 | 3 |
| GEF 5 | 3 | GEF 6 | 3 |
| 400-level MKTG Elective | 3 | Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ADV 491, PR 491, or MKTG 491 | 3 | IMC 459 | 3 |
| MDIA 438 | 3 | BCOR 320 | 3 |
| Minor Course 5 | 3 | GEF 7 | 3 |
| IMC 410 | 3 | IMC 511 | 3 |
| IMC 513 | 3 | IMC 512 | 3 |
| | 15 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMC Electives (1 and 2 of 3) | 6 | IMC Specialty Course (2 of 2) | 3 |
| IMC Specialty Course (1 of 2) | 3 | IMC Elective Course (3 of 3) | 3 |
| | | IMC 536 | 3 |
| | 9 | | 9 |

Total credit hours: 138

Students in the IMC BS+MS ABM program can share a total of 12 credits, in IMC 410, IMC 511, IMC 512 and IMC 513 across both their graduate and undergraduate degrees.

## Major Learning Outcomes

### INTEGRATED MARKETING COMMUNICATIONS

Graduates of the undergraduate IMC program will:

1. Apply critical thinking, creativity and secondary research skills in collaboration with student colleagues and in the completion of written assignments.
2. Illustrate an understanding of consumer and business segments and the importance of reaching, serving and engaging diverse publics.
3. Demonstrate an understanding of the strategic marketing communications planning process and the importance of a demonstrated return on investment.
4. Demonstrate an understanding of the history of media, advertising, marketing and public relations, their complementary roles, and the influence of technology on these professions.
5. Know when and how to apply traditional and social media planning and placement buys in support of an organization's goals.
6. Be able to evaluate and assess ethical, legal and socially responsible marketing communications decisions.
7. Describe the major types of consumer behavior and the stages in the buyer decision process.

# Journalism, B.S.J.

## Degree Offered

- Bachelor of Science in Journalism

## Nature of the Program

The journalism major at the School of Media and Communications prepares students for careers as journalists working in the fields of broadcast, video and audio production, digital, and newspaper journalism. All students in the journalism major must complete a series of shared core requirements (15 credit hours) and a shared capstone experience (3 credit hours). In addition, students will take two upper-level courses of their own choosing in one of several focus areas: video and audio, visual/photo journalism, documentary or reporting and writing. Students will also take 6 credit hours in journalism

skills classes, such as podcasting, voice performance, AR/VR, video editing and drone journalism in addition to six credits of approved journalism electives.

Journalism majors have the opportunity to participate in immersion journalism courses along with numerous other special topics classes. The School houses student chapters of national journalism and media organizations along with a variety of media-centric clubs and student organizations. Journalism majors who wish to pursue law school or other graduate study have a solid basis in writing and research. The School offers a 3 + 3 degree program with the College of Law for high achieving students.

## Admissions for 2026-2027


- Admission to the School of Media and Communications (p. 535)
- Scholarships (p. 535)
- Choosing a Major (p. 535)
- Accelerated Bachelor's/Master's Program (p. 535)


## Admission to the School of Media and Communications

**For specific information regarding the admissions requirements for First Time Freshmen to the School of Media and Communications, please visit** Admission to the School of Media and Communications **(**p. 517**).**

Students who have completed at least one full-time semester of college work (either at WVU or elsewhere) with a cumulative GPA of 2.0 or higher may also qualify for direct admission into the School of Media and Communications irrespective of standardized test scores. Students who do not meet these criteria will automatically be enrolled in WVU's Center for Learning, Advising and Student Success (CLASS). Students advised in CLASS may declare a major in the School of Media and Communications once they have earned a cumulative GPA of 2.0 at WVU. Or, if a student has a 2.0 cumulative GPA at WVU, they may enroll in MDIA 215S (space permitting) or they may declare the College's Multidisciplinary Studies major. If the student earns a C- or better in MDIA 215S and maintains a 2.0 overall GPA at WVU, then the student may then declare a major in the School of Media.

## Scholarships

In addition to financial aid from West Virginia University, the School of Media and Communications offers a number of scholarships each year to eligible students. All students applying for scholarships must file a FAFSA form by the deadline, even if they are not eligible for need-based aid.

## Choosing a Major

The School of Media and Communications offers five majors: advertising and public relations, integrated marketing communication, journalism, sports and adventure media, and multidisciplinary media studies.

Direct admission students are admitted to the School upon admission to the University and declare their majors at that time. However, to declare a multidisciplinary studies major, students must have earned 29 college credit hours and have a minimum 2.0 overall GPA.

## Accelerated Bachelor's/Master's Program

Students in the advertising and public relations or journalism BSJ programs in the School of Media and Communications with a minimum cumulative GPA of 3.3 are eligible for this program. The accelerated MSJ program allows students to customize a research project that is relevant to their interests, whether they are Advertising and Public Relations or Journalism majors. Interested students are identified during their initial year or two at the School, and, if interested, must meet with their academic advisor by the fall of their junior year. Freshmen and sophomores are welcome to stop by to discuss the program as well. Information is posted on the School's website.

### 3+3 BSJ/JD

Qualifying students may also enroll in the 3+3 BSJ/JD degree program, offered in collaboration with the WVU School of Media and Communications and College of Law. You may learn more about this program on the 3+3 BSJ/JD degree program website (https://admissions.law.wvu.edu/apply/3-plus-3/).

Major Code: 3725

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |

| | | |
|---|---|---|
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 39 |
| Non-Journalism/Media Requirements | | 27 |
| School of Media and Communications Core Requirements | | 15 |
| Journalism Major Requirements | | 39 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 6, and 7 | | 16 |
| MDIA 191 | First-Year Seminar | 2 |
| **General Electives** ** | | **21** |
| Total Hours | | 39 |

## Non-Journalism/Media Requirements

| Code | Title | Hours |
|---|---|---|
| POLS 102 | Introduction to American Government | 3 |
| STAT 111 | Understanding Statistics (GEF 3) | 3 |
| HIST 153 | Making of Modern America: 1865 to the Present (GEF 5) | 3 |
| ECON 200 | Survey of Economics | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| English literature or Creative Writing course | | 3 |
| Two semesters of any foreign language/computer coding course or one language/coding course +study abroad | | 6 |
| Select one of the following: | | 3 |
| PSYC 101 | Introduction to Psychology | |
| SOC 101 | Introduction to Sociology | |
| ANTH 105 | Introduction to Anthropology | |
| Total Hours | | 27 |

## School of Media and Communications Core Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in College of Media Core Requirements. | | |
| MDIA 101 | Media and Society (may fulfill GEF 4) | 3 |
| MDIA 215S | Media Writing | 3 |
| MDIA 225S | Media Tools & Applications | 3 |

| | | |
|---|---|---|
| MDIA 328 | Media Ethics and Law | 3 |
| Select one of the following: | | 3 |
| MDIA 401 | Making Media in the Digital Age | |
| MDIA 427 | History of American Journalism, Media & Pop Culture | |
| MDIA 455 | Media, Identity, and Power | |
| MDIA 555 | Media, Identity, and Power | |
| Total Hours | | 15 |

## Journalism Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in Journalism Major Requirements. | | |
| Select three one-credit-hour JRL skills courses, which include, but are not limited to, the following options: | | 3 |
| JRL 235S | Video Editing | |
| JRL 236S | Podcast Producing | |
| JRL 237S | Advanced Video Editing | |
| JRL 238S | Voice Performance for Broadcasting | |
| JRL 240S | Immersive Storytelling: AR/VR | |
| JRL 325S | Podcast Reporting & Producing | |
| Take each of the following: | | |
| JRL 318S | Beat Reporting | 3 |
| JRL 319S | Editing and Curation | 3 |
| JRL 341S | Data and Design | 3 |
| or JRL 321S | Media Design | |
| JRL 458 | Interactive Media and Audience Building | 3 |
| Select one of the following capstones: | | 3 |
| JRL 411 | Experimental Journalism | |
| JRL 431S | Multimedia Storytelling | |
| JRL 440S | Documentary Storytelling | |
| JRL 459S | Multimedia News Publication | |
| JRL 467S | Public Affairs Show-Morgantown Today | |
| JRL 487S | Advanced Video Reporting and Producing | |
| Select two advisor-approved "track" electives from the following or from other advisor-approved upper-level JRL electives: | | 6 |
| JRL 320S | Advanced Photojournalism | |
| JRL 340S | | |
| JRL 430S | Social Media and Journalism | |
| JRL 426S | Investigative Reporting | |
| JRL 335S | Video and Audio News Writing | |
| NOTE: JRL 235S must be taken concurrently with JRL 335S and counts as a required one-credit JRL skills course | | |
| JRL 386S | Beginning Video Reporting | |
| JRL 448S | Digital Publication: Social Video | |
| JRL 493 | Special Topics | |
| Upper-Division Journalism (JRL) Courses | | |
| **Required Minor** * | | **15** |
| Total Hours | | 39 |

| Code | Title | Hours |
|---|---|---|
| **English Literature or Creative Writing Courses** | | |
| English Literature | | |
| ENGL 131 | Poetry and Drama | 3 |
| ENGL 132 | Short Story and Novel | 3 |
| ENGL 139 | Contemporary African Literature | 3 |
| ENGL 154 | African American Literature | 3 |

| | | |
|---|---|---|
| ENGL 156 | Literature of Native America | 3 |
| ENGL 226 | World Literature | 3 |
| ENGL 232 | Poetry | 3 |
| ENGL 233 | The Short Story | 3 |
| ENGL 234 | Drama | 3 |
| ENGL 235 | Novel | 3 |
| ENGL 236 | The Bible as Literature | 3 |
| ENGL 241 | American Literature 1 | 3 |
| ENGL 242 | American Literature 2 | 3 |
| ENGL 251 | American Folklore and Culture | 3 |
| ENGL 252 | Appalachian Fiction | 3 |
| ENGL 254 | African American Literature | 3 |
| ENGL 257 | Science Fiction and Fantasy | 3 |
| ENGL 258 | Popular American Culture | 3 |
| ENGL 261 | British Literature before 1800 | 3 |
| ENGL 262 | British Literature 2 | 3 |
| ENGL 263 | Shakespeare 1 | 3 |
| ENGL 272 | Modern Literature | 3 |
| ENGL 273 | Contemporary Literature | 3 |
| ENGL 285 | Images of Women in Literature | 3 |
| Creative Writing | | |
| ENGL 111 | Introduction to Creative Writing | 3 |
| ENGL 212 | Creative Writing: Fiction | 3 |
| ENGL 213 | Creative Writing: Poetry | 3 |
| ENGL 214 | Creative Writing: Non-Fiction | 3 |

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Students must complete an officially sanctioned minor outside the School of Media and Communications. However, students may pursue the Sport Communication minor, which is offered jointly by the College of Creative Arts and Media and the College of Applied Human Sciences. Students completing a dual-degree are exempt from the requirement to complete a minor. Students should consult their advisor before starting a minor. Some minors require 18 hours of coursework instead of 15 hours, and some minor courses are offered online primarily during summer terms.

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General Education and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGL Literature or Creative Writing Course | 3 |
| MDIA 101 (GEF 4) | 3 | Language Course | 3 |
| MDIA 215S | 3 | MDIA 225S | 3 |
| MDIA 191 | 2 | GEF 2B | 4 |
| Language Course | 3 | General Elective | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | JRL 318S | 3 |
| ECON 200 | 3 | HIST 153 | 3 |
| JRL 319S | 3 | Minor Course | 3 |
| Minor Course | 3 | General Elective | 3 |
| Select a one-credit-hour JRL Skills Course | 1 | GEF 6 | 3 |
| Select one of the following: | 3 | Select a one-credit-hour JRL Skills Course | 1 |
| PSYC 101 | | | |

| | | | |
|---|---|---|---|
| SOC 101 | | | |
| ANTH 105 | | | |
| | 16 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 102 | 3 | BCOR 350 | 3 |
| MDIA 328 | 3 | STAT 111 | 3 |
| Minor Course | 3 | JRL 458 | 3 |
| JRL 341S or 321S | 3 | 300- or 400-level JRL "track" Elective | 3 |
| GEF 7 | 3 | Select one of the following: | 3 |
| Select a one-credit-hour JRL Skills Course | 1 | MDIA 401 | |
| | | MDIA 427 | |
| | | MDIA 455 | |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| 300- or 400-level JRL "track" Elective | 3 | JRL Capstone Course | 3 |
| Minor Course | 3 | Minor Course | 3 |
| General Elective | 9 | General Elective | 6 |
| | 15 | | 12 |

Total credit hours: 120

## Accelerated Bachelor's/Master's Program

- B.S.J. in Journalism/M.S.J in Journalism (p. 539)
- B.S.J. Journalism and M.S. Integrated Marketing Communications (p. 540)

## Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for both the B.S.J and the M.S.J in Journalism. Students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| B.S.J Undergraduate Requirements | | 108 |
| Shared Bachelor's/Master's Curriculum Coursework | | 12 |
| M.S.J. Master's Requirements | | 18 |
| Total Hours | | 138 |

## Shared Bachelor's/Master's Degree Requirements

| Code | Title | Hours |
|---|---|---|
| JRL 458 | Interactive Media and Audience Building | 3 |
| JRL 504 | Mass Media and Society | 3 |
| JRL 520 | Advanced Journalistic Writing and Research | 3 |
| JRL 528 | Media Ethics and Law | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MDIA 191 | 2 | ENGL Literature or Creative Writing course | 3 |
| MDIA 101 (GEF 4) | 3 | Language Course | 3 |
| MDIA 215S | 3 | GEF 2B | 4 |
| ENGL 101 (GEF 1) | 3 | Select one of the following: | 3 |

| | | | |
|---|---|---|---|
| Language Course | 3 | ANTH 105<br>PSYC 101<br>SOC 101 | |
| | | General Elective | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| One-credit-hour JRL Skills course | 1 | JRL 318S | 3 |
| MDIA 225S | 3 | GEF 6 | 3 |
| Elective | 3 | HIST 153 | 3 |
| ENGL 102 (GEF 1) | 3 | General Elective | 3 |
| BCOR 350 | 3 | Minor Course | 3 |
| One-credit-hour JRL Skills Course | 1 | | |
| | 14 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| JRL 319S | 3 | STAT 111 | 3 |
| GEF 7 | 3 | Minor Course | 3 |
| JRL 341S | 3 | Electives | 3 |
| POLS 102 | 3 | ECON 200 | 3 |
| Minor Course | 3 | JRL "track" elective | 3 |
| One credit-hour-hour JRL Skills Course | 1 | | |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| JRL 458 | 3 | JRL Capstone Course | 3 |
| JRL 528 | 3 | Minor Course | 3 |
| Minor Course | 3 | Elective | 3 |
| JRL 504 | 3 | JRL 520 | 3 |
| Elective | 3 | JRL "track" elective | 3 |
| | 15 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Elective* | 3 | JRL 689 | 3 |
| Elective* | 3 | JRL 697 or 698 | 3 |
| JRL 697 | 3 | Elective* | 3 |
| | 9 | | 9 |

Total credit hours: 138

*

These electives should be at the 500- or 600-level and may come from within or external to the School of Media and Communications.

## Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for the B.S.J in Journalism, including earning a minimum grade of C- in School of Media and Communications Core Requirements and Journalism major requirements. In addition to all the requirements of the M.S. in Integrated Marketing Communications. Students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| B.S.J. Journalism Requirements | | 108 |
| Shared Bachelor's/Master's Coursework | | 12 |

| | |
|---|---|
| M.S. Integrated Marketing Communications Major Requirements | 18 |
| Total Hours | 138 |

## Shared Bachelor's/Master's Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| IMC 410 | Introduction to Integrated Marketing Communications | 3 |
| IMC 511 | Marketing Research and Analysis | 3 |
| IMC 512 | Audience Insight | 3 |
| IMC 513 | Brand Equity Management | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGL Literature or Creative Writing Course | 3 |
| MDIA 101 (GEF 4) | 3 | Language Course | 3 |
| MDIA 215S | 3 | MDIA 225S | 3 |
| MDIA 191 | 2 | Elective | 3 |
| Language Course | 3 | GEF 2B | 4 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | JRL 318S | 3 |
| ECON 200 | 3 | HIST 153 (GEF 5) | 3 |
| JRL 319S | 3 | Minor Course | 3 |
| Minor Course | 3 | Elective | 3 |
| Select a one-credit-hour JRL Skills Course | 1 | GEF 6 | 3 |
| Select one of the following: | 3 | Select a one-credit-hour JRL Skills Course | 1 |
| PSYC 101 | | | |
| SOC 101 | | | |
| ANTH 105 | | | |
| | 16 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| POLS 102 | 3 | BCOR 350 | 3 |
| JRL 328 | 3 | STAT 111 (GEF 3) | 3 |
| Minor Course | 3 | JRL 458 | 3 |
| JRL 341S | 3 | 300- or 400-level JRL "track" Elective | 3 |
| GEF 7 | 3 | Elective | 3 |
| Select a one-credit-hour JRL Skills Course | 1 | | |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| 300- or 400-level JRL "track" Elective | 3 | JRL Capstone Course | 3 |
| Minor Course | 3 | Minor Course | 3 |
| IMC 410 | 3 | IMC 511 | 3 |
| IMC 513 | 3 | IMC 512 | 3 |
| Elective | 3 | | |
| | 15 | | 12 |

| Fifth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| IMC Electives (1 and 2 of 3) | 6 | IMC Specialty Course (2 of 2) | 3 |
| IMC Specialty Course (1 of 2) | 3 | IMC Elective Course (3 of 3) | 3 |
| | | IMC 536 | 3 |
| | 9 | | 9 |

Total credit hours: 138

Students in the IMC BS+MS ABM program can share a total of 12 credits, in IMC 410, IMC 511, IMC 512 and IMC 513 across both their graduate and undergraduate degrees.

## Major Learning Outcomes

### JOURNALISM

The Reed School of Media and Communications states as its learning goals the values and competencies of its national accrediting body, the Accrediting Council for Education in Journalism and Mass Communications, which appear under information about the B.S. in Journalism degree. In addition, the School faculty have set other specific educational outcomes deemed critical for success as professional communicators. These additional educational outcomes for journalism majors are:

1. Journalism graduates will demonstrate proficiency in critical thinking skills, writing and reporting, and an understanding of basic production skills, allowing them to produce news stories and multimedia projects. Graduates will be adequately prepared to either work in the field or pursue advanced educational opportunities.
2. Journalism graduates will demonstrate a mastery of written and spoken communications, an understanding of the technologies of print, television and digital media, and knowledge and applications of these skills in their chosen careers.
3. Journalism graduates will demonstrate an understanding of how to serve, reflect and engage diverse publics in their reporting and producing.
4. Journalism graduates will demonstrate knowledge of media ethics, law and regulation, including a full understanding of the First Amendment within the context of artificial intelligence and social media.
5. Journalism graduates will demonstrate specialized knowledge of news media interactions with various critical publics, including but not limited to: government at all levels; educational entities; law enforcement; medical, social and humanitarian services; and religious and secular organizations within the community.
6. Journalism graduates will learn to work as collaborative teams to solve problems, create strategies and produce content across all media platforms using the principles of human-centered design.
7. Journalism graduates demonstrate the ability to engage an audience using social media networking and analytics tools.
8. Journalism graduates will demonstrate an understanding of the history of technology and Silicon Valley in the context of media and its impact on acquisition, production, distribution and the economic models of media.
9. Journalism graduates will learn methods for data mining, evaluating sources, and investigating algorithms.
10. Journalism graduates will be introduced to programming for media in one or more modern languages.

# Multidisciplinary Media Studies, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

As the world has become more complex, our communications industries have evolved with it, and future professionals must have both specific skills and broad-based backgrounds to adapt quickly to this changing environment. The School of Media and Communications Multidisciplinary Media Studies Bachelor of Arts program draws upon undergraduate course offerings university-wide and is comprised of three media-focused tracks. *Many School of Media and Communications courses are designed to be completed online; therefore many of the courses are available* only *online and sometimes must be taken during summer terms. Note that additional online course fees apply.*

The Multidisciplinary Media Studies program will develop students who will:

- acquire a broad liberal arts education
- have studied three media areas of interest in depth
- be capable of critical thought
- understand the importance of the First Amendment and media ethics in a democratic society
- be able to analyze problems from multiple perspectives

To declare a Multidisciplinary Media Studies major, students must have a 2.0 minimum overall GPA.

## Admissions for 2026-2027

- Admission to the School of Media and Communications (p. 543)
- Scholarships (p. 543)
- Choosing a Major (p. 543)
- Accelerated Bachelor's/Master's Program (p. 543)

## Admission to the School of Media and Communications

**For specific information regarding the admissions requirements for First Time Freshmen to the School of Media and Communications, please visit** Admission to the School of Media and Communications **(**p. 517**).**

Students who have completed at least one full-time semester of college work (either at WVU or elsewhere) with a cumulative GPA of 2.0 or higher may also qualify for direct admission into the School of Media and Communications irrespective of standardized test scores. Students who do not meet these criteria will automatically be enrolled in WVU's Center for Learning, Advising and Student Success (CLASS). Students advised in CLASS may declare a major in the School of Media and Communications once they have earned a cumulative GPA of 2.0 at WVU. Or, if a student has a 2.0 cumulative GPA at WVU, they may enroll in MDIA 215S (space permitting) or they may declare the College's Multidisciplinary Studies major. If the student earns a C- or better in MDIA 215S and maintains a 2.0 overall GPA at WVU, then the student may then declare a major in the School of Media and Communications.

## Scholarships

In addition to financial aid from West Virginia University, the School of Media and Communications offers a number of scholarships each year to eligible students. All students applying for scholarships must file a FAFSA form by the deadline, even if they are not eligible for need-based aid.

## Choosing a Major

The School of Media and Communications offers five majors: advertising and public relations, integrated marketing communication, journalism, sports and adventure media and multidisciplinary media studies.

Direct admission students are admitted to the School upon admission to the University and declare their majors at that time.

## Accelerated Bachelor's/Master's Program

Students in the advertising and public relations or journalism BSJ programs in the School of Media and Communications with a minimum cumulative GPA of 3.3 are eligible for this program. The accelerated MSJ program allows students to customize a research project that is relevant to their interests, whether they are Advertising and Public Relations or Journalism majors. Interested students are identified during their initial year or two at the School, and, if interested, must meet with their academic advisor by the fall of their junior year. Freshmen and sophomores are welcome to stop by to discuss the program as well. Information is posted on the School's website.

### 3+3 BSJ/JD

High-achieving students may also participate in the 3+3 BSJ/JD degree program with the WVU College of Law. See the School of Media and Communications 3+3 BSJ/JD degree program website (https://admissions.law.wvu.edu/apply/3-plus-3/) for more information about this program.

Major Code: 4970

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |

| | |
|---|---|
| F5 - Human Inquiry & the Past | 3 |
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 69 |
| Multidisciplinary Media Studies Major Requirements | | 51 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) * | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, 7, and 8 | | 31 |
| MDIA 191 | First-Year Seminar | 2 |
| General Electives | | 36 |
| Total Hours | | 69 |

## Multidisciplinary Media Studies Major Requirements

| Code | Title | Hours |
|---|---|---|
| Cumulative GPA of 2.0 or higher required. | | |
| A grade of C- or higher must be earned in all major courses. | | |
| **Multidisciplinary Media Studies Core** | | **18** |
| MDIA 101 | Media and Society | |
| MDIA 215S | Media Writing | |
| MDIA 225S | Media Tools & Applications | |
| MDIA 328 | Media Ethics and Law | |
| MDIA 485S | Reed School Multidisciplinary Capstone | |
| Select one of the following: | | |
| ADPR 215 | Introduction to Advertising and Public Relations | |
| ADV 215 | Principles of Advertising | |
| PR 215 | Introduction to Public Relations | |
| **Reed School of Media and Communications Track #1** ** | | **9** |
| **Reed School of Media and Communications Track #2** ** | | **9** |
| **Reed School of Media and Communications Track #3** ** | | **9** |
| **Media Electives** *** | | **6** |
| Total Hours | | 51 |

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General Education and Elective Credits can vary - students must have a minimum of 120 earned credit hours total to complete the degree. Only MDIA 101 can be counted towards both the GEF and MDMS major requirements.

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Reed School of Media and Communications tracks must be selected from the following: Advertising, Entertainment Media, Event Planning, Health Promotion, Journalism, Public Relations, Sport Communication, Strategic Social Media. Students must complete nine unique credit hours for each of their tracks.

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Any other Reed School of Media and Communications courses of the student's choice.

## Multidisciplinary Media Studies Tracks

| Code | Title | Hours |
|---|---|---|
| **Advertising** | | **9** |
| ADV 309 | Advertising and Creativity | |
| ADV 409 | Advertising Research and Media | |
| ADV 419 | Advertising Strategies | |
| **Public Relations** | | **9** |
| PR 301 | Writing for Public Relations | |
| PR 401 | Applied Public Relations | |
| PR 410 | Integrated Marketing Communications for Public Relations | |
| **Journalism (select 3)** | | **9** |
| JRL 321S | Media Design | |
| JRL 335S | Video and Audio News Writing | |
| JRL 412 | Sport Journalism | |
| JRL 420S | Feature Writing | |
| JRL 430S | Social Media and Journalism | |
| **Strategic Social Media** | | **9** |
| JRL 432 | Social Media Strategy | |
| JRL 433 | Social Media Applications | |
| JRL 434 | Social Media Campaigns | |
| **Event Planning** | | **9** |
| PR 436 | Event Planning | |
| PR 437 | Event Promotion | |
| PR 438 | Event Execution | |
| **Health Promotion** | | **9** |
| JRL 450 | Writing for Health Promotion | |
| JRL 452 | Applied Health Promotion | |
| JRL 454 | Health Promotion Campaigns | |
| **Entertainment Media (select 3)** | | **9** |
| JRL 419 | Entertainment Reporting | |
| PR 431 | Promotion for Entertainment Media | |
| PR 432 | Entertainment Media Branding | |
| PR 433 | Entertainment Media Campaigns | |
| **Sport Communication** | | **9** |
| PR 412 | IMC for Sport | |
| JRL 412 | Sport Journalism | |
| MDIA 361 | Media Relations In Sport | |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 2A | 4 | GEF 6 | 3 |
| MDIA 101 (GEF 4) | 3 | MDIA 225S | 3 |
| MDIA 191 | 2 | GEF 7 | 3 |
| MDIA 215S | 3 | GEF 3 | 3 |
| ENGL 101 (GEF 1) | 3 | General Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | GEF2/General Elective | 3 |
| GEF 8 | 3 | GEF 8 | 3 |

| | | | |
|---|---|---|---|
| Track 1, Course 1 | | 3 Track 3, Course 1 | 3 |
| Track 2, Course 1 | | 3 Track 1, Course 2 | 3 |
| GEF 5 | | 3 Track 2, Course 2 | 3 |
| | | 15 | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 8 | | 3 Track 3, Course 3 | 3 |
| Track 3, Course 2 | | 3 Media Elective | 3 |
| Track 1, Course 3 | | 3 Media Elective | 3 |
| Track 2, Course 3 | | 3 General Electives | 6 |
| General Electives | | 3 | |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| General Electives | | 12 General Electives | 12 |
| MDIA 328 | | 3 MDIA 485S | 3 |
| | | 15 | 15 |

Total credit hours: 120

**Note:** Some tracks may require online course enrollment during Summer terms to complete. Students should check with their advisor about individual minor requirements and expected course availabilities. Additional online course fees apply.

Track courses may not be used to fulfill both a focus requirement and a General Education Foundation requirement, with the exception of MDIA 101.

Track courses may not be used to fulfill the requirements for more than one focus. All Reed School of Media and Communications tracks must be completed with their own unique hours.

Of total earned credit hours, a minimum of 30 credit hours must be at the 200-level or higher, and an additional minimum of 30 credit hours must be at the 300-level or higher.

A grade of C- or higher must be earned in all major- and track-required courses.

Students have the option to use elective hours to pursue a fourth track to complement their studies.

## Accelerated Program

- B.A. Multidisciplinary Media Studies and M.S. Integrated Marketing Communications (p. 546)

## Accelerated Bachelors/Masters Degree Requirements

Students must fulfill all degree requirements for the B.A. in Multidisciplinary Media Studies, including grade and GPA requirements, and all the requirements of the M.S. in Integrated Marketing Communications. Students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| Multidisciplinary Media Studies Major Requirements | | 108 |
| Shared Bachelor's/Master's Coursework Requirements | | 12 |
| M.S. Integrated Marketing Communications Major Requirements | | 18 |
| Total Hours | | 138 |

## Shared Bachelor's/Master's Coursework Requirements

| Code | Title | Hours |
|---|---|---|
| IMC 410 | Introduction to Integrated Marketing Communications | 3 |
| IMC 511 | Marketing Research and Analysis | 3 |
| IMC 512 | Audience Insight | 3 |
| IMC 513 | Brand Equity Management | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 2A | 4 | GEF 6 | 3 |
| MDIA 101 | 3 | MDIA 225S | 3 |
| MDIA 191 | 2 | GEF 7 | 3 |
| MDIA 215S | 3 | GEF 3 | 3 |
| ENGL 101 | 3 | General Elective | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | GEF2/Elective | 3 |
| GEF 8 | 3 | GEF 8 | 3 |
| Track 1, Course 1 | 3 | Track 3, Course 1 | 3 |
| Track 2, Course 1 | 3 | Track 1, Course 2 | 3 |
| GEF 5 | 3 | Track 2, Course 2 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 8 | 3 | Track 3, Course 3 | 3 |
| Track 3, Course 2 | 3 | Media Elective | 3 |
| Track 1, Course 3 | 3 | Media Elective | 3 |
| Track 2, Course 3 | 3 | General Electives | 6 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| MDIA 328 | 3 | MDIA 485S | 3 |
| IMC 410 | 3 | IMC 511 | 3 |
| IMC 513 | 3 | IMC 512 | 3 |
| | 15 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMC Electives (1 and 2 of 3) | 6 | IMC Specialty Course (2 of 2) | 3 |
| IMC Specialty Course (1 of 2) | 3 | IMC Elective Course (3 of 3) | 3 |
| | | IMC 536 | 3 |
| | 9 | | 9 |

Total credit hours: 138

**Note:** Students in the MDS BA + MS ABM program can share a total of 12 credits, in IMC 410, IMC 511, IMC 512, and IMC 513 across both their graduate and undergraduate degrees.

## Major Learning Outcomes

### MULTIDISCIPLINARY MEDIA STUDIES

Upon completion of the B.A. in Multidisciplinary Media Studies, students will:

- demonstrate the ability to engage an audience using social media networking and analytics tools
- understand and apply the U.S. principles and laws of freedom of speech and press
- demonstrate the ability to professionally present ideas in all form: written, verbal and with the use of appropriate digital/electronic audio-visual materials

- demonstrate an understanding of the history and role of professionals and institutions in shaping communications
- demonstrate an understanding of gender, race ethnicity, sexual orientation and, as appropriate, other forms of diversity in domestic society in relation to mass communications
- demonstrate an understanding of the diversity of peoples and cultures and of the significance and impact of mass communications in a global society
- demonstrate an understanding of professional ethical principles and work ethically in pursuit of truth, accuracy, fairness and diversity
- think critically, creatively and independently
- write correctly and clearly in forms and styles appropriate for the communications professions, audiences and purposes they serve
- critically evaluate their own work and that of others for accuracy and fairness, clarity, appropriate style and grammatical correctness
- apply basic numerical and statistical concepts
- apply tools and technologies appropriate for the communications professions in which they work

# Sports and Adventure Media, B.S.J.

## Degree Offered

- Bachelor of Science in Journalism

## Nature of the Program

The Sports and Adventure Media Major prepares students for careers as content creators with fundamental knowledge in media, sports and adventure. The Sports and Adventure Media program offers courses that focus on video production for the sports broadcast industry and journalism purposes. Courses also include instruction on multi-platform content production for public relations and journalism purposes.

Students will be prepared to enter an ever-changing digital media landscape by taking innovative courses that utilize the latest storytelling technology and audience engagement tactics, while instilling fundamental storytelling principles and media ethics. Graduates of this degree will stand out in sports media, adventure sports media, and adventure tourism and travel industries.

## Admissions for 2026-2027


- Admission to the School of Media and Communications (p. 548)
- Scholarships (p. 548)
- Choosing a Major (p. 548)
- Accelerated Bachelor's/Master's Program (p. 549)


## Admission to the School of Media and Communications

**For specific information regarding the admissions requirements for First Time Freshmen to the School of Media and Communications, please visit** Admission to the School of Media and Communications **(**http://catalog.wvu.edu/undergraduate/collegeofcreativeartsandmedia/media/#admissionsrequirementstext**).**

Students who have completed at least one full-time semester of college work (either at WVU or elsewhere) with a cumulative GPA of 2.0 or higher may also qualify for direct admission into the School of Media and Communications irrespective of standardized test scores. Students who do not meet these criteria will automatically be enrolled in WVU's Center for Learning, Advising and Student Success (CLASS). Students advised in CLASS may declare a major in the School of Media and Communications once they have earned a cumulative GPA of 2.0 at WVU. Or, if a student has a 2.0 cumulative GPA at WVU, they may enroll in MDIA 215S (space permitting) or they may declare the College's Multidisciplinary Studies major. If the student earns a C- or better in MDIA 215S and maintains a 2.0 overall GPA at WVU, then the student may then declare a major in the School of Media and Communications.

## Scholarships

In addition to financial aid from West Virginia University, the School of Media and Communications offers a number of scholarships each year to eligible students. All students applying for scholarships must file a FAFSA form by the deadline, even if they are not eligible for need-based aid.

## Choosing a Major

The School of Media and Communications offers five majors: advertising and public relations, integrated marketing communication, journalism, sports and adventure media, and multidisciplinary media studies.

Direct admission students are admitted to the School upon admission to the University and declare their majors at that time.

## Accelerated Bachelor's/Master's Program

Students in the advertising and public relations or journalism BSJ programs in the School of Media and Communications with a minimum cumulative GPA of 3.3 are eligible for this program. The accelerated MSJ program allows students to customize a research project that is relevant to their interests, whether they are Advertising and Public Relations or Journalism majors. Interested students are identified during their initial year or two at the School, and, if interested, must meet with their academic advisor by the fall of their junior year. Freshmen and sophomores are welcome to stop by to discuss the program as well. Information is posted on the School's website.

### 3+3 BSJ/JD

High-achieving students may also participate in the 3+3 BSJ/JD degree program with the WVU College of Law. See the School of Media and Communication's 3+3 BSJ/JD degree program website (https://admissions.law.wvu.edu/apply/3-plus-3/) for more information about this program.

Major Code: 3726

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 47 |
| Sports and Adventure Media Program Requirements | | 21 |
| School of Media and Communications Core Requirements | | 15 |
| Sports and Adventure Media Major Requirements | | 37 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 5, 6, and 7 | | 19 |
| MDIA 191 | First-Year Seminar | 2 |
| **General Electives*** | | **26** |
| Total Hours | | 47 |

## Sports and Adventure Media Program Requirements

| Code | Title | Hours |
|---|---|---|
| ECON 200 | Survey of Economics | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| STAT 111 | Understanding Statistics (GEF 3) | 3 |
| PSYC 101 | Introduction to Psychology | 3 |
| or SOC 101 | Introduction to Sociology | |
| PSYC 251 | Introduction to Social Psychology | 3 |
| or SOC 320 | Social Psychology | |
| SEP 371 | Sport in American Society | 3 |
| English literature or Creative Writing Course | | 3 |
| Total Hours | | 21 |

## School of Media and Communications Core Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in College of Media Core Requirements. | | |
| MDIA 101 | Media and Society (GEF 4) | 3 |
| MDIA 215S | Media Writing | 3 |
| MDIA 225S | Media Tools & Applications | 3 |
| MDIA 328 | Media Ethics and Law | 3 |
| Select one of the following: | | 3 |
| MDIA 401 | Making Media in the Digital Age | |
| MDIA 427 | History of American Journalism, Media & Pop Culture | |
| MDIA 455 | Media, Identity, and Power | |
| Total Hours | | 15 |

## Sports and Adventure Media Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Sports and Adventure Media Major Requirements. | | |
| JRL 235S | Video Editing | 1 |
| JRL 330S | Sports and Adventure Media Writing | 3 |
| MDIA 361 | Media Relations In Sport | 3 |
| MDIA 438 | Branded Content and Narrative | 3 |
| JRL 380S | Sports and Adventure Media Video Storytelling | 3 |
| JRL 484S | Advanced Sports and Adventure Video Production | 3 |
| Select two of the following: | | 6 |
| JRL 325S | Podcast Reporting & Producing | |
| JRL 435S | Live Sports Video Production | |
| MDIA 340S | Creative Video Production | |
| MDIA 441 | Internship | |
| JRL 448S | Digital Publication: Social Video | |
| JRL 487S | Advanced Video Reporting and Producing | |
| Required Minor | | 15 |
| Total Hours | | 37 |

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*General Elective and Elective Credits can vary - students must have a minimum of 120 credit hours total to complete the degree

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MDIA 101 (GEF 4) | 3 | MDIA 225S | 3 |
| MDIA 191 | 2 | ENGL 102 (GEF 1) | 3 |
| GEF 2B | 4 | PSYC 101 or SOC 101 | 3 |
| SEP 371 | 3 | MDIA 215S | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 6 | 3 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| JRL 235S | 1 | JRL 380S | 3 |
| JRL 330S | 3 | ECON 200 | 3 |
| PSYC 251 or SOC 320 | 3 | STAT 111 (GEF 3) | 3 |
| GEF 5 | 3 | GEF 7 | 3 |
| General Elective | 3 | Minor Course 1 | 3 |
| General Elective | 2 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MDIA 361 | 3 | MDIA 438 | 3 |
| MDIA 328 | 3 | BCOR 350 | 3 |
| MDIA 401, 427, or 455 | 3 | Major Elective 2 | 3 |
| Major Elective 1 | 3 | Minor Course 2 | 3 |
| ENGL Literature or Creative Writing Course | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| JRL 484S | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | Minor Course 4 | 3 |
| Minor Course 3 | 3 | Minor Course 5 | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Major Learning Outcomes

### SPORTS AND ADVENTURE MEDIA

The goal of the major in Sports and Adventure Media is to provide students with a foundation of knowledge and critical thinking and a depth of skills and understanding that will prepare them for professions in the sports and adventure media industries and/or for further education and research pursuits in sports and adventure media. We will achieve this goal by meeting the following objectives, which will culminate in a B.S.J. degree:

1. Graduates of the Sports and Adventure Media program will be adept
   at researching, synthesizing and ultimately conveying to audiences information through various mediums, including text, photo, audio and video.
2. Graduates of the Sports and Adventure Media program will be skillful
   in live and pre-produced programming, dissemination of content, effective audience engagement, and creative expression using the latest tools and technologies in the industry.
3. Graduates of the Sports and Adventure Media program will demonstrate
   an understanding of the historical context, theoretical foundations and contemporary trends within media, particularly as it relates to sports.
4. Graduates in Sports and Adventure media will be practitioners of sound
   media ethics and understand laws and regulations that have shaped and continue to impact media.
5. Graduates in Sports and Adventure media will understand the significance

of diversity within the realms of the sports and adventure recreation industries and media. They will apply their knowledge through hands-on experiences, creating work that both serves and contributes to a diverse society.

# School of Music

## Degrees Offered

- **Bachelor of Arts (BA)**
  - Music
  - Music Business and Industry with Areas of Emphasis in:
    - Applied Music
    - Multi-Instrumental
- **Bachelor of Music (BM)**
  - Music Composition
  - Music Education
  - Music Therapy
  - Performance with Areas of Emphasis in:
    - Instrumental
    - Piano
    - Voice
- **Bachelor of Science (BS)**
  - Music and Health

## Mission

To create an innovative and inclusive musical community that prepares informed, ethical students for meaningful creative lives as performers, educators, composers, conductors, music therapists, entrepreneurs, and scholars.

## Vision

The School of Music strives to cultivate a vibrant community of musicians and scholars who engage in research and creative activity in the fields of music performance and improvisation, composition, music-teacher education, theory, musicology, music therapy, technology, and industry. Our rigorous programs and distinguished faculty provide students the opportunity to develop the abilities to become consummate leaders in the musical arts.

## Background

The School of Music has been essential to WVU's cultural and academic life since 1897. The University has been accredited by the National Association of Schools of Music since 1947. Our active faculty of over fifty members includes internationally acclaimed artists and scholars who are also distinguished teachers. The School is housed in the Canady Creative Arts Center, the heart of visual and performing arts at WVU and the state of West Virginia.

## Statement of Principles

The West Virginia University School of Music strives to create an inclusive, diverse, equitable, and accessible environment where students, staff, faculty, and administrators can thrive creatively and personally. We seek to cultivate an environment of trust, respect, and accountability that empowers all WVU School of Music community members to contribute their talents and expertise in support of our mission and vision.

## Performing Ensembles

One hallmark of the School of Music is its commitment to studying and performing music from many styles and genres. WVU students can perform in bands, choirs, orchestras, jazz ensembles, and numerous other performing opportunities in various world musical traditions, styles, and sizes. The student and community performing groups are open to all qualified WVU students. More information about the School of Music ensembles can be found on the School of Music website.

In addition, students have many opportunities to hear the highly accomplished WVU music faculty live in performances on and off campus.

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## FACULTY

### INTERIM DIRECTOR

- Michael Vercelli - D.M.A. (University of Arizona)
  Director of World Music Performance Center

## PROFESSORS

- Cynthia Anderson - M.M. (Manhattan School of Music)
  Oboe,Theory
- Nina Assimakopoulos - M.M. (Munich Academy of Music)
  Flute, Chamber Music
- Kelly Burke - D.M.A (University of Michigan)
  Clarinet
- Keith Jackson - D.M.A. (Arizona State University)
  Trombone
- Andrew Kohn - Ph.D. (University of Pittsburgh)
  Double Bass, Theory
- Paul Kreider - D.M.A. (University of Arizona)
  Voice, Diction, Opera
- Mikylah Myers - D.M.A. (University of Houston)
  Violin, Chamber Music
- Sandra Schwartz - Ph.D. (University of Miami)
  Music Education
- Scott Tobias - D.M.A. (University of Georgia)
  Director of Bands
- Michael Vercelli - D.M.A. (University of Arizona)
  Director of World Music Performance Center
- George Willis - M.M. (Temple University)
  Percussion

## TEACHING PROFESSORS

- Darko Velichkovski - M.A. (City University of New York)
  Director of Music Business & Industry

## ASSOCIATE PROFESSORS

- Hakeem Bilal - M.M. (Carnegie Mellon University)
  Trombone
- Erin Ellis - D.M.A. (Eastman School of Music)
  Cello, Chamber Music, String Pedagogy
- Jason Gossett - Ph.D. (The Pennsylvania State University)
  Music Education
- Andrea Houde - M.M. (Peabody Institute)
  Viola, String Pedagogy, Chamber Music
- Lucy Mauro - D.M.A. (Peabody Conservatory)
  Piano Pedagogy, Class Piano, Piano, Chamber Music
- Angela Munroe - Ph.D. (University of Colorado Boulder)
  Music Education
- Kym Scott - D.M.A. (University of Southern California)
  Director of Choral Activities

## TEACHING ASSOCIATE PROFESSORS

- Mark Benincosa - M.S. (West Virginia University)
  Music Technology & Production

## ASSISTANT PROFESSORS

- Thomas Erik Angerhofer - D.M.A. (University of Colorado Boulder)
  Voice
- Albert Houde - D.M.A. (West Virginia University)
  Horn
- Mary Grace Johnson - D.M.A.- ABD (Rice University)
  Violin and Chamber Music
- Emily Lambert - Ph.D.- ABD (University of Miami)
  Music Therapy

- Amanda Wai Yin Li - D.M. (Indiana University)
  Voice
- Robert Sears - D.M.A. (University of Illinois at Urbana-Champaign)
  Trumpet, Jazz, Chamber Music
- Jeffrey Siegfried - D.M.A. (University of Michigan)
  Saxophone, Jazz, Chamber Music
- Andy Sledge - D.M.A.- ABD (Yale School of Music)
  Bassoon and Music Theory
- Florian Walch - Ph.D. (University of Chicago)
  Music Theory
- Rotem Weinberg - D.M.A. (University of Michigan)
  Director of Orchestral Activities
- Cheldon Williams - D.M.A. (University of Texas at Austin)
  Band, Marching Band, Pep Band

## TEACHING ASSISTANT PROFESSORS

- Katelyn Best - Ph.D. (Florida State University)
  Ethnomusicology, Musicology
- Jake Sandridge - Ph.D. (Rice University)
  Composition, Electronic Music, Theory, Aural Skills
- Joshua Swiger - M.A. (West Virginia University)
  Music Business & Industry

## LECTURERS

- Sun Jung Lee - D.M.A. (West Virginia University)
  Accompanying, Piano, Chamber Music
- Carson McTeer - B.A. (Rice University)
  Tuba, Euphonium, Chamber Music

## INSTRUCTORS

- Chanler Bailey
  Steel Drum Ensemble
- Brittany Blair - M.M. (University of Michigan)
  Harp, Theory, Aural Skills
- Hooi Yin Boey - D.M.A. (West Virginia University
  Piano
- Dana Brink - M.M. (Yale University)
  Woodwind Pedagogy, Theory, Aural Skills
- Hannah Ivey Bush - M/M (University of Georgia)
  Music Therapy
- Alan Cline - D.M.A. (West Virginia University)
  Voice, Vocal Pedagogy
- Zachary Fanok - M.A. (Fairmont State University)
  Appalachian Music, Fiddle
- Ross Justice - M.A. (West Virginia University)
  Music Business & Industry
- Rebecca Kreider - M.M. (Indiana University)
  General Education Courses
- Charles Lucas - A.A. (The Art Institute of Pittsburgh)
  Guitar
- Keeheon Nam - M.M. (The Juilliard School)
  Clarinet, Aural Skills
- Adam Osmianski - M.M. (West Virginia University)
  General Education Courses
- Steve Smith
  Banjo

- Brian Wolfe - B.M. (West Virginia University)
  Drum Set, Jazz, Commercial Music

### PROFESSORS EMERITI

- Peter Amstutz
- John Beall
- James W. Benner
- Thomas S. Brown
- Philip J. Faini
- Mary Ferer
- William Haller
- John Hendricks III
- Leo Horacek, Jr.
- Barton Hudson
- Christine B. Kefferstan
- Hope Koehler
- Gerald Lefkoff
- James E. Miltenberger
- Janet Robbins
- William Skidmore
- Travis Stimeling
- Connie Arau Sturm
- David Taddie
- Robert Thieme
- Virginia Thompson
- Gilbert Trythall
- Molly Weaver
- John Weigand
- Don G. Wilcox
- Christopher Wilkinson
- John Winkler

### ASSOCIATE PROFESSORS EMERITI

- David Bess
- Joyce A. Catalfano
- Rose M. Crain
- John E. Crotty
- June D. Swartwout

## Admissions - How to Apply

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))

2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition.* The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - (no audition)
- BM Composition - audition required (a portfolio review of recent compositions is part of the audition process)
- BM Music Education - audition required (an interview is part of the audition process)
- BM Music Therapy - audition required (an interview is part of the audition process)

- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

* The Multi-instrumental Emphasis in the BA Music Business & Industry requires no audition; students must be admitted to WVU.

## General Requirements for School of Music Bachelor Degrees

- Completion of Degree Requirements (p. 556)
- First-Year Seminar and Music Convocation (p. 556)
- Concert,  (p. 556)Recital and/or Presentation Attendance (p. 556)
- Ensemble Requirement (p. 556)
- Satisfactory Academic Progress (p. 556)
- Satisfactory Performance Progress and Juries (p. 557)
- Additional Performance Proficiencies for Music Education Majors (p. 557)
- Capstone Requirements (p. 557)
- Course Substitution, Curricular Waivers, or Credit by Examination (p. 557)

## COMPLETION OF DEGREE REQUIREMENTS

- Students are responsible for being aware of and correctly fulfilling all graduation requirements.
- Students should review the curriculum requirements before and after every registration period so that errors or omissions will be detected and corrected immediately.
- Transfer students must establish transfer credit from other institutions as early as possible in their WVU study—preferably during the first semester of residence.
- Some majors in the School of Music have specific academic and applied music requirements. Refer to details outlined in each major.

## FIRST-YEAR SEMINAR AND MUSIC CONVOCATION

- Entering first-time, first-year students are required to register for First-Year Seminar MUSC 191.
- Full-time undergraduate music majors beyond the first semester are expected to register for Music Convocation MUSC 189 as required by their degree program.

## CONCERT, RECITAL AND/OR PRESENTATION ATTENDANCE

- Concert, Recital, and/or Presentation Attendance is required for MUSC 191 First Year Seminar and applied studios. Students must attend the specified number of events each semester until they complete their specific course requirements. This requirement may be adjusted for transfer students.

## ENSEMBLE REQUIREMENT

- Major ensembles are Chamber Singers, Wind Symphony, Orchestra, Jazz Ensemble 1, Mountaineer Singers, Mountaineer Chorus, Symphonic Band, and Jazz Ensemble 2.
- If students are scholarship recipients, they may be called upon to render special service (as participants in particular organizations or ensembles, as piano accompanists, etc.) as designated by the School Director.
- Some majors have specific ensemble requirements; students should consult their academic advisor for further details.

## SATISFACTORY ACADEMIC PROGRESS

- Each degree program has a series of academic milestones that must be met for students to complete their graduation requirements in a reasonable amount of time.
- Students who fail to meet one or more milestones will receive a written warning at the end of the relevant semester outlining expectations for future success.
- If it is determined that a student is not making satisfactory academic progress, they may be suspended from the School of Music and moved to the CCAM Multi-Disciplinary Studies major. This action requires approval of the School Director and the Dean of the College (or their designees).
- Students may obtain further information regarding academic progress policies from their advisor, the school director's office, or the Undergraduate Music Student Handbook.

## SATISFACTORY PERFORMANCE PROGRESS AND JURIES

- Music majors and minors must take applied lessons on their principal performance medium each semester until they complete their credit-hour requirement and obtain the proficiency required for their program.
- Progress in music performance is assessed each semester through private lessons and an end-of-semester jury. Jury examinations are performed at the end of each semester, documenting progress toward each student's proficiency requirement.
- If the performance faculty determines that a student is not making satisfactory progress in reaching the proficiency standards of their degree program, the student (copied to their academic advisor and School Director) will receive a written warning outlining expectations for future success.
- Students not performing satisfactorily over multiple semesters may be suspended from the School of Music and moved to the CCAM Multi-Disciplinary Studies major. This action requires approval of the School Director and the Dean of the College (or their designees).
- Jury requirements and proficiency standards for each performance area are documented in the Undergraduate Student Handbook.
- Completing all performance-related requirements signifies a student has attained the minimum proficiency level required by their degree program.

## ADDITIONAL PERFORMANCE PROFICIENCIES FOR MUSIC EDUCATION MAJORS

- Music Education Majors must demonstrate additional (secondary) performance proficiencies associated with MUSC 280, MUSC 281, and either MUSC 284 or MUSC 285.
- Students must pass all secondary performance proficiency examinations no later than mid-term in the end of the semester prior to that in which they student teach.

## CAPSTONE REQUIREMENTS

- Senior-level capstone courses are required for all degree programs in the School of Music.
  - BA Music: MUSC 451 Capstone Project in Music
  - BA Music Business & Industry: MUSC 452 Capstone Project in Music Business & Industry
  - BM Music Performance: MUSC 488 Recital
  - BM Music Education: MUSC 487 Student Teaching Seminar
  - BM Music Therapy: MUSC 445 Evidence-Based Practice in Music Therapy
  - BM Music Composition: MUSC 467 Major Project in Theory, Composition, or Music History
  - BS Music and Health: MUSC 450 Capstone in Music and Health

## COURSE SUBSTITUTIONS, CURRICULAR WAIVERS, OR CREDIT BY EXAMINATION

- A faculty member must request in writing to the Director of the School of Music for music course substitutions or credit by examination.
- If the Director endorses the request, it will be forwarded to the College Records Office to be entered into DegreeWorks.
- Some requests may require additional approval by the Associate Dean of Academic Affairs in the College of Creative Arts and Media.

# Music and Health, B.S.

## Music and Health

- Bachelor of Science

## Nature of the Program

This Bachelor of Science in Music and Health aims to provide an opportunity for students to pursue concentrated studies in music while also completing the requirements for graduate study in one of several tracks. The major is intended for those who wish to study music as their undergraduate focus and then pursue a career in medicine, dentistry, occupational therapy, physical therapy or as a physician assistant, and/or those who would like to continue practicing music professionally while also enjoying a career in the health sciences.

## Admissions for 2026-2027

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

For admission consideration, all students must submit separate applications to the University and to the School of Music. The audition is a preliminary assessment of a student’s potential for success. For the Bachelor of Science in Music and Health, students must audition at a minimum performance level four. If a student is admitted, their standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano).

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))
2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition and/or interview. The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - interview required (no audition)
- BM Composition - audition and portfolio review required
- BM Music Education - audition and interview required
- BM Music Therapy - audition and interview required
- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can achieve the greatest success. Evaluation of students' work by the School of Music faculty informs these decisions. If students wish a broader, liberal arts-oriented program, they may pursue a Bachelor of Arts (BA) in Music.

Major Code: 3723

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 27 |
| Music and Health Program Requirements | | 25 |
| Music and Health Major Requirements | | 68 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 7, and 8 | | 18 |
| MUSC 191 | First-Year Seminar | 2 |
| General Electives | | 7 |
| Total Hours | | 27 |

## Music and Health Program Requirements

| Code | Title | Hours |
|---|---|---|
| Students must earn and maintain a minimum cumulative GPA of 3.0. | | |
| MUSC 161 | Aural Theory 1 | 2 |
| MUSC 162 | Written Theory 1 | 3 |
| MUSC 163 | Aural Theory 2 | 2 |
| MUSC 164 | Written Theory 2 | 3 |
| Select one of the following: | | 3 |
| MUSC 111 | Introduction to Music | |
| MUSC 113 | American Popular Music | |
| MUSC 114 | Music and the Immigrant Experience | |
| MUSC 115 | Introduction to History of Jazz | |
| MUSC 116 | Music in World Cultures | |
| MUSC 117 | Hip Hop Nation: Musical and Conceptual Foundations of a Cultural Revolution | |
| MUSC 118 | Music in Appalachia | |
| MUSC 189 | Music Convocation | 0 |
| MUSC 261 | Aural Theory 3 | 2 |
| MUSC 262 | Written Theory 3 | 3 |
| MUSC 263 | Aural Theory 4 | 2 |
| MUSC 270 | History of Western Musical Traditions 1 (GEF 6) | 3 |
| or MUSC 271 | History of Western Musical Traditions 2 | |
| Select one of the following: | | 2-3 |
| MUSC 362 | Instrumentation and Orchestration | |
| MUSC 364 | Popular Music Analysis Seminar | |
| MUSC 365 | Songwriting: Composition and Analysis | |
| MUSC 461 | Counterpoint, 16th Century | |
| MUSC 462 | Counterpoint, 18th Century | |
| MUSC 463 | Analysis of Eighteenth and Nineteenth Century Music | |
| MUSC 464 | Compositional Techniques in Contemporary Music | |
| MUSC 465S | Electronic Music Production | |
| MUSC 468 | Jazz and Commercial Music Harmony | |
| MUSC 469 | Counterpoint, 20th Century | |
| Total Hours | | 25 |

## Music and Health Major Requirements

| Code | Title | Hours |
|---|---|---|
| Students must earn and maintain a minimum cumulative GPA of 3.0. | | |
| **Health Track Electives** | | **32-41** |
| Selection of health electives may be determined by the track a student selects. | | |
| A grade of C- or higher must be earned in all Health courses | | |
| Medicine (MD) - 32 Credits | | |
| Pharmacy (PharmD) - 38 Credits | | |
| Physical Therapy (DPT) - 41 Credits | | |

| | | |
|---|---|---|
| Occupational Therapy (OTD) - 33 Credits | | |
| Dentistry (DDS) - 40 Credits | | |
| Physicians' Assistant (MHS) - 35 Credits | | |
| **Applied Music** ***minimum proficiency level 7 required** | | |
| Applied Music 100 level (MUSC 121-127D) - 2 semesters | | 4 |
| Applied Music 200 level (MUSC 221-227D) - 2 semesters | | 4 |
| Applied Music 300 level (MUSC 321-327D) - 2 semesters | | 4 |
| **Ensemble** | | **10** |
| **Major Ensembles** ** | | |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 300B | Band: Marching | |
| MUSC 302 | University Community Choir | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 350 | Jazz Ensemble 2 | |
| MUSC 353 | Large Jazz Ensemble 1 | |
| **Other Music Ensembles** | | |
| MUSC 101 | Band: Concert | |
| MUSC 101A | Band: Pep Band | |
| MUSC 304 | Introduction To Opera Theatre | |
| MUSC 340 | Chamber Music: Brass | |
| MUSC 341 | Chamber Music: Guitar | |
| MUSC 342 | Chamber Music: Piano-4 Hand | |
| MUSC 343 | Chamber Music: Strings | |
| MUSC 344 | Chamber Music: Woodwind | |
| MUSC 345 | Chamber Music: Vocal | |
| MUSC 346 | Chamber Music: Mixed Ensemble | |
| MUSC 347 | Chamber Music: Mountaineer Singers | |
| MUSC 348 | Chamber Music: New Music | |
| MUSC 349A | Chamber Music: Brass Choir | |
| MUSC 349C | Chamber Music: Other-Vocal Accompaniment | |
| MUSC 349Z | Collegium Musicum | |
| MUSC 351 | Chamber Music: Percussion 1 | |
| MUSC 352 | Chamber Music: Percussion 2 | |
| MUSC 353B | Chamber Music: Jazz Small Group | |
| MUSC 353C | Chamber Music: Jazz Small Group 2 | |
| MUSC 353E | Chamber Music: Jazz and Ethnic | |
| MUSC 353G | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 353H | Chamber Music: Jazz Other | |
| MUSC 353I | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 354 | Gamelan | |
| MUSC 355 | Steel Band | |
| MUSC 356 | African Music Ensemble | |
| MUSC 357 | Brazilian Music Ensemble | |
| MUSC 358 | Experiential Music Ensemble | |
| MUSC 359 | Taiko Ensemble | |
| MUSC 361 | Fife and Drum Ensemble | |
| MUSC 363 | Appalachian Music Ensemble | |
| MUSC 492 | Directed Study | 2 |

| | |
|---|---|
| **MUSC Electives** | **12** |
| Total Hours | 68 |

*

**Applied Music Requirement**: Students must attain a proficiency level suitable for public performance (at least level seven) on their major principal instrument. If the student does not make satisfactory progress in achieving the expected performance proficiency, the student will be dismissed. Students will be admitted with a minimum applied audition level of 4, take six semesters of applied study at 2 credits each, and earn an exit level of 7.

**

**Major Ensemble Requirement**: Students are required to participate in a Major Ensemble a minimum of four semesters.

***

Students who do not meet these requirements will be dismissed from the program. All students must complete 10 hours of community service per year.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Music Ensemble | 1 | MUSC Music Ensemble | 1 |
| MUSC 121-127D Applied Music | 2 | MUSC 121-127D Applied Music | 2 |
| MUSC 191 | 2 | MUSC 189 | 0 |
| GEF, Health Track, or General Elective | 10 | Select one of the following: | 3 |
| | | MUSC 111 | |
| | | MUSC 113 | |
| | | MUSC 114 | |
| | | MUSC 115 | |
| | | MUSC 116 | |
| | | MUSC 117 | |
| | | MUSC 118 | |
| | | ENGL 101 (GEF 1) | 3 |
| | | GEF, Health Track, or General Elective | 6 |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Music Ensemble | 1 | MUSC Music Ensemble | 1 |
| MUSC 221-227D Applied Music | 2 | MUSC 221-227D Applied Music | 2 |
| MUSC 162 | 3 | MUSC 164 | 3 |
| ENGL 102 (GEF 1) | 3 | GEF, Health Track, or General Elective | 8 |
| GEF, Health Track, or General Elective | 8 | | |
| | 17 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Music Ensemble | 1 | MUSC Music Ensemble | 1 |
| MUSC 321-327D Applied Music | 2 | MUSC 321-327D Applied Music | 2 |
| MUSC 161 | 2 | MUSC 163 | 2 |
| MUSC 262 | 3 | MUSC Elective | 3 |
| GEF, Health Track, or General Elective | 7 | Select one of the following: | 2-3 |
| | | MUSC 362 | |
| | | MUSC 364 | |
| | | MUSC 365 | |
| | | MUSC 461 | |
| | | MUSC 462 | |
| | | MUSC 463 | |
| | | MUSC 464 | |
| | | MUSC 465S | |

| | | | |
|---|---|---|---|
| | | MUSC 466 | |
| | | MUSC 468 | |
| | | MUSC 469 | |
| | | GEF, Health Track, or General Elective | 3 |
| | 15 | | 13 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Music Ensembles | 2 | MUSC Music Ensembles | 2 |
| MUSC 261 | 2 | MUSC 189 | 0 |
| MUSC 270 or 271 (GEF 6) | 3 | MUSC 263 | 2 |
| MUSC 492 (Capstone) | 2 | MUSC Elective | 3 |
| MUSC Elective | 3 | MUSC Elective | 3 |
| GEF, Health Track, or General Elective | 3 | GEF, Health Track, or General Elective | 6 |
| | 15 | | 16 |

Total credit hours: 120

# Pre-Health Elective Tracks

## MEDICINE (MD)

| Code | Title | Hours |
|---|---|---|
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | 4 |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | 4 |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | 4 |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | 4 |
| Total Hours | | 32 |

## PHARMACY (PHARMD)

| Code | Title | Hours |
|---|---|---|
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | 4 |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | 4 |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | 4 |
| STAT 211 | Elementary Statistical Inference | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| PSIO 241 | Elementary Physiology | 4 |
| AGBI 410 | Introductory Biochemistry | 3 |
| or BMM 339 | Introduction to Human Biochemistry | |

| | | |
|---|---|---|
| COMM 270<br>& 270S | Effective Public Speaking<br>and Effective Public Speaking Studio | 3 |
| ECON 201 | Principles of Microeconomics | 3 |
| MATH 150 | Applied Calculus | 3 |
| or MATH 155 | Calculus 1 | |
| MICB 200 | Medical Microbiology | 3 |
| Total Hours | | 38 |

## PHYSICAL THERAPY (DPT)

| Code | Title | Hours |
|---|---|---|
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | 4 |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | 4 |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | 4 |
| STAT 211 | Elementary Statistical Inference | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| PSYC 101 | Introduction to Psychology | 3 |
| PSYC 241 | Introduction to Human Development | 3 |
| PALM 205 | Introduction to Human Anatomy | 3 |
| PALM 206 | Human Anatomy Laboratory | 1 |
| PSIO 441 | Mechanisms of Body Function | 4 |
| or PSIO 241 | Elementary Physiology | |
| Total Hours | | 41 |

## OCCUPATIONAL THERAPY (OTD)

| Code | Title | Hours |
|---|---|---|
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | 4 |
| STAT 211 | Elementary Statistical Inference | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| PSYC 101 | Introduction to Psychology | 3 |
| PSYC 241 | Introduction to Human Development | 3 |
| PSYC 281 | Introduction to Psychological Disorders | 3 |
| PSIO 241 | Elementary Physiology | 4 |
| OTH 201 | Medical Terminology for Occupational Therapy | 1 |
| SOC 101 | Introduction to Sociology | 3 |
| or ANTH 105 | Introduction to Anthropology | |
| OTH 400 | Assistive Technology Practicum | 3 |
| PALM 205 | Introduction to Human Anatomy | 3 |
| PALM 206 | Human Anatomy Laboratory | 1 |
| ULIB 101 | Introduction to Library Research | 2 |
| Total Hours | | 33 |

## DENTISTRY (DDS)

| Code | Title | Hours |
|---|---|---|
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | 4 |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | 4 |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | 4 |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | 4 |
| PALM 205 | Introduction to Human Anatomy | 3 |
| PALM 206 | Human Anatomy Laboratory | 1 |
| BMM 339 | Introduction to Human Biochemistry | 4 |
| or AGBI 410 | Introductory Biochemistry | |
| Total Hours | | 40 |

## PHYSICIAN ASSISTANT (PA)

| Code | Title | Hours |
|---|---|---|
| AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory | 4 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| or BMM 339 | Introduction to Human Biochemistry | |
| STAT 211 | Elementary Statistical Inference | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| PSYC 101 | Introduction to Psychology | 3 |
| PALM 205 | Introduction to Human Anatomy | 3 |
| PALM 206 | Human Anatomy Laboratory | 1 |
| PSIO 241 | Elementary Physiology | 4 |
| OTH 201 | Medical Terminology for Occupational Therapy | 1 |
| Total Hours | | 35 |

# Major Learning Outcomes

## MUSIC AND HEALTH

Students who earn the Bachelor of Science in Music and Health will:

1. perform as a soloist (vocal or instrumental) and as a member of a variety of ensembles, both traditional band, orchestra, choir as well as chamber, world music, jazz, and non-traditional ensembles that vary both in size and nature,
2. excel through challenging, methodical, and innovative practical training towards a career in a health profession while achieving creative music experiences,

3. provide musical and cultural offerings and promote health and wellness for the citizens of West Virginia, and
4. contribute to a diverse and inclusive culture that advances education, healthcare, and prosperity for all by providing access and opportunity; by advancing high-impact research; and by leading transformation in West Virginia and the world through local, state and global engagement.

# Music, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Bachelor of Arts in Music provides students with the opportunity to major in music while pursuing a broad liberal arts education. Depending upon the courses taken beyond those required for the major, students may prepare for a variety of careers, not just those associated with music. To enter this program, in addition to being admitted to WVU, students must meet audition requirements on one of the following: a band or orchestral instrument, guitar, piano, or voice. Unless otherwise specified, general College of Creative Arts and WVU regulations apply.

## Admissions for 2026-2027

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

For admission consideration, all students must submit separate applications to the University and to the School of Music. The audition is a preliminary assessment of a student's potential for success. For the Bachelor of Science in Music and Health, students must audition at a minimum performance level four. If a student is admitted, their standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano).

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))
2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition and/or interview. The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - interview required (no audition)
- BM Composition - audition and portfolio review required
- BM Music Education - audition and interview required
- BM Music Therapy - audition and interview required
- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can achieve the greatest success. Evaluation of students' work by the School of Music faculty informs these decisions. If students wish a broader, liberal arts-oriented program, they may pursue a Bachelor of Arts (BA) in Music.

Major Code: 3542

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 27 |
| Music Program Requirements | | 28 |
| Music Major Requirements | | 70 |
| Total Hours | | 125 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 7 and 8 | | 25 |
| MUSC 191 | First-Year Seminar | 2 |
| Total Hours | | 27 |

## Music Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.0 is required in all courses | | |
| **Music Core Courses** | | |
| MUSC 161 | Aural Theory 1 | 2 |
| MUSC 162 | Written Theory 1 | 3 |
| MUSC 163 | Aural Theory 2 | 2 |
| MUSC 164 | Written Theory 2 | 3 |
| MUSC 189 | Music Convocation (Two semesters) | 0 |
| Select one of the following (GEF 8): | | 3 |
| MUSC 111 | Introduction to Music | |
| MUSC 113 | American Popular Music | |
| MUSC 114 | Music and the Immigrant Experience | |
| MUSC 115 | Introduction to History of Jazz | |
| MUSC 116 | Music in World Cultures | |
| MUSC 118 | Music in Appalachia | |
| MUSC 261 | Aural Theory 3 | 2 |
| MUSC 262 | Written Theory 3 | 3 |
| MUSC 263 | Aural Theory 4 | 2 |
| Select one of the following: | | 2-3 |

| | | |
|---|---|---|
| MUSC 362 | Instrumentation and Orchestration | |
| MUSC 364 | Popular Music Analysis Seminar | |
| MUSC 365 | Songwriting: Composition and Analysis | |
| MUSC 461 | Counterpoint, 16th Century | |
| MUSC 462 | Counterpoint, 18th Century | |
| MUSC 463 | Analysis of Eighteenth and Nineteenth Century Music | |
| MUSC 464 | Compositional Techniques in Contemporary Music | |
| MUSC 465S | Electronic Music Production | |
| MUSC 466 | Techniques for Electronic Music Performance | |
| MUSC 468 | Jazz and Commercial Music Harmony | |
| MUSC 469 | Counterpoint, 20th Century | |
| MUSC 270 | History of Western Musical Traditions 1 (GEF 6) | 3 |
| MUSC 271 | History of Western Musical Traditions 2 (GEF 8) | 3 |
| Total Hours | | 28 |

## Music Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.0 is required in all courses | | |
| Electives [*] | | 40 |
| Upper-Level Music Electives (in Music Theory or Music History) | | 4 |
| 8 semesters of Major Ensemble, selected from the following: [**] | | 8 |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 300B | Band: Marching | |
| MUSC 302 | University Community Choir | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| Applied Music Study (MUSC 121-127, 221-227, 321-327, 421-427) [*minimum proficiency level 7 required] | | 16 |
| MUSC 492 | Directed Study (Capstone) | 2 |
| Proficiency Level | | |
| Total Hours | | 70 |

*****

Electives must be courses that go beyond the GEF and foreign language requirements. Students may use up to 15 credits of MUSC courses as electives.

******

Credits may vary. Refer to the School of Music Requirements (https://catalog.wvu.edu/undergraduate/collegeofcreativeartsandmedia/music/) for policies related to fulfilling the Major Ensemble requirement.

## Performance Proficiency

Students must attain a proficiency in their major performance area suitable for public performance (at least level seven). Secondary piano proficiency is not required. Two solo upper-level appearances and two semesters of Music Convocation are required. If the student does not make satisfactory progress in achieving the expected performance proficiency, the student will be discontinued.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 121-127D Applied Music | 2 | MUSC 121-127D Applied Music | 2 |
| MUSC 161 | 2 | MUSC 163 | 2 |

| | | | |
|---|---|---|---|
| MUSC 162 | 3 | GEF | 3 |
| MUSC 191 | 2 | Electives | 3 |
| ENGL 101 (GEF 1) | 3 | MUSC 164 | 3 |
| GEF | 3 | MUSC 189 | 0 |
| Electives | 3 | Select one of the following (GEF 8): | 3 |
| | | MUSC 111 | |
| | | MUSC 113 | |
| | | MUSC 114 | |
| | | MUSC 115 | |
| | | MUSC 116 | |
| | | MUSC 118 | |
| | 19 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 221-227D Applied Music | 2 | MUSC 221-227D Applied Music | 2 |
| MUSC 261 | 2 | MUSC 263 | 2 |
| MUSC 262 | 3 | MUSC 271 (GEF 6) | 3 |
| MUSC 270 (GEF 8) | 3 | Select one of the following: | 2-3 |
| MUSC 189 | 0 | MUSC 362 | |
| ENGL 102 (GEF 1) | 3 | MUSC 364 | |
| Electives | 3 | MUSC 365 | |
| | | MUSC 461 | |
| | | MUSC 462 | |
| | | MUSC 463 | |
| | | MUSC 464 | |
| | | MUSC 465S | |
| | | MUSC 466 | |
| | | MUSC 468 | |
| | | MUSC 469 | |
| | | GEF | 3 |
| | 17 | | 13 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 321-327D Applied Music | 2 | MUSC 321-327D Applied Music | 2 |
| MUSC History or Theory Electives | 2 | MUSC History or Theory Electives | 2 |
| GEF 2 | 4 | Electives | 6 |
| Electives | 6 | GEF | 3 |
| GEF | 3 | | |
| | 18 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 421-427D Applied Music | 2 | MUSC 421-427D Applied Music | 2 |
| Electives | 11 | Electives | 8 |
| | | MUSC 492 | 2 |
| | 14 | | 13 |

Total credit hours: 125

## Major Learning Outcomes

### MUSIC - BA

Students graduating with the Bachelor of Arts degree in Music will develop:

1. the ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency, and rhetorical force,
2. an informed acquaintance with the mathematical and experimental methods of the physical and biological sciences; with the main forms of analysis and the historical and quantitative techniques needed for investigating the workings and developments of modern society,
3. an ability to address culture and history from a variety of perspectives,
4. an understanding of, and experience in thinking about, moral and ethical problems,
5. the ability to respect, understand, and evaluate work in a variety of disciplines, and
6. the capacity to explain and defend views effectively and rationally.

# Music Composition, B.M.

## Degree Offered

- Bachelor of Music

## Nature of the Program

The composition curriculum is especially designed for students wishing to prepare themselves as composers in both acoustic and electronic styles. The increased interest of society today in the arts is creating many new opportunities for the professional composer and teacher.

## Admissions for 2026-2027

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

For admission consideration, all students must submit separate applications to the University and to the School of Music. The audition is a preliminary assessment of a student's potential for success. For the Bachelor of Science in Music and Health, students must audition at a minimum performance level four. If a student is admitted, their standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano).

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))
2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition and/or interview. The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - interview required (no audition)
- BM Composition - audition and portfolio review required
- BM Music Education - audition and interview required
- BM Music Therapy - audition and interview required
- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can achieve the greatest success. Evaluation of students' work by the School of Music faculty informs these decisions. If students wish a broader, liberal arts-oriented program, they may pursue a Bachelor of Arts (BA) in Music.

Major Code: 3712

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 29 |
| Music Composition Program Requirements | | 24 |
| Music Composition Major Requirements | | 67-68 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 7, and 8 | | 27 |
| MUSC 191 | First-Year Seminar | 2 |
| Total Hours | | 29 |

## Music Composition Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.0 is required in all major courses | | |
| MUSC 161 | Aural Theory 1 (Minimum grade of B-) | 2 |
| MUSC 162 | Written Theory 1 (Minimum grade of B-) | 3 |
| MUSC 163 | Aural Theory 2 (Minimum grade of B-) | 2 |
| MUSC 164 | Written Theory 2 (Minimum grade of B-) | 3 |
| MUSC 189 | Music Convocation (Five Semesters) | 0 |
| Select one of the following (GEF 8): | | 3 |
| MUSC 111 | Introduction to Music | |
| MUSC 113 | American Popular Music | |
| MUSC 114 | Music and the Immigrant Experience | |
| MUSC 115 | Introduction to History of Jazz | |

| | | |
|---|---|---|
| MUSC 116 | Music in World Cultures | |
| MUSC 117 | Hip Hop Nation: Musical and Conceptual Foundations of a Cultural Revolution | |
| MUSC 118 | Music in Appalachia | |
| MUSC 262 | Written Theory 3 (Minimum grade of B-) | 3 |
| MUSC 263 | Aural Theory 4 (Minimum grade of B-; must be taken as the accelerated section. If this is not possible, the student must take MUSC 261 as well.) | 2 |
| MUSC 270 | History of Western Musical Traditions 1 (May fulfill GEF 8) | 3 |
| MUSC 271 | History of Western Musical Traditions 2 (May fulfill GEF 6) | 3 |
| Total Hours | | 24 |

## Music Composition Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.0 is required in all major courses | | |
| **Composition Courses** | | |
| Music Composition | | 6 |
| MUSC 160S | Introduction to Music Composition (Repeated) | |
| Upper Division Composition | | 16 |
| MUSC 460S | Upper Division Composition (Repeated) | |
| MUSC 362 | Instrumentation and Orchestration | 3 |
| MUSC 464 | Compositional Techniques in Contemporary Music | 3 |
| Select one of the following: | | 2-3 |
| MUSC 364 | Popular Music Analysis Seminar | |
| MUSC 365 | Songwriting: Composition and Analysis | |
| MUSC 463 | Analysis of Eighteenth and Nineteenth Century Music | |
| MUSC 461 | Counterpoint, 16th Century | |
| MUSC 462 | Counterpoint, 18th Century | |
| MUSC 468 | Jazz and Commercial Music Harmony | |
| MUSC 469 | Counterpoint, 20th Century | |
| Choose eight hours from the following: | | 8 |
| MUSC 460A | Electronic Music Composition | |
| MUSC 465S | Electronic Music Production | |
| MUSC 466 | Techniques for Electronic Music Performance | |
| MUSC 236 | Introduction to Recording Technology | |
| MUSC 338 | Sound-Games/Visual Media | |
| MUSC 439 | Songwriting with Technology | |
| MUSC 459 | Film and Video Game Composition | |
| **Music Business Courses** | | |
| MUSC 410 | Introduction to Music Industry | 3 |
| **Music Supportive Courses** | | |
| MUSC 200S | Fundamentals of Conducting | 2 |
| Class Piano *minimum proficiency level 2 required; waived if piano is principal instrument | | 4 |
| MUSC 130S | Piano Class 1 | |
| MUSC 131S | Piano Class 2 | |
| MUSC 132S | Piano Class 3 | |
| MUSC 133S | Piano Class 4 | |
| 2 semesters of music ensemble to be selected from the following: * | | 2 |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 300B | Band: Marching | |
| MUSC 302 | University Community Choir | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |

| | | |
|---|---|---|
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| 1 semesters of: | | 1 |
| MUSC 348 | Chamber Music: New Music | |
| 2 semesters of music ensemble to be selected from the following: * | | 2 |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 300B | Band: Marching | |
| MUSC 302 | University Community Choir | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 340 | Chamber Music: Brass | |
| MUSC 341 | Chamber Music: Guitar | |
| MUSC 342 | Chamber Music: Piano-4 Hand | |
| MUSC 343 | Chamber Music: Strings | |
| MUSC 344 | Chamber Music: Woodwind | |
| MUSC 345 | Chamber Music: Vocal | |
| MUSC 346 | Chamber Music: Mixed Ensemble | |
| MUSC 347 | Chamber Music: Mountaineer Singers | |
| MUSC 348 | Chamber Music: New Music | |
| MUSC 349 | Chamber Music: Other | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| MUSC 353B | Chamber Music: Jazz Small Group | |
| MUSC 353C | Chamber Music: Jazz Small Group 2 | |
| MUSC 353E | Chamber Music: Jazz and Ethnic | |
| MUSC 353G | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 353H | Chamber Music: Jazz Other | |
| MUSC 353I | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 354 | Gamelan | |
| MUSC 355 | Steel Band | |
| MUSC 356 | African Music Ensemble | |
| MUSC 357 | Brazilian Music Ensemble | |
| MUSC 358 | Experiential Music Ensemble | |
| MUSC 359 | Taiko Ensemble | |
| MUSC 361 | Fife and Drum Ensemble | |
| MUSC 363 | Appalachian Music Ensemble | |
| 2 semesters of music ensembles to be selected from the following: | | 2 |
| MUSC 340 | Chamber Music: Brass | |
| MUSC 341 | Chamber Music: Guitar | |
| MUSC 342 | Chamber Music: Piano-4 Hand | |
| MUSC 343 | Chamber Music: Strings | |
| MUSC 344 | Chamber Music: Woodwind | |
| MUSC 346 | Chamber Music: Mixed Ensemble | |
| MUSC 347 | Chamber Music: Mountaineer Singers | |
| MUSC 348 | Chamber Music: New Music | |
| MUSC 349 | Chamber Music: Other | |
| MUSC 353B | Chamber Music: Jazz Small Group | |
| MUSC 353C | Chamber Music: Jazz Small Group 2 | |
| MUSC 353E | Chamber Music: Jazz and Ethnic | |

| | | |
|---|---|---|
| MUSC 353G | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 353H | Chamber Music: Jazz Other | |
| MUSC 353I | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 354 | Gamelan | |
| MUSC 355 | Steel Band | |
| MUSC 356 | African Music Ensemble | |
| MUSC 357 | Brazilian Music Ensemble | |
| MUSC 358 | Experiential Music Ensemble | |
| MUSC 359 | Taiko Ensemble | |
| MUSC 361 | Fife and Drum Ensemble | |
| MUSC 363 | Appalachian Music Ensemble | |
| **Principal Performance Studies** ***minimum proficiency level 6 required** | | |
| Select eight hours from the following: | | |
| Applied Music 100 level (MUSC 121-127) - 2 semesters | | 4 |
| Applied Music 200 level (MUSC 221-227) - 2 semesters | | 4 |
| Music History Elective - selected from the following: | | 3 |
| MUSC 470A | Topics in Popular Music | |
| MUSC 470B | Topics in the Study of Western Art Music | |
| MUSC 470C | Topics in the History of Jazz | |
| MUSC 470D | Topics in Music of Sub-Saharan Africa | |
| MUSC 470E | Topics in Musics of the Americas | |
| MUSC 470F | Topics in Musics of East Asia | |
| MUSC 470G | Topics in Musics of South Asia | |
| MUSC 470H | Topics in Gender and Sexuality in Music | |
| MUSC 470I | Topics in Race and Ethnicity in Music | |
| MUSC 470J | Topics in Musics of the Arab World | |
| MUSC 477 | Music of Africa | |
| Capstone | | |
| MUSC 467 | Major Project in Theory, Composition, or Music History | 2 |
| Proficiency Level Piano | | |
| Proficiency Level | | |
| Total Hours | | 67-68 |

*****
Credits may vary. Refer to the School of Music Requirements (p. 552) for policies related to fulfilling ensemble requirements.

## Performance Proficiency

A music major with an emphasis in composition should enter as a freshman having achieved proficiency level three on the major instrument, and must complete proficiency level six on that instrument before graduation.  If piano is not the major instrument, the student must achieve a level two on piano. Piano majors reduce total curricular credits by four.

## Solo Performance Requirement

Majors in this curriculum must present two solo performances on the major instrument in upper-level recitals before graduation.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Ensemble | 1 | MUSC Ensemble | 1 |
| MUSC Ensemble | 1 | MUSC 121-127D Applied Music | 2 |
| MUSC 122-127D Applied Music | 2 | MUSC 160S | 3 |
| MUSC 160S | 3 | Select one of the following: | 1 |
| Select one of the following: | 1 | MUSC 130S | |
| MUSC 130S | | MUSC 131S | |

| | | | |
|---|---|---|---|
| MUSC 131S | | MUSC 132S | |
| MUSC 132S | | MUSC 133S | |
| MUSC 133S | | MUSC 134S | |
| MUSC 134S | | MUSC 163 | 2 |
| MUSC 161 | 2 | MUSC 164 | 3 |
| MUSC 162 | 3 | MUSC 189 | 0 |
| MUSC 191 | 2 | Select one of the following (GEF 8): | 3 |
| | | MUSC 111 | |
| | | MUSC 113 | |
| | | MUSC 114 | |
| | | MUSC 115 | |
| | | MUSC 116 | |
| | | MUSC 117 | |
| | | MUSC 118 | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Ensemble | 1 | MUSC Ensemble | 1 |
| MUSC 221-227D Applied Music | 2 | MUSC 221-227D Applied Music | 2 |
| MUSC 460S | 4 | MUSC 460S | 4 |
| Select one of the following: | 1 | Select one of the following: | 1 |
| MUSC 130S | | MUSC 130S | |
| MUSC 131S | | MUSC 131S | |
| MUSC 132S | | MUSC 132S | |
| MUSC 133S | | MUSC 133S | |
| MUSC 134S | | MUSC 134S | |
| MUSC 262 | 3 | Select one of the following: | 3 |
| MUSC 263 (Must be taken as accelerated section.) | 2 | MUSC 463 | |
| MUSC 189 | 0 | MUSC 365 | |
| GEF 3 | 3 | MUSC 468 | |
| | | MUSC 469 | |
| | | MUSC 461 | |
| | | MUSC 462 | |
| | | MUSC 189 | 0 |
| | | ENGL 101 | 3 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 460S | 4 | MUSC 460S | 4 |
| Choose one of the following: | 3 | MUSC 348 | 1 |
| MUSC 459 | | MUSC 189 | 0 |
| MUSC 338 | | GEF 7 | 3 |
| MUSC 189 | 0 | MUSC 270 | 3 |
| GEF 4 | 3 | MUSC 464 | 3 |
| MUSC 410 | 3 | | |
| ENGL 102 | 3 | | |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 200S | 2 | Capstone: | |
| Choose One of the Following: | 2 | MUSC 467 | 2 |
| MUSC 460A | | MUSC Ensemble | 1 |

| | | | |
|---|---|---|---|
| MUSC 465S | | GEF 8 | 3 |
| MUSC 362 | 3 | Choose One of the Following: | 2-3 |
| GEF 2 | 2 | MUSC 460A | |
| GEF 5 | 3 | MUSC 466 | |
| MUSC 271 | 3 | MUSC 236 | |
| MUSC Ensemble | 1 | MUSC 439 | |
| | | Choose one of the following: | 3 |
| | | MUSC 470A | |
| | | MUSC 470B | |
| | | MUSC 470C | |
| | | MUSC 470D | |
| | | MUSC 470E | |
| | | MUSC 470F | |
| | | MUSC 470G | |
| | | MUSC 470H | |
| | | MUSC 470I | |
| | | MUSC 470J | |
| | | MUSC 477 | |
| | | GEF 2 | 3 |
| | 16 | | 14 |

Total credit hours: 120

## Major Learning Outcomes

### MUSIC COMPOSITION

Students who earn the Bachelor of Music in Composition will be able to:

- Compose at a high level in a variety of styles, for a wide range of instrumental/choral groups, and in varying media, including both electronic and acoustic settings.
- Demonstrate fluency in the use of tools needed by composers including varied and diverse approaches to composing music in any style, a workable knowledge of multiple instruments and digital technologies, analytical techniques, and applicable technologies.
- Collaborate effectively with musicians and artists, including but not limited to instrumentalists, digital artists, and media specialists, whose work crosses artistic lines to produce public performances of their work.
- Display entrepreneurship in a wide range of artistic, professional, and business-minded experiences.

# Music Education, B.M.

## Degree Offered

- Bachelor of Music

## Nature of the Program

Students who successfully complete the music education curriculum and all certification exams required by the West Virginia Department of Education will be qualified for a professional certificate, grades birth through adult. This certification allows teaching of instrumental, vocal, and general music in West Virginia public schools.

## Admissions for 2026-2027

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

For admission consideration, all students must submit separate applications to the University and to the School of Music. The audition is a preliminary assessment of a student's potential for success. For the Bachelor of Science in Music and Health, students must audition at a minimum performance level four. If a student is admitted, their standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano).

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))
2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition and/or interview. The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - interview required (no audition)
- BM Composition - audition and portfolio review required
- BM Music Education - audition and interview required
- BM Music Therapy - audition and interview required
- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can achieve the greatest success. Evaluation of students' work by the School of Music faculty informs these decisions. If students wish a broader, liberal arts-oriented program, they may pursue a Bachelor of Arts (BA) in Music.

Major Code: 3715

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 24 |
| Music Education Program Requirements | | 28 |

| | |
|---|---|
| Music Education Major Requirements | 78 |
| Total Hours | 130 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 7, and 8 | | 22 |
| MUSC 191 | First-Year Seminar | 2 |
| Total Hours | | 24 |

## Music Education Program Requirements

| Code | Title | Hours |
|---|---|---|
| A cumulative GPA of 2.75 is required. | | |
| MUSC 189 | Music Convocation (Five Semesters) | 0 |
| **Music Core Courses** | | |
| Minimum GPA of 2.75 | | |
| **Select one of the following (GEF 8):** | | **3** |
| MUSC 111 | Introduction to Music | |
| MUSC 113 | American Popular Music | |
| MUSC 114 | Music and the Immigrant Experience | |
| MUSC 115 | Introduction to History of Jazz | |
| MUSC 116 | Music in World Cultures | |
| MUSC 117 | Hip Hop Nation: Musical and Conceptual Foundations of a Cultural Revolution | |
| MUSC 118 | Music in Appalachia | |
| MUSC 161 | Aural Theory 1 | 2 |
| MUSC 162 | Written Theory 1 | 3 |
| MUSC 163 | Aural Theory 2 | 2 |
| MUSC 164 | Written Theory 2 | 3 |
| MUSC 200S | Fundamentals of Conducting | 2 |
| MUSC 201S | Conducting and Score Interpretation | 2 |
| MUSC 261 | Aural Theory 3 | 2 |
| MUSC 262 | Written Theory 3 | 3 |
| MUSC 270 | History of Western Musical Traditions 1 (GEF 6) | 3 |
| MUSC 271 | History of Western Musical Traditions 2 (GEF 8) | 3 |
| Total Hours | | 28 |

## Music Education Major Requirements

| Code | Title | Hours |
|---|---|---|
| A cumulative GPA of 2.75 is required. | | |
| A minimum GPA of 2.75 is required in all major requirements. | | |
| **Professional Education Courses** | | |
| Minimum Grade of C- required. Minimum GPA of 2.75. | | |
| MUSC 180 | Introduction to Music Education | 1 |
| MUSC 289 | Classroom Instruments | 1 |
| MUSC 290 | Music Teaching and Learning | 2 |
| MUSC 320 | Technology in the Music Classroom | 2 |
| MUSC 282<br>& 282S | String Instrument Pedagogy<br>and String Instrument Pedagogy | 2 |
| MUSC 283<br>& 283S | Percussion Instrument Pedagogy<br>and Percussion Instrument Pedagogy | 2 |
| MUSC 284<br>& 284S | Vocal Pedagogy<br>and Vocal Pedagogy Studio | 3 |

| | | |
|---|---|---|
| **Select one of the following sequences:** | | **4-5** |
| MUSC 280<br>& 280S | Woodwind Instrument Pedagogy<br>and Woodwind Instrument Pedagogy | |
| MUSC 281<br>& 281S | Brass Instrument Pedagogy<br>and Brass Instrument Pedagogy | |
| or | | |
| MUSC 285<br>& MUSC 280S | Wind Pedagogy<br>and Woodwind Instrument Pedagogy | |
| and | | |
| MUSC 269A | Diction for Singers: English and Italian | |
| or MUSC 269B | Diction for Singers: German and French | |
| MUSC 380<br>& 380S | Instrumental Methods and Technology Applications<br>and Instrumental Methods and Technology Applications * | 3 |
| MUSC 381<br>& 381S | Choral Music Methods and Technology Applications<br>and Choral Music Methods and Technology Applications * | 3 |
| MUSC 382<br>& 382S | General Music Methods and Technology Applications<br>and General Music Methods and Technology Applications * | 3 |
| EDP 301 | Learning in PreK-Adult Educational Settings | 3 |
| SPED 404 | Special Education in Contemporary Society (GEF 4) | 3 |
| SPED 460 | Differentiation of Instruction | 3 |
| RDNG 422 | Reading in the Content Areas | 3 |
| MUSC 484 | Music Residency 1 | 4 |
| MUSC 487 | Residency 2 Seminar (Capstone) | 2 |
| MUSC 491 | Professional Field Experience | 10 |
| **Studies in Music** | | |
| Class Piano (if piano is not principal) | | |
| MUSC 130S | Piano Class 1 | 1 |
| MUSC 131S | Piano Class 2 | 1 |
| MUSC 132S | Piano Class 3 | 1 |
| **Ensembles (7 semesters required)** **At least one semester/ensemble must be MUSC 353, MUSC 353A-I, MUSC 354-359, MUSC 361, or MUSC 363. At least one semester must be MUSC 302, MUSC 305, MUSC 305A, or MUSC 345.** | | |
| 4 semesters/ensembles selected from the following: | | 4 |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| MUSC 353C | Chamber Music: Jazz Small Group 2 | |
| 3 semesters/ensembles selected from the following: | | 3 |
| MUSC 101 | Band: Concert | |
| MUSC 101A | Band: Pep Band | |
| MUSC 150 | Chamber Music: Freshman Percussion | |
| MUSC 300B | Band: Marching | |
| MUSC 302 | University Community Choir | |
| MUSC 304 | Introduction To Opera Theatre | |
| MUSC 340 | Chamber Music: Brass | |
| MUSC 341 | Chamber Music: Guitar | |
| MUSC 342 | Chamber Music: Piano-4 Hand | |
| MUSC 343 | Chamber Music: Strings | |
| MUSC 344 | Chamber Music: Woodwind | |
| MUSC 345 | Chamber Music: Vocal | |

| | | |
|---|---|---|
| MUSC 346 | Chamber Music: Mixed Ensemble | |
| MUSC 347 | Chamber Music: Mountaineer Singers | |
| MUSC 348 | Chamber Music: New Music | |
| MUSC 349A | Chamber Music: Brass Choir | |
| MUSC 349B | Chamber Music: Other | |
| MUSC 349C | Chamber Music: Other-Vocal Accompaniment | |
| MUSC 349D | Chamber Music: Other | |
| MUSC 349E | Chamber Music: Other | |
| MUSC 349F | Chamber Music: Other | |
| MUSC 349G | Chamber Music: Other | |
| MUSC 349H | Chamber Music: Other | |
| MUSC 349I | Chamber Music: Other | |
| MUSC 349J | Chamber Music: Other | |
| MUSC 349K | Chamber Music: Other | |
| MUSC 349L | Chamber Music: Other | |
| MUSC 349M | Chamber Music: Other | |
| MUSC 349N | Chamber Music: Other | |
| MUSC 349O | Chamber Music: Other | |
| MUSC 349P | Chamber Music: Other | |
| MUSC 349Q | Chamber Music: Other | |
| MUSC 349R | Chamber Music: Other | |
| MUSC 349S | Chamber Music: Other | |
| MUSC 349T | Chamber Music: Other | |
| MUSC 349U | Chamber Music: Other | |
| MUSC 349V | Chamber Music: Other | |
| MUSC 349W | Chamber Music: Other | |
| MUSC 349X | Chamber Music: Other | |
| MUSC 349Y | Chamber Music: Other | |
| MUSC 349Z | Collegium Musicum | |
| MUSC 353I | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 349 | Chamber Music: Other | |
| MUSC 351 | Chamber Music: Percussion 1 | |
| MUSC 352 | Chamber Music: Percussion 2 | |
| MUSC 353B | Chamber Music: Jazz Small Group | |
| MUSC 353E | Chamber Music: Jazz and Ethnic | |
| MUSC 353G | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 353H | Chamber Music: Jazz Other | |
| MUSC 354 | Gamelan | |
| MUSC 355 | Steel Band | |
| MUSC 356 | African Music Ensemble | |
| MUSC 357 | Brazilian Music Ensemble | |
| MUSC 358 | Experiential Music Ensemble | |
| MUSC 359 | Taiko Ensemble | |
| MUSC 361 | Fife and Drum Ensemble | |
| MUSC 363 | Appalachian Music Ensemble | |
| Select 14 hours from the following: | | |
| Applied Music 100 level (MUSC 121-127D) - 2 semesters | | 4 |
| Applied Music 200 level (MUSC 221-227D) - 2 semesters | | 4 |
| Applied Music 300 level (MUSC 321-327D) - 2 semesters | | 4 |
| Applied Music 400 level (MUSC 421-427D) - 1 semester | | 2 |
| Proficiency Level Piano (min. level 2 required) | | |
| Proficiency Level (min. level 7 required) | | |

| | |
|---|---|
| Recital | |
| Total Hours | 78 |

*

Prior to enrolling in MUSC 380, MUSC 381, and MUSC 382, students must be accepted into Candidacy by (a) satisfying the Pre-Professional Skills Requirement set by WVDE, (b) completing the candidacy application and interview, (c) passing MUSC 132 or its equivalent, (d) satisfying secondary instrument proficiency requirements, (e) passing MUSC 201S and 289 (with a C or better), and (f) meeting the following GPA requirements:

1. An overall GPA of 2.75 in all courses taken at WVU and at any other institution (this includes courses taken at other institutions that are not accepted by WVU)
2. A GPA of 2.75 in all music core courses
3. A GPA of 2.75 in professional education courses and meeting the minimum grade requirements noted above.

## Proficiency Level

Music education students should begin as freshmen at proficiency level three on their principal performance medium (instrument or voice) and must complete proficiency level seven on the medium to be eligible for student teaching. Students must present two solo performances on the major instrument or voice in upper-level recitals before the semester in which they student teach.

## Secondary Instrument Proficiency Requirements

In addition to the general pre-professional requirements indicated above, secondary instrument requirements for specific music education methods courses are:

- MUSC 380 381, 382 Passing all proficiencies associated with MUSC 280, MUSC 281, and either MUSC 284 or MUSC 285.

## Residency

Students must pass all secondary instrument proficiency examinations no later than the end of the semester prior to that in which they student teach.

Students must pass the Praxis Series subject area test in music (Music: Content Knowledge [0113]) prior to applying for Residency I (MUSC 484) and meet the following GPA requirements

- An overall GPA of 2.75 in all courses taken at WVU and at any other institution (this includes courses taken at other institutions that are not accepted by WVU);
- A GPA of 2.75 in all music (content area) courses
- A GPA of 2.75 in professional education courses and music education methods courses with no D's or F's in these courses:

## Certification

To be recommended for certification, students must complete and pass the Educative Teacher Performance Assessment (edTPA) during Residency II.

## Combined Performance/Music Education Curriculum

An option to double-major in music education and music performance or music composition can be arranged for outstanding students who desire to meet the requirements of majors in both areas. Admission to this rigorous program is by written consent of the coordinator of the appropriate area and the coordinator of music education after the student has completed two semesters. This curriculum satisfies the course requirements of the professional certificate for birth through adult. The numerous possible combinations of performance and composition with music education cannot be listed separately here. Advisors in cooperation with the student will determine when to take coursework. Students in this program typically add one or two semesters to their college experience.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Ensemble | 1 | Ensemble | 1 |
| MUSC 121-127D Applied Music | 2 | MUSC 121-127D Applied Music | 2 |
| Select one of the following: | 1 | Select one of the following: | 1 |
| MUSC 130S | | MUSC 130S | |
| MUSC 131S | | MUSC 131S | |
| MUSC 132S | | MUSC 132S | |
| MUSC 161 | 2 | MUSC 163 | 2 |
| MUSC 162 | 3 | MUSC 164 | 3 |

| | | | |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | MUSC 180 | 1 |
| MUSC 191 | 2 | Select one of the following (GEF 8): | 3 |
| MUSC 284<br>& 284S | 3 | MUSC 111 | |
| | | MUSC 113 | |
| | | MUSC 114 | |
| | | MUSC 115 | |
| | | MUSC 116 | |
| | | MUSC 117 | |
| | | MUSC 118 | |
| | | MUSC 189 | 0 |
| | | Select one of the following: | 2 |
| | | MUSC 280<br>& 280S | |
| | | MUSC 281<br>& 281S | |
| | | SPED 404 (GEF 4) | 3 |
| | 17 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Ensemble | 1 | Ensemble | 1 |
| MUSC 221-227D Applied Music | 2 | MUSC 221-227D Applied Music | 2 |
| Select one of the following: | 1 | MUSC 189 | 0 |
| MUSC 130S | | MUSC 201S | 2 |
| MUSC 131S | | MUSC 270 (GEF 6) | 3 |
| MUSC 132S | | Select one of the following: | 2 |
| MUSC 189 | 0 | MUSC 283<br>& 283S | |
| MUSC 200S | 2 | MUSC 282<br>& 282S | |
| MUSC 261 | 2 | EDP 301 | 3 |
| MUSC 262 | 3 | MUSC 289 | 1 |
| Select one of the following: | 2 | | |
| MUSC 280<br>& 280S | | | |
| MUSC 281<br>& 281S | | | |
| ENGL 102 (GEF 1) | 3 | | |
| MUSC 290 | 2 | | |
| | 18 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Ensemble | 1 | Ensemble | 1 |
| MUSC 321-327D Applied Music | 2 | MUSC 321-327D Applied Music | 2 |
| MUSC 189 | 0 | MUSC 189 | 0 |
| Select one of the following: | 2 | Select one of the following: | 3 |
| MUSC 282<br>& 282S | | MUSC 380<br>& 380S | |
| MUSC 283<br>& 283S | | MUSC 381<br>& 381S | |
| Select one of the following: | 3 | MUSC 382<br>& 382S | |
| MUSC 380<br>& 380S | | GEF 2 | 4 |

| | | | |
|---|---|---|---|
| MUSC 381 & 381S | | GEF 8 | 3 |
| MUSC 382 & 382S | | GEF 5 | 3 |
| GEF 7 | 3 | MUSC 320 | 2 |
| RDNG 422 | 3 | | |
| MUSC 271 (GEF 8) | 3 | | |
| | 17 | | 18 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Ensemble | 1 | MUSC 491 | 10 |
| MUSC 421-427D Applied Music | 2 | MUSC 487 | 2 |
| Select one of the following: | 3 | | |
| MUSC 380 & 380S | | | |
| MUSC 381 & 381S | | | |
| MUSC 382 & 382S | | | |
| MUSC 484 | 4 | | |
| GEF 3 | 3 | | |
| SPED 460 | 3 | | |
| | 16 | | 12 |

Total credit hours: 130

# Major Learning Outcomes

## MUSIC EDUCATION

Students will:

- Demonstrate general musicianship (audiation and creativity) including:
  - Adaptability to various classroom instruments
  - Performance knowledge of a wide variety of musical genres and cultures
  - Adaptability to new/unfamiliar forms of music
  - Creativity: Experience in composing, arranging/mixing, and improvising in a variety of mediums
- Demonstrate independent and collaborative refined/advanced musicianship (in-depth study on a specific instrument regardless of genre of music)
- Possess a thorough understanding of child development (Pre-K-12) and musical learning and how they interact in the music education of early childhood, young children, adolescents, and teenagers.
- Develop pedagogical skills related to lesson planning, delivery, classroom management, and assessment in a variety of music teaching and learning contexts
- Understand, adapt to, and use music/pedagogical technology in teaching and learning
- Articulate values and beliefs regarding the musical education of K-12 children and actuate them through curricular planning.
- Be a reflective practitioner to guide student musical learning
  - Reflect on one’s own teaching practice
  - Reflect on student achievement
- Adapt to changing landscape of public/private education

# Music Business and Industry, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

Music industry is a vibrant, multi-billion dollar global industry, vast in scope and reach, offering a product that is deeply ingrained into the fabric of every country and culture, across social strata around the world. As such, it offers extensive professional opportunities to those who are trained, knowledgeable, and versed in its systems, methods, and practices.

The BA in Music Business and Industry offers two tracks (areas of emphasis) students may select: applied music (which includes private instrument or voice lessons) or multi-instrumental (where students are engaged in group instrumental/vocal lessons).

The Music Business and Industry program provides an engaging, systematic, and rigorous course of study leading to analytical, creative, regulatory, and entrepreneurial understanding and skills necessary to succeed in today's complex and challenging music industry field.

The full course of study that includes courses in music, music industry, and business, combined with the University's General Education Foundations curriculum, is designed in line with the College of Creative Arts and Media's mission of educating artists, teachers, and scholars through an experiential, student-centered approach to learning. The Music Business and Industry program includes courses in intellectual property in music industry, music publishing, live music industry, recording industry, music product development and placement, and recording technology.

## Admissions for 2026-2027

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

For admission consideration, all students must submit separate applications to the University and to the School of Music. The audition is a preliminary assessment of a student's potential for success. For the Bachelor of Science in Music and Health, students must audition at a minimum performance level four. If a student is admitted, their standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano).

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))
2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition and/or interview. The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - interview required (no audition)
- BM Composition - audition and portfolio review required
- BM Music Education - audition and interview required
- BM Music Therapy - audition and interview required
- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can achieve the greatest success. Evaluation of students' work by the School of Music faculty informs these decisions. If students wish a broader, liberal arts-oriented program, they may pursue a Bachelor of Arts (BA) in Music.

# Area of Emphasis Information

## BA IN MUSIC BUSINESS AND INDUSTRY PROGRAM / AREA OF EMPHASIS: APPLIED MUSIC

### ENTRANCE REQUIREMENTS

Acceptance into the Bachelor of Arts in Music Business and Industry degree program is contingent upon admission to WVU as an undergraduate student and a successful interview. Each student applying for the BA in Business and Music Industry program will complete an interview process with one or more representatives from the Music Business and Industry program. Other School of Music staff may be present as well. The interview process covers information about the student's educational history, preparation for the music industry degree program, interest in music industry as a career, and any other information the student would like to share with the interviewer.

### MUSIC PERFORMANCE AUDITION REQUIREMENT

All the prospective majors who wish to enroll in the program's Area of Emphasis: Applied Music will be required to pass a successful instrumental/vocal performance audition in order to be admitted into the program. Students who pursue this area emphasis must audition at a performance level 2, or above, on their principal instrument/voice to be admitted to the BA in Business and Music Industry program. Auditions for such incoming majors are held principally in November, February, and March in Morgantown. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

All admitted students should own their own instrument under normal circumstances (except for piano) and a portable (folding) music stand.

### ADDITIONAL REQUIREMENTS:

High school graduates from West Virginia and non-residents are eligible to be considered for admission to the program with a 2.5 grade point average and either a composite ACT score of 19 or a combined math and critical reading SAT score of 910. If space is available and the required high school units, GPA, and test scores are met, the student will be admitted. Therefore, we encourage eligible students to apply as soon as possible after September 15 of their senior year. If one of the requirements is not met, students may still apply, and the Music Business and Industry Program Director will review the application. If appropriate, students should submit a written statement explaining any extenuating circumstances that might have affected their academic performance.

## BA IN MUSIC BUSINESS AND INDUSTRY PROGRAM / AREA OF EMPHASIS: MULTI-INSTRUMENTAL

### ENTRANCE REQUIREMENTS

Acceptance into the Bachelor of Arts in Business and Music Industry degree program is contingent upon admission to WVU as an undergraduate student and a successful interview. Each student applying for the BA in Music Business and Industry program will complete an interview process with one or more representatives from the Music Business and Industry program. Other School of Music staff may be present as well. The interview process covers information about the student's educational history, preparation for the music industry degree program, interest in music industry as a career, and any other information the student would like to share with the interviewer.

### MUSIC PERFORMANCE AUDITION REQUIREMENT

Music performance audition is not required for this Area of Emphasis.

### ADDITIONAL REQUIREMENTS:

High school graduates from West Virginia and non-residents are eligible to be considered for admission to the program with a 2.5 grade point average and either a composite ACT score of 19 or a combined math and critical reading SAT score of 910. If space is available and the required high school units, GPA, and test scores are met, the student will be admitted. Therefore, we encourage eligible students to apply as soon as possible after September 15 of their senior year. If one of the requirements is not met, students may still apply, and the Music Business and Industry Program Director will review the application. If appropriate, students should submit a written statement explaining any extenuating circumstances that might have affected their academic performance.

Major Code: 3706

# General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |

| | | |
|---|---|---|
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 42 |
| Music Industry Major Requirements | | 78 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5 and 8 | | 25 |
| MUSC 191 | First-Year Seminar | 2 |
| General Electives | | 15 |
| Total Hours | | 42 |

## Music Industry Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Minimum grade of C- is required in all Music Business & Industry courses** * | | |
| **Minimum GPA of 2.5 in all MUSC courses** * | | |
| **Music Business & Industry Courses** | | |
| MUSC 410 | Introduction to Music Industry | 3 |
| MUSC 411 | Intellectual Property in Music Industry | 3 |
| MUSC 412 | Music Product Development and Placement | 3 |
| MUSC 413 | Live Music Industry | 3 |
| MUSC 414 | Recording Industry | 3 |
| MUSC 415 | Music Publishing | 3 |
| MUSC 491 | Professional Field Experience | 3 |
| **Music Business & Industry Electives** | | **5** |
| Any MUSC courses approved by advisor | | |
| **Business Courses** | | |
| ACCT 201 | Principles of Accounting 1 | 3 |
| BCOR 350 | Principles of Marketing | 3 |
| BCOR 370 | Principles of Management | 3 |
| or BCOR 340 | Principles of Finance | |
| **Musicianship Skills and Analysis Courses** | | |
| MUSC 140 | Commercial Music Aural Skills 1 | 3 |
| MUSC 141 | Commercial Music Aural Skills 2 | 3 |
| MUSC 142 | Commercial Music Fundamentals | 3 |

| | | |
|---|---|---|
| MUSC 143 | Commercial Music Harmony and Form | 3 |
| MUSC 144 | Functional Keyboard for the Commercial Musician 1 | 2 |
| MUSC 145 | Functional Keyboard for the Commercial Musician 2 | 2 |
| **Musicology Courses** | | |
| Select one of the following (GEF 8): | | 3 |
| MUSC 111 | Introduction to Music | |
| MUSC 112 | Mozart to Metallica: Music and Society | |
| MUSC 113 | American Popular Music | |
| MUSC 114 | Music and the Immigrant Experience | |
| MUSC 115 | Introduction to History of Jazz | |
| MUSC 116 | Music in World Cultures | |
| MUSC 118 | Music in Appalachia | |
| MUSC 117 | Hip Hop Nation: Musical and Conceptual Foundations of a Cultural Revolution | |
| MUSC 271 | History of Western Musical Traditions 2 (GEF 6) | 3 |
| **Music Convocation** | | |
| MUSC 189 | Music Convocation (2 semesters) | 0 |
| **Required Area of Emphasis (AoE)** | | **18** |
| Applied Music AoE | | |
| Multi-Instrumental AoE | | |
| **Capstone** | | |
| MUSC 452 | Capstone Project in Music Business & Industry | 3 |
| Total Hours | | 78 |

*

This does not supersede or replace the University's D/F repeat policy.

## Areas of Emphasis

- Applied Music (p. 586)
- Multi-Instrumental (p. 587)

## Applied Music Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| **A minimum grade of C- is required in all music industry courses.** | | |
| **A minimum GPA of 2.5 in all MUSC courses.** | | |
| **Applied Lessons** | ***minimum proficiency level 5 required** | |
| Applied Music 100 Level (MUSC 121-127) | | 4 |
| Applied Music 200 Level (MUSC 221-227) | | 4 |
| Applied Music 300 Level (MUSC 321-327) | | 4 |
| **Music Ensemble (6 semesters)** | | **6** |
| Any of the following, and any other ensemble approved by advisor | | |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 300B | Band: Marching | |
| MUSC 302 | University Community Choir | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| Total Hours | | 18 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 191 | 2 | MUSC 189 | 0 |
| MUSC 189 | 0 | MUSC 121-127 Applied Lesson | 2 |
| MUSC 410 | 3 | MUSC 141 | 3 |
| MUSC 121-127 Applied Lesson | 2 | MUSC 144 | 2 |
| MUSC 140 | 3 | Musicology Requirement (GEF 8) | 3 |
| MUSC 142 | 3 | GEF | 3 |
| GEF | 3 | GEF | 3 |
| | 16 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 411 | 3 | MUSC 412 | 3 |
| MUSC 221-227 Applied Lesson | 2 | MUSC 221-227 Applied Lesson | 2 |
| Music Ensemble | 1 | Music Ensemble | 1 |
| MUSC 143 | 3 | MUSC 271 (GEF 6) | 3 |
| GEF | 4 | ACCT 201 | 3 |
| MUSC 145 | 2 | GEF | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 413 | 3 | MUSC 414 | 3 |
| MUSC 321-327 Applied Lesson | 2 | MUSC 321-327 Applied Lesson | 2 |
| Music Ensemble | 1 | Music Ensemble | 1 |
| BCOR 350 | 3 | BCOR 370 | 3 |
| GEF | 3 | GEF | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 415 | 3 | MUSC 452 | 3 |
| MUSC 491 | 3 | Music Ensemble | 1 |
| Music Ensemble | 1 | Music Elective | 3 |
| Music Elective | 2 | GEF | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 15 | | 13 |

Total credit hours: 120

## Multi-Instrumental Area of Emphasis Requirements

| Code | Title | Hours |
|---|---|---|
| **A minimum grade of C- is required in all music industry courses.** | | |
| **A minimum GPA of 2.5 in all MUSC courses.** | | |
| **Group Instrumental Lessons** | | |
| MUSC 137 | Class Guitar 1 | 1 |
| MUSC 237 | Class Guitar 2 | 1 |
| Or any other group instrumental/vocal classes approved by advisor | | |
| **Digital Audio Workstations Classes** | | |
| MUSC 336 | Introduction to Pro Tools | 3 |

| | | |
|---|---|---|
| MUSC 337 | Digital Audio Workstations | 3 |
| **Music Ensemble** | | **4** |
| Any available ensemble that does not require audition, or for which a student passes the audition. | | |
| **Music Technology Courses** | | |
| MUSC 236 | Introduction to Recording Technology | 2 |
| MUSC 437 | Practicum-Recording Technology | 4 |
| Total Hours | | 18 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 191 | 2 | MUSC 189 | 0 |
| MUSC 189 | 0 | MUSC 141 | 3 |
| MUSC 410 | 3 | MUSC 144 | 2 |
| MUSC 140 | 3 | Musicology Requirement (GEF 8) | 3 |
| MUSC 142 | 3 | GEF | 3 |
| GEF | 3 | GEF | 3 |
| | 14 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 411 | 3 | ACCT 201 | 3 |
| MUSC 143 | 3 | MUSC 412 | 3 |
| MUSC 145 | 2 | MUSC 236 | 2 |
| GEF | 3 | MUSC 271 (GEF 6) | 3 |
| GEF | 4 | MUSC 137 | 1 |
| | | GEF | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 413 | 3 | MUSC 414 | 3 |
| MUSC 237 | 1 | MUSC 337 | 3 |
| MUSC 336 | 3 | Music Ensemble | 1 |
| Music Ensemble | 1 | BCOR 370 | 3 |
| BCOR 350 | 3 | GEF | 3 |
| GEF | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 17 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 415 | 3 | MUSC 452 | 3 |
| MUSC 491 | 3 | MUSC 437 | 4 |
| Music Ensemble | 1 | Music Ensemble | 1 |
| Music Elective | 2 | Music Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 15 | | 14 |

Total credit hours: 120

## Major Learning Outcomes

### MUSIC BUSINESS AND INDUSTRY

Students who earn the Bachelor of Arts in Music Industry will develop:

- The ability to integrate knowledge and skills in music, music industry, and business, to address issues, projects, and problems in the music industry.
- Make independent, logical evaluations and judgements associated with the work of one or more sectors of the music industry.
- The capacity to pose, analyze, and solve problems with an understanding of the interrelationships and interdependencies of various interests and influences on the music industry.
- Knowledge and skills in various aspects of the music industry and business more generally through study and personal experience.

# Music Performance, B.M.

## Degree Offered

- Bachelor of Music

## Nature of the Program

The performance curricula are especially designed for students wishing to prepare themselves as performers or as teachers of a particular instrument or voice.  The increased interest of society today in the arts is creating many new opportunities for the professional musician and for the private music teacher.

The BM in Music Performance offers three areas of emphasis:

- Instrumental
- Piano
- Voice

Instruments included in the Instrumental area of emphasis are:

- Flute
- Oboe
- Clarinet
- Saxophone
- Bassoon
- Horn
- Trumpet
- Trombone
- Euphonium
- Tuba
- Percussion
- Violin
- Viola
- Cello
- Double Bass
- Harp
- Guitar

## Admissions for 2026-2027

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

For admission consideration, all students must submit separate applications to the University and to the School of Music. The audition is a preliminary assessment of a student's potential for success. For the Bachelor of Science in Music and Health, students must audition at a minimum performance level four. If a student is admitted, their standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano).

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))
2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition and/or interview. The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - interview required (no audition)
- BM Composition - audition and portfolio review required
- BM Music Education - audition and interview required
- BM Music Therapy - audition and interview required
- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can achieve the greatest success. Evaluation of students' work by the School of Music faculty informs these decisions. If students wish a broader, liberal arts-oriented program, they may pursue a Bachelor of Arts (BA) in Music.

Major Code: 3716

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 27 |
| Performance Major Major Requirements | | 93 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 7 and 8 | | 25 |
| MUSC 191 | First-Year Seminar | 2 |
| Total Hours | | 27 |

## Music Performance Major Requirements

Music Performance Majors must complete the Music Courses and one of the Applied Performance Areas of Emphasis: Instrumental, Piano, or Voice.

| Code | Title | Hours |
|---|---|---|
| **Music Convocation** | | |
| MUSC 189 | Music Convocation (5 semesters) | |
| **Applied Performance Study** | | **24** |
| Applied Music Study (MUSC 121-127, 221-227, 321-327, 421-427) | | |
| **Theory & Analysis** | | |
| MUSC 161 | Aural Theory 1 | 2 |
| MUSC 163 | Aural Theory 2 | 2 |
| MUSC 261 | Aural Theory 3 | 2 |
| MUSC 162 | Written Theory 1 | 3 |
| MUSC 164 | Written Theory 2 | 3 |
| MUSC 262 | Written Theory 3 | 3 |
| MUSC 130S | Piano Class 1 | 1 |
| MUSC 131S | Piano Class 2 | 1 |
| MUSC 132S | Piano Class 3 | 1 |
| Select one of the following: | | 2 or 3 |
| MUSC 362 | Instrumentation and Orchestration | |
| MUSC 364 | Popular Music Analysis Seminar | |
| MUSC 365 | Songwriting: Composition and Analysis | |
| MUSC 461 | Counterpoint, 16th Century | |
| MUSC 462 | Counterpoint, 18th Century | |
| MUSC 463 | Analysis of Eighteenth and Nineteenth Century Music | |
| MUSC 464 | Compositional Techniques in Contemporary Music | |
| MUSC 465S | Electronic Music Production | |
| MUSC 466 | Techniques for Electronic Music Performance | |
| MUSC 468 | Jazz and Commercial Music Harmony | |
| MUSC 469 | Counterpoint, 20th Century | |
| **Musicology** | | |
| Select one of the following (GEF 8): | | 3 |
| MUSC 111 | Introduction to Music | |
| MUSC 113 | American Popular Music | |
| MUSC 114 | Music and the Immigrant Experience | |
| MUSC 115 | Introduction to History of Jazz | |
| MUSC 116 | Music in World Cultures | |
| MUSC 118 | Music in Appalachia | |
| MUSC 270 | History of Western Musical Traditions 1 (GEF 6) | 3 |

| | | |
|---|---|---|
| MUSC 271 | History of Western Musical Traditions 2 (GEF 8) | 3 |
| **Conducting** | | |
| MUSC 200S | Fundamentals of Conducting | 2 |
| **Methods and Pedagogy** | | **2** |
| MUSC 433 | Methods and Pedagogy | |
| **Literature & Reperatory** | | **2** |
| MUSC 434 | Literature and Repertory | |
| **Music Technology or Industry** | | **2-3** |
| MUSC 236 | Introduction to Recording Technology | |
| MUSC 336 | Introduction to Pro Tools | |
| MUSC 410 | Introduction to Music Industry | |
| **Ensemble** | | **12** |
| Major & Chamber Ensembles | | |
| (See Area of Emphasis for list of acceptable ensembles.) | | |
| **Electives** | | |
| Upper-Division Academic Music (300- or 400-level) Electives | | 3 |
| Unrestricted Music Electives | | 3-5 |
| **Capstone** | | |
| MUSC 488 | Recital | 0 |
| **Area of Emphasis** | | **14-16** |
| Instrumental Performance (14 Hours) | | |
| Piano Performance (14 Hours) | | |
| Voice Performance (16 Hours) | | |
| Total Hours | | 93 |

*****

Credits may vary. Refer to the School of Music Requirements (p. 552) for policies related to fulfilling the Major Ensemble and Chamber Ensemble requirements.

******

Prerequisite for MUSC 270 or MUSC 271.

## Areas of Emphasis

- Instrumental Performance (p. 592)
- Piano Performance (p. 594)
- Voice Performance (p. 596)

## Instrumental Performance Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| **Applied Lessons** * | | **8** |
| Applied Music Study (MUSC 121-127, 221-227, 321-327, 421-427) | | |
| **Ensembles: List of acceptable Ensembles for the Instrumental Area of Emphasis** | | |
| Major Ensembles | | |
| Eight (8) semesters from the following: | | |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| Chamber Ensembles | | |
| Four (4) semesters from the following: | | |
| MUSC 340 | Chamber Music: Brass | |
| MUSC 341 | Chamber Music: Guitar | |
| MUSC 343 | Chamber Music: Strings | |

| | | |
|---|---|---|
| MUSC 344 | Chamber Music: Woodwind | |
| MUSC 345 | Chamber Music: Vocal | |
| MUSC 346 | Chamber Music: Mixed Ensemble | |
| MUSC 348 | Chamber Music: New Music | |
| MUSC 349 | Chamber Music: Other | |
| MUSC 349A | Chamber Music: Brass Choir | |
| MUSC 351 | Chamber Music: Percussion 1 | |
| MUSC 352 | Chamber Music: Percussion 2 | |
| MUSC 353B | Chamber Music: Jazz Small Group | |
| MUSC 354 | Gamelan | |
| MUSC 355 | Steel Band | |
| MUSC 356 | African Music Ensemble | |
| MUSC 357 | Brazilian Music Ensemble | |
| MUSC 358 | Experiential Music Ensemble | |
| MUSC 361 | Fife and Drum Ensemble | |
| MUSC 363 | Appalachian Music Ensemble | |
| **Electives** | | **6** |
| Upper-Division Academic Music (300- or 400-level) Electives ** | | |
| Total Hours | | 14 |

*

One additional credit each semester.

**

To be chosen in consultation with your advisor.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 121-127D | 4 | MUSC Major Ensemble | 1 |
| MUSC Major Ensemble | 1 | MUSC 121-127D | 4 |
| MUSC 161 | 2 | MUSC 131S | 1 |
| MUSC 162 | 3 | MUSC 163 | 2 |
| MUSC 130S | 1 | MUSC 164 | 3 |
| MUSC 191 | 2 | MUSC 189 | 0 |
| ENGL 101 (GEF 1) | 3 | GEF | 3 |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 221-227D | 4 | MUSC 221-227D | 4 |
| MUSC 261 | 2 | MUSC 270 | 3 |
| MUSC 262 | 3 | Select one of the following: | 2-3 |
| MUSC 132S | 1 | MUSC 362 | |
| Select one of the following: | 3 | MUSC 364 | |
| MUSC 111 | | MUSC 365 | |
| MUSC 113 | | MUSC 461 | |
| MUSC 114 | | MUSC 462 | |
| MUSC 115 | | MUSC 463 | |
| MUSC 116 | | MUSC 464 | |
| MUSC 117 | | MUSC 465S | |
| MUSC 118 | | MUSC 466 | |
| MUSC 189 | 0 | MUSC 468 | |

| | | | | |
|---|---|---|---|---|
| Unrestricted Music Elective | | 2 | MUSC 469 | |
| MUSC Chamber Ensemble | | 1 | MUSC 189 | 0 |
| | | | ENGL 102 (GEF 1) | 3 |
| | | | Unrestricted Music Elective | 1 |
| | | 17 | | 14 |

**Third Year**

| Fall | Hours | | Spring | Hours |
|---|---|---|---|---|
| MUSC 321-327D | | 4 | MUSC 321-327D | 4 |
| MUSC Major Ensemble | | 1 | MUSC Major Ensemble | 1 |
| MUSC Chamber Ensemble | | 1 | MUSC Chamber Ensemble | 1 |
| MUSC 189 | | 0 | MUSC 189 | 0 |
| MUSC 200S | | 2 | Select one of the following: | 2 or 3 |
| MUSC 271 | | 3 | MUSC 236 | |
| GEF 2 | | 4 | MUSC 336 | |
| | | | MUSC 410 | |
| | | | Upper Division Academic Music Elective | 3 |
| | | | GEF | 3 |
| | | 15 | | 14 |

**Fourth Year**

| Fall | Hours | | Spring | Hours |
|---|---|---|---|---|
| MUSC 421-427D | | 4 | MUSC 421-427D | 4 |
| MUSC Major Ensemble | | 1 | MUSC Major Ensemble | 1 |
| MUSC Chamber Ensemble | | 1 | MUSC Chamber Music Ensemble | 1 |
| MUSC 433 | | 3 | MUSC 434 | 3 |
| Upper Division Academic Music Elective | | 3 | Upper Division Academic Music Elective | 3 |
| GEF | | 3 | GEF | 3 |
| | | | MUSC 488 (Capstone) | 0 |
| | | 15 | | 15 |

Total credit hours: 120

## Piano Performance Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| **Applied Lessons** * | | **8** |
| Applied Music Study (MUSC 123B, 223B, 323B, 423B) | | |
| **Ensembles: List of acceptable Ensembles for the Piano Area of Emphasis** | | |
| Major Ensembles | | |
| Select two (2) credits minimum from the following: | | |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 307 | Mountaineer Singers | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| Chamber Ensembles | | |
| Select two (2) credits minimum from the following: | | |
| MUSC 342 | Chamber Music: Piano-4 Hand | |
| MUSC 346 | Chamber Music: Mixed Ensemble | |
| MUSC 348 | Chamber Music: New Music | |
| MUSC 349 | Chamber Music: Other | |
| MUSC 349C | Chamber Music: Other-Vocal Accompaniment | |

| | | |
|---|---|---|
| MUSC 354 | Gamelan | |
| MUSC 355 | Steel Band | |
| MUSC 356 | African Music Ensemble | |
| MUSC 357 | Brazilian Music Ensemble | |
| MUSC 358 | Experiential Music Ensemble | |
| MUSC 359 | Taiko Ensemble | |
| **Electives** | | **6** |
| Upper-Division Academic Music (300- or 400-level) Electives ** | | |
| Total Hours | | 14 |

*

One additional credit each semester.

**

To be chosen with your advisor.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 123B | 4 | MUSC 123B | 4 |
| Ensemble | 1 | Ensemble | 1 |
| MUSC 161 | 2 | MUSC 163 | 2 |
| MUSC 162 | 3 | MUSC 164 | 3 |
| MUSC 130S | 1 | MUSC 131S | 1 |
| MUSC 191 | 2 | MUSC 189 | 0 |
| ENGL 101 (GEF 1) | 3 | GEF | 3 |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 223B | 4 | MUSC 223B | 4 |
| MUSC 261 | 2 | MUSC 270 | 3 |
| MUSC 262 | 3 | Select one of the following: | 2 or 3 |
| MUSC 132S | 1 | MUSC 362 | |
| Select one of the following: | 3 | MUSC 364 | |
| MUSC 111 | | MUSC 365 | |
| MUSC 113 | | MUSC 461 | |
| MUSC 114 | | MUSC 462 | |
| MUSC 115 | | MUSC 463 | |
| MUSC 116 | | MUSC 464 | |
| MUSC 117 | | MUSC 465S | |
| MUSC 118 | | MUSC 466 | |
| MUSC 189 | 0 | MUSC 468 | |
| ENGL 102 (GEF 1) | 3 | MUSC 469 | |
| | | MUSC 189 | 0 |
| | | GEF 2 | 4 |
| | 17 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 323B | 4 | MUSC 323B | 4 |
| MUSC Chamber Ensemble | 1 | MUSC 189 | 0 |
| MUSC Major Ensemble | 1 | MUSC Chamber Ensemble | 1 |
| MUSC 271 | 3 | Select one of the following: | 2 or 3 |

| | | | |
|---|---|---|---|
| MUSC 200S | 2 | MUSC 236 | |
| MUSC 189 | 0 | MUSC 336 | |
| GEF | 3 | MUSC 410 | |
| | | Music Electives | 5 |
| | | GEF | 3 |
| | 14 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 423B | 4 | MUSC 423B | 4 |
| MUSC Chamber Ensemble | 1 | MUSC Chamber Ensemble | 1 |
| MUSC 433 | 3 | Upper Division Academic Music Elective | 3 |
| Upper Division Academic Music Elective | 3 | Unrestricted Music Electives | 2 |
| GEF | 3 | MUSC 434 | 3 |
| | | GEF | 3 |
| | | MUSC 488 (Capstone) | 0 |
| | 14 | | 16 |

Total credit hours: 120

## Voice Performance Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| **Ensembles: List of acceptable Ensembles for the Voice Area of Emphasis** | | |
| MUSC 305 | Chamber Singers * | |
| **Opera** | | |
| MUSC 404S | Lyric Theatre | |
| **Language** | | **16** |
| MUSC 269A | Diction for Singers: English and Italian | |
| MUSC 269B | Diction for Singers: German and French | |
| MUSC 478 | Coaching for Singers *** | |
| MUSC 493 | Special Topics **** | |
| Total Hours | | 16 |

*****

Eight (8) semesters

******

Four (4) semesters

*******

Repeated three (3) times

********

Language Related Study

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 126 | 3 | MUSC 126 | 3 |
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 130S | 1 | MUSC 131S | 1 |
| MUSC 161 | 2 | MUSC 163 | 2 |
| MUSC 162 | 3 | MUSC 164 | 3 |
| MUSC 191 | 2 | MUSC 189 | 0 |
| ENGL 101 | 3 | Select one of the following: | 3 |
| | | MUSC 111 | |
| | | MUSC 113 | |

| | | | |
|---|---|---|---|
| | | MUSC 114 | |
| | | MUSC 115 | |
| | | MUSC 116 | |
| | | MUSC 117 | |
| | | MUSC 118 | |
| | | GEF | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 226 | 3 | MUSC 226 | 3 |
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 132S | 1 | MUSC 269B | 3 |
| MUSC 261 | 2 | MUSC 189 | 0 |
| MUSC 262 | 3 | Select one of the following: | 2 or 3 |
| MUSC 189 | 0 | MUSC 362 | |
| MUSC 269A | 3 | MUSC 364 | |
| ENGL 102 (GEF 1) | 3 | MUSC 365 | |
| | | MUSC 461 | |
| | | MUSC 462 | |
| | | MUSC 463 | |
| | | MUSC 464 | |
| | | MUSC 465S | |
| | | MUSC 466 | |
| | | MUSC 468 | |
| | | MUSC 469 | |
| | | MUSC 270 | 3 |
| | | GEF | 3 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 326 | 3 | MUSC 326 | 3 |
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 404S | 1 | MUSC 189 | 0 |
| MUSC 478 | 1 | MUSC 404S | 1 |
| MUSC 271 | 3 | MUSC 478 | 1 |
| MUSC 200S | 2 | Language | 3 |
| MUSC 189 | 0 | MUSC 393A | |
| Upper-Division Academic Music Elective | 3 | Music Technology or Industry | 2 or 3 |
| GEF | 3 | MUSC 236 | |
| | | MUSC 336 | |
| | | MUSC 410 | |
| | | GEF | 3 |
| | 17 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 426 | 2 | MUSC 426 | 3 |
| MUSC Major Ensemble | 1 | MUSC Major Ensemble | 1 |
| MUSC 404S | 1 | MUSC 404S | 1 |
| Language | 3 | MUSC 434 | 3 |
| MUSC 493[Language Related Topic] | | MUSC 478 | 1 |
| MUSC 478 | 1 | MUSC 488 (Capstone) | 0 |
| MUSC 433 | 3 | Upper-Division Academic Music Elective | 3 |

| | | |
|---|---|---|
| GEF | 3 Unrestricted Music Elective | 1 |
| | 14 | 13 |

Total credit hours: 120

## Major Learning Outcomes

### MUSIC PERFORMANCE

Upon Completion of the BM in Music Performance, students will be able to:

1. Perform with facility, self-expression, and concert success on their primary instrument or voice. For voice students, this includes appropriate use of foreign languages and diction.
2. Demonstrate artistic proficiency and flexibility as a performer and collaborator in varied settings, including chamber ensembles and large conducted ensembles.
3. Demonstrate ability to apply knowledge of compositional form, historical context, performance practices, extended techniques, nontraditional notation, and current issues to the performance of Western classical music.
4. Practice the necessary skills for professional success.
5. Apply the necessary skills to maintain their physical and mental health while creating a career of sustainability and longevity.

# Music Therapy, B.M.

## Degree Offered

- Bachelor of Music

## Nature of the Program

Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program. Through a course of study focused on the disciplines of music, human development, and music therapy combined with the University¹s General Education Foundations, the BM in Music Therapy imparts essential competencies in three main areas:  musical foundations, clinical foundations, and music therapy foundations.

Upon successful completion of the bachelor's degree, graduates are eligible to take the national board certification exam in order to obtain the credential MT-BC (Music Therapist Board Certified), which is required for professional practice in the United States.

## Admissions for 2026-2027

Acceptance into an undergraduate music degree program is contingent upon both admission to WVU as an undergraduate student and a successful performance audition. Auditions are held from late fall through the early spring semester. For maximum scholarship consideration, students are encouraged to complete the application (including audition) before March 1. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339. Special accommodations may be made by contacting the School of Music at (304) 293-4532 or Music@mail.wvu.edu.

For admission consideration, all students must submit separate applications to the University and to the School of Music. The audition is a preliminary assessment of a student’s potential for success. For the Bachelor of Science in Music and Health, students must audition at a minimum performance level four. If a student is admitted, their standing is confirmed or revised after the first semester of study.

Students should own their own instrument under normal circumstances (except for piano).

1. Apply to West Virginia University (How to Apply (https://admissions.wvu.edu/how-to-apply/))
2. Audition for the School of Music (Apply Now (https://wvucca.wufoo.com/forms/w1qiwnk21fcr23v/))

Acceptance into an undergraduate music degree program requires admission to WVU as an undergraduate student and a successful audition and/or interview. The audition and/or interview is a preliminary assessment of a student's potential for success in their intended major.

- BA Music - audition required
- BA Music Business and Industry: Applied Music Emphasis - audition required
- BA Music Business and Industry: Multi-instrumental Emphasis - interview required (no audition)
- BM Composition - audition and portfolio review required
- BM Music Education - audition and interview required
- BM Music Therapy - audition and interview required

- BM Performance - audition required
- BS Music and Health - audition required

Students who cannot attend one of our regularly scheduled audition days should contact the School of Music at:
(304) 293-4532 or Music@mail.wvu.edu.

Music majors can change from one music curriculum to another with faculty approval, particularly during the freshman or sophomore year, without significant loss of course credit. Students are encouraged to explore and follow the curriculum for which they are best qualified and in which they can achieve the greatest success. Evaluation of students' work by the School of Music faculty informs these decisions. If students wish a broader, liberal arts-oriented program, they may pursue a Bachelor of Arts (BA) in Music.

Major Code: 3717

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 11 |
| Music Therapy Program Requirements | | 79 |
| Music Therapy Major Requirements | | 37 |
| Total Hours | | 127 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1 and 5 | | 9 |
| MUSC 191 | First-Year Seminar | 2 |
| Total Hours | | 11 |

## Music Therapy Program Requirements

| Code | Title | Hours |
|---|---|---|
| GPA of 2.75 is required each semester and cumulatively. | | |
| Minimum GPA of 2.75 is required in all MUSC and clinical foundations courses. | | |
| Minimum grade of C- is required in all MUSC and clinical foundations courses. | | |

| | | |
|---|---|---|
| **Applied Lessons** | | |
| Principal Instrument | | 12 |
| Applied Music 100 Level (MUSC 121-127) | | |
| Applied Music 200 Level (MUSC 221-227) | | |
| Applied Music 300 Level (MUSC 321-327) | | |
| **Applied Studies** | | |
| MUSC 137 | Class Guitar 1 | 1 |
| MUSC 144 | Functional Keyboard for the Commercial Musician 1 | 2 |
| MUSC 145 | Functional Keyboard for the Commercial Musician 2 | 2 |
| MUSC 237 | Class Guitar 2 | 1 |
| MUSC 284 | Vocal Pedagogy | 3 |
| MUSC 284S | Vocal Pedagogy Studio | 0 |
| **7 Semesters of Music Ensemble (at least 3 major ensembles; 2 vocal & 2 chamber or world music required)** | | **7** |
| Major Ensembles | | |
| MUSC 300 | Band: Wind Symphony | |
| MUSC 300A | Band: Symphonic | |
| MUSC 300B | Band: Marching | |
| MUSC 302 | University Community Choir | |
| MUSC 303 | Symphony Orchestra | |
| MUSC 305 | Chamber Singers | |
| MUSC 306 | University Mountaineer Chorus | |
| MUSC 353 | Jazz Ensemble 1 | |
| MUSC 350 | Jazz Ensemble 2 | |
| Small/World Ensembles | | |
| MUSC 340 | Chamber Music: Brass | |
| MUSC 342 | Chamber Music: Piano-4 Hand | |
| MUSC 343 | Chamber Music: Strings | |
| MUSC 344 | Chamber Music: Woodwind | |
| MUSC 346 | Chamber Music: Mixed Ensemble | |
| MUSC 348 | Chamber Music: New Music | |
| MUSC 349 | Chamber Music: Other | |
| MUSC 351 | Chamber Music: Percussion 1 | |
| MUSC 352 | Chamber Music: Percussion 2 | |
| MUSC 353B | Chamber Music: Jazz Small Group | |
| MUSC 353C | Chamber Music: Jazz Small Group 2 | |
| MUSC 353E | Chamber Music: Jazz and Ethnic | |
| MUSC 353G | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 353H | Chamber Music: Jazz Other | |
| MUSC 353I | Chamber Music: Jazz Vocal Ensemble | |
| MUSC 354 | Gamelan | |
| MUSC 355 | Steel Band | |
| MUSC 356 | African Music Ensemble | |
| MUSC 357 | Brazilian Music Ensemble | |
| MUSC 358 | Experiential Music Ensemble | |
| MUSC 359 | Taiko Ensemble | |
| MUSC 361 | Fife and Drum Ensemble | |
| **Music Convocation** | | |
| MUSC 189 | Music Convocation (Four Semesters) | |
| **Musical Foundations** | | |
| MUSC 113 | American Popular Music (May fulfill GEF 8) pre-requisite for MUSC 270 and/or MUSC 271 | 3 |
| MUSC 116 | Music in World Cultures (GEF 7) pre-requisite for MUSC 270 and/or MUSC 271 | 3 |
| MUSC 161 | Aural Theory 1 | 2 |

| | | |
|---|---|---|
| MUSC 162 | Written Theory 1 | 3 |
| MUSC 163 | Aural Theory 2 | 2 |
| MUSC 164 | Written Theory 2 | 3 |
| MUSC 261 | Aural Theory 3 | 2 |
| MUSC 262 | Written Theory 3 | 3 |
| Select one of the following (GEF 6): | | 3 |
| MUSC 270 | History of Western Musical Traditions 1 | |
| MUSC 271 | History of Western Musical Traditions 2 | |
| Select one of the following: | | 2 |
| MUSC 236 | Introduction to Recording Technology | |
| MUSC 465S | Electronic Music Production | |
| MUSC 466 | Techniques for Electronic Music Performance | |
| **Clinical Foundations** | | |
| BIOL 102 & 102L | General Biology 2 and General Biology 2 Laboratory (GEF 2) | 4 |
| PALM 205 | Introduction to Human Anatomy | 3 |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| PSYC 241 | Introduction to Human Development (GEF 8) | 3 |
| PSYC 281 | Introduction to Psychological Disorders (GEF 8) | 3 |
| SOWK 147 | Human Diversity | 3 |
| STAT 111 | Understanding Statistics | 3 |
| or STAT 211 | Elementary Statistical Inference | |
| Select one of the following: | | 3 |
| DISB 381 | Lifespan Disability Policy | |
| DISB 385 | Disability and Society | |
| SPED 404 | Special Education in Contemporary Society | |
| Total Hours | | 79 |

## Music Therapy Major Requirements

| Code | Title | Hours |
|---|---|---|
| GPA of 2.75 is required each semester and cumulatively. | | |
| Minimum GPA of 2.75 is required in all MUSC and clinical foundations courses. | | |
| Minimum grade of C- is required in all MUSC and clinical foundations courses. | | |
| MUSC 185 | Introduction to Music Therapy | 3 |
| MUSC 205 | Clinical Foundations of Music Therapy | 3 |
| MUSC 230S | Music Therapy Methods 1 | 3 |
| MUSC 231 | Music Therapy Methods 2 | 3 |
| MUSC 330 | Principles and Practices of Music Therapy 1 | 3 |
| MUSC 331 | Principles and Practices of Music Therapy 2 | 3 |
| MUSC 444 | Psychological Foundations of Music | 3 |
| MUSC 445 | Music Therapy Research Methods | 3 |
| MUSC 239 | Music Therapy Practicum 1 | 2 |
| MUSC 239A | Music Therapy Practicum 2 | 2 |
| MUSC 339 | Music Therapy Practicum 3 | 2 |
| MUSC 339A | Music Therapy Practicum 4 | 2 |
| MUSC 440 | Music Therapy Practicum 5 | 2 |
| MUSC 440A | Music Therapy Practicum 6 | 2 |
| MUSC 485 | Music Therapy Internship | 1 |
| Total Hours | | 37 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Major Ensemble | 1 | Major Ensemble | 1 |
| MUSC 121-127 Applied Lesson | 2 | MUSC 121-127 Applied Lesson | 2 |
| MUSC 137 | 1 | MUSC 163 | 2 |
| MUSC 161 | 2 | MUSC 164 | 3 |
| MUSC 162 | 3 | MUSC 189 | 0 |
| MUSC 185 | 3 | MUSC 205 | 3 |
| MUSC 191 | 2 | MUSC 237 | 1 |
| ENGL 101 (GEF 1) | 3 | PSYC 101 (GEF 4) | 3 |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Major Ensemble | 1 | World or Chamber Music Ensemble | 1 |
| MUSC 221-227 Applied Lesson | 2 | MUSC 221-227 Applied Lesson | 2 |
| MUSC 116 (GEF 7) | 3 | MUSC 145 | 2 |
| MUSC 144 | 2 | MUSC 189 | 0 |
| MUSC 189 | 0 | MUSC 231 | 3 |
| MUSC 261 | 2 | MUSC 239A | 2 |
| MUSC 262 | 3 | ENGL 102 (GEF 1) | 3 |
| MUSC 230S | 3 | PSYC 241 (GEF 8) | 3 |
| MUSC 239 | 2 | | |
| | 18 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MUSC 321-327 Applied Lesson | 2 | Vocal Ensemble | 1 |
| MUSC 113 (GEF 8) | 3 | MUSC 321-327 Applied Lesson | 2 |
| MUSC 189 | 0 | MUSC 331 | 3 |
| MUSC 284 | 3 | MUSC 339A | 2 |
| MUSC 284S | 0 | BIOL 102 & 102L (GEF 2) | 4 |
| MUSC 330 | 3 | STAT 111 or 211 (GEF 3) | 3 |
| MUSC 339 | 2 | | |
| PSYC 281 (GEF 8) | 3 | | |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| Vocal Ensemble | 1 | World or Chamber Music Ensemble | 1 | MUSC 485 | 1 |
| Select one of the following (GEF 6): | 3 | MUSC 440A | 2 | | |
| MUSC 270 | | MUSC 445 | 3 | | |
| MUSC 271 | | SOWK 147 | 3 | | |
| MUSC 440 | 2 | GEF 5 | 3 | | |
| MUSC 444 | 3 | Select one of the following: | 3 | | |

| | | | | |
|---|---|---|---|---|
| Select one of the following: | 2-3 | SPED 404 | | |
| MUSC 236 | | DISB 381 | | |
| MUSC 465S | | DISB 385 | | |
| MUSC 466 | | | | |
| PALM 205 | 3 | | | |
| | 14 | | 15 | 1 |

Total credit hours: 127

## Major Learning Outcomes

### MUSIC THERAPY

Learning outcomes for this degree are directly related to the essential competencies, experiences, and opportunities stated by the National Association of Schools of Music and the American Music Therapy Association. They include:

- Advanced keyboard skills, including the ability to play at sight, accompany, transpose, and improvise.
- Ability to sight-sing and take aural dictation.
- Skills in voice, especially as related to group singing. Ability to communicate using a basic repertory of traditional, folk, and popular songs.
- Guitar skills sufficient to accompany self and ensembles. Ability to perform a basic repertory of traditional, folk, and popular songs in several keys, with or without printed music.
- Knowledge of and performance ability on percussion and other instruments sufficient to facilitate rhythm-based musical experiences for individuals and groups.
- Conducting skills adequate to the therapist¹s needs in providing repertory and leadership to small and large vocal/instrumental ensembles.
- Composition and arranging skills sufficient to compose songs with simple accompaniment; and to arrange, transpose, and simplify music compositions for small vocal and non-symphonic instrumental ensembles.
- Movement skills to direct and move expressively in structured rhythmic and improvisatory movement experiences.
- Knowledge of the basic principles of normal human development, exceptionality and psychopathology, principles of therapy, and the therapeutic relationship.
- Knowledge of the basic foundations and principles of music therapy, including history and philosophy; the psychological, physiological, and sociological bases for the use of music as therapy; music therapy methods, techniques and materials with their appropriate applications to various client populations.
- Knowledge of various client populations; client assessment; treatment planning; therapy implementation and evaluation; clinical documentation (both oral and written) and termination/discharge planning.
- Knowledge of professional standards of clinical practice; professional role and ethics; interdisciplinary collaboration in designing and implementing treatment programs; supervision and administration.
- Knowledge of research methods to be able to interpret information, demonstrate basic knowledge of historical, quantitative, and qualitative research, and to apply research findings to clinical practice in music therapy.

# School of Theatre and Dance

## Degrees Offered

### BACHELOR OF ARTS

- Dance
- Theatre

### BACHELOR OF FINE ARTS

- Acting
- Musical Theatre
- Theatre Design & Technology

### MINORS

- Theatre
- Technical Production
- Dance

## Accreditation

All theatre degree programs at West Virginia University are accredited by the National Association of Schools of Theatre (NAST).

## Nature of the Program

The School of Theatre & Dance offers a competitive training program for the student who seeks artistic growth and development. The School trains students in modern, state-of-the-art facilities with an emphasis on experiential learning in either a B.A. or B.F.A. degree program. We offer intensive training by industry professionals with small classes and one-on-one mentoring.

## Mission Statement

We, the faculty and staff, educate students in the diverse traditions and practices of theatre and dance. We challenge each student to engage and confront—vigorously, honestly, and innovatively—the many processes of collaborative theatre and dance. We exemplify to our students the role of creative artists to develop, to explore, and to contribute meaningfully to the world they inhabit.

## Performances

The School annually produces five to seven major productions in three major performance spaces: the Gladys G. Davis Theatre, Lyell B. Clay Concert Theatre, and the Vivien Davis Michael Laboratory Theatre, all in the Canady Creative Arts Center. The School also occasionally produces in the historic Metropolitan Theatre in downtown Morgantown. These productions provide practical experience for all theatre and dance students and serve the community audience with a balance of classic and contemporary drama, dance, opera, and musical theatre.

## Career Opportunities

Graduates of the School of Theatre & Dance are employed in professional theatre, radio, television, and film. Others have chosen careers in fashion design, commercial sales, makeup, lighting design and installation, law, and positions in the public arena. Undergraduates are frequently offered graduate student positions with leading university training programs offering M.F.A. study.

## Scholarships

The College of Creative Arts and Media offers a limited number of special College-based scholarship awards for freshman and current students enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and the demonstration of potential success in the Theatre & Dance program.

Information regarding both University, College of Creative Arts and Media, and Theatre & Dance scholarships can be found on our website.

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## FACULTY

### DIRECTOR

- Joshua Williamson - Joshua Williamson - M.F.A. (University of Wisconsin–Madison)
  Lighting Design & Technology

### ASSOCIATE DIRECTOR

- Radhica Ganapathy - Ph.D. (Texas Tech University)
  Theatre History & Criticism

### PROFESSORS

- Yoav Kaddar - Ph.D. (State University of New York - Albany) and M.F.A. (University of Washington Seattle)
  Dance
- Mary McClung - M.F.A. (West Virginia University)
  Costume Design & Technology
- Joshua Williamson - M.F.A. (University of Wisconsin–Madison)
  Lighting Design & Technology

### TEACHING PROFESSOR

- Cathy O'Dell - M.F.A. (West Virginia University)
  Introduction to Theatre, Acting

### SERVICE PROFESSORS

- Alan McEwen - M.F.A. (University of Oregon)
  Lighting & Sound

- Steven Neuenschwander - M.F.A. (Yale School of Drama)
  Technical Direction

### ASSOCIATE PROFESSORS

- Lee Blair - M.F.A. (University of Florida)
  Head of Performance/Acting & Musical Theatre
- Radhica Ganapathy - Ph.D. (Texas Tech University)
  Theatre History, Criticism, & Literature
- General McArthur Hambrick - M.F.A. (University of Washington)
  Dance & Musical Theatre
- Tamara Honesty - M.F.A. (West Virginia University)
  Scene Design
- Jessica Morgan - M.F.A. (The Ohio State University)
  Stage Movement

### TEACHING ASSOCIATE PROFESSOR

- Maureen Kaddar - M.F.A. (University of Wisconsin - Milwaukee)
  Dance

### ASSISTANT PROFESSORS

- Ryan Scoble - M.F.A. (Kent State University)
  Musical Theatre

### SERVICE ASSISTANT PROFESSOR

- Lara Berich - M.F.A. (Boston University)
  Costume Construction
- Aubrey Sirtautas - M.F.A. (Carnegie Mellon University)
  Production & Stage Management

### VISITING ASSISTANT PROFESSOR

- Acacia Daken - M.F.A. (Bristol Old Vic Theatre School)
  Voice for the Actor

### PROFESSORS EMERITI

- Jerry McGonigle
  Acting & Directing
- Joann Spencer Siegrist
  Puppetry
- M. Kathryne Weidebusch
  Dance

### ASSOCIATE PROFESSORS EMERITI

- James D. Held
  Theatre History, World Drama

## Admissions

Auditions or interviews are required for admission into the B.F.A. theatre programs and the B.A. dance program. Additionally, all students must meet the University's criteria for undergraduate admission. Auditions are required for acting, musical theatre, and dance. Interviews and portfolio reviews are required for theatre design and technology and puppetry. The B.A. in theatre does not require an audition/interview but applicants must still meet University undergraduate admissions requirements.

Upon entrance, students must comply with the general regulations of the University concerning degrees, satisfy all entrance and divisional requirements, and complete one of the curricula of the School of Theatre & Dance with a 2.0 (C) grade point average. Students are required to successfully complete a semesterly review with the faculty which may include an interview, scene work, audition piece, or other type of jury.

For admission to the junior year of the School of Theatre & Dance, a student must have established an overall 2.0 (C) grade point average. Transfer students must establish transfer credit from other institutions during the first semester in which they are enrolled in the School of Theatre & Dance.

Students are responsible for correctly fulfilling all requirements. Each student should review the course requirements both before and after every registration period so that errors or omissions will be detected immediately.

# Acting, B.F.A

## Degree Offered

- Bachelor of Fine Arts

## Nature of the Program

The Bachelor of Fine Arts in Acting (BFA) program in the School of Theatre & Dance is competitive with the best university acting programs in the country, both in intensity and in class time devoted to professional training. Throughout four years of study, students will progress through a well-coordinated series of core theatre studies covering theatre history, dramatic theory, text analysis, directing, stagecraft, costuming and special topics as well as their performance studies in acting, voice and diction, stage movement, and audition techniques.

Freshmen and sophomore students receive four to six hours of acting instruction per week. Beginning in the sophomore year, students also receive an additional four hours per week in stage movement and in voice and speech. These first two years are set against the backdrop of a rigorous and wide range of liberal arts course work.

## Studio Acting Program

The junior and senior years for the BFA in Acting are known as the Studio Acting Program and continue work in movement, voice and speech, and acting with twenty hours a week dedicated to actor training. This conservatory-style training within an academic setting allows the Studio faculty to elevate and intensify the actor training with a select group of students (*see Student Assessment below*). The Studio Acting Program also includes graduate students in the Master of Fine Arts Acting degree program.

The junior year is grounded in contemporary American realism, early Modern realism and non-realistic European drama with method study primarily in Meisner Technique. The senior year is dedicated to classical work in Shakespeare and Comedic Styles (Commedia, Restoration, Comedy of Manners) as well as Acting for the Camera and Career Development in the preparation for our NYC Senior Showcase. Other topics of study include Suzuki, movement composition, Laban efforts, stage combat, fencing, masks, Fitzmaurice, Linklater, Roy Hart, dialects, voice-overs, performance art, improvisation, clowning and audition techniques.

The BFA Acting students along with our MFA Acting students and the BFA students in the Musical Theatre Studio are the core of the School's casting pool for five to six main stage productions as well as 10-12 workshop and second stage opportunities per year.

## STUDENT ASSESSMENT

Routine assessment is vital to the continued growth and success of the Studio Acting Program. This assessment includes and occurs with daily in-class critiques, faculty reviews, end-of-semester evaluations as well as rehearsals and public performances. These types of assessment, both formal and informal, monitor the development of the BFA student's technique and process development, their artistic growth and commitment, and application of the craft and study of Acting to the other liberal arts.

Examples of student assessment and progress within the BFA in Acting include:

- Audition for entry into the program
  - Requirements for auditioning and specific dates for our Audition/Portfolio Days may be found on the College of Creative Arts and Media website.
- Auditions for credit-bearing performance opportunities (THET 200/300/400)
  - Acting majors will participate in a number of opportunities designed to incorporate classroom and process skills into public performance.
  - At the completion of each of these productions, the students will receive an evaluation of their participation.
- End-of-sophomore year assessment for continuation in the BFA in Acting and advancement to the Studio Acting Program
  - After two years of actor training and study, there is an assessment process for students to move on to the Studio Acting Program and their junior year of study. This process allows the Studio faculty to ascertain a student's potential for professional development as an actor. This assessment includes review of a student's GPA, credit hours, an essay of professional goals, attendance, class participation as well as an audition of material and genres covered within the first two years of study.
  - Students seen as having professional potential and a good academic standing will proceed into their junior year and the Studio Acting Program.
  - Students seen within this assessment as not having professional potential or with academic issues are not invited to continue to the Studio Acting Program. These students may be advised to consider different degree programs within or outside the School of Theatre & Dance. They may also be advised to continue their studies in Theatre and Acting, improve their academic standing and re-audition for the Studio Acting program in the following year.
- End-of-semester evaluations for students in the Studio Acting Program.

- At the end of each semester, each Studio Acting student will take part in an evaluation that consists of a discussion of the student's progress in the areas of talent, trainability, demeanor, professional discipline and potential as well as the demonstrated acquisition of the identified learning goals.
- These evaluations serve to monitor and record the student's progress toward the completion of the degree.
- The evaluations will be administered by the Area Coordinator of Performance and shall include participation and feedback from Studio Acting Program faculty.
- Written evaluation forms will be used to indicate areas of strength and weakness. The written evaluation form will be shared with each student, and a copy will be placed in the student's advising file to be used as part of the ongoing assessment of the student's progress in the Studio Acting Program.
- At the discretion of the Area Coordinator of Performance and in consultation with the Director of the School of Theatre and Dance, students who do not successfully pass this evaluative review will be either put on probationary status or removed from the Studio Acting Program.

## Admissions for 2026-2027

Students must meet all WVU Undergraduate Admissions entrance requirements. Prior to admission into the BFA Acting program, applicants must successfully pass an audition. The School of Theatre & Dance will administer auditions each semester for entrance into the program. Typically, auditions will be held in November and early spring semester in Morgantown. Additional auditions may also be scheduled. Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339.

Major Code: 3711

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 39 |
| Acting Major Requirements | | 83 |
| Total Hours | | 122 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, and 8 | | 28 |
| THET 191 | First-Year Seminar | 2 |

| | |
|---|---|
| General Electives | 9 |
| Total Hours | 39 |

## Acting Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Theatre Studies** | | |
| THET 100 | First-Year Practicum | 1 |
| THET 103<br>& THET 104 | Stagecraft<br>and Stagecraft Lab | 4 |
| THET 105<br>& THET 106 | Costuming<br>and Costuming Lab | 4 |
| THET 170 | World Theatre and Drama (GEF 7) | 3 |
| THET 221 | Theatre Makeup | 3 |
| THET 230 | Text Analysis | 3 |
| THET 302 | Directing | 3 |
| THET 360 | Western Theatre History 1: Greeks to Restoration | 3 |
| THET 365 | Western Theatre History 2: Enlightenment to Contemporary (Fulfills Writing and Communication Skills Requirement) | 3 |
| THET 460 | Contemporary Drama | 3 |
| **Acting** | | |
| DANC 100S | Fundamentals of Dance Techniques | 2 |
| THET 144S | Fundamentals of Acting | 3 |
| THET 240S | Fundamental Vocal Technique 1 | 2 |
| THET 242S | Fundamentals of Movement | 2 |
| THET 244 | Intermediate Acting | 3 |
| THET 246S | Auditioning and Career Development | 3 |
| THET 340S | Intermediate Vocal Techniques 1 | 2 |
| THET 341S | Intermediate Vocal Techniques 2 | 2 |
| THET 342S | Stage Movement 1 | 2 |
| THET 343S | Stage Movement 2 | 2 |
| THET 344S | Acting Studio | 3 |
| THET 345S | Acting Studio | 3 |
| THET 440S | Advanced Vocal Techniques | 2 |
| THET 441S | Advanced Vocal Techniques 2 | 2 |
| THET 442S | Advanced Stage Movement 1 | 2 |
| THET 443S | Advanced Stage Movement 2 | 2 |
| THET 444S | Advanced Acting Studio | 3 |
| THET 445S | Advanced Acting Studio | 3 |
| **Studio Scene Study** | | **4** |
| THET 348S | Studio Scene Study 1 (Repeat twice for a total of 2 credit hours) | |
| THET 447S | Studio Scene Study 2 (Repeat twice for a total of 2 credit hours) | |
| **Practicum Courses** | | **3** |
| THET 200 | Production Practicum (Repeat twice for a total of 2 credit hours) | |
| THET 400 | Advanced Production Practicum | |
| THET 401 | Capstone Experience | 3 |
| Total Hours | | 83 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 191 | 2 | ENGL 101 (GEF 1) | 3 |
| THET 100 | 1 | THET 105 & THET 106 | 4 |
| THET 103 & THET 104 | 4 | DANC 100S | 2 |
| THET 144S (GEF 6) | 3 | GEF 3 | 3 |
| THET 170 (GEF 7) | 3 | GEF 4 | 3 |
| General Elective | 3 | | |
| | 16 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | THET 200 | 1 |
| THET 200 | 1 | THET 221 | 3 |
| THET 230 | 3 | THET 242S | 2 |
| THET 240S | 2 | THET 244 | 3 |
| THET 246S | 3 | GEF 5 | 3 |
| GEF 2 | 4 | GEF 8 | 3 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 340S | 2 | THET 341S | 2 |
| THET 342S | 2 | THET 343S | 2 |
| THET 344S | 3 | THET 345S | 3 |
| THET 348S | 1 | THET 348S | 1 |
| THET 360 | 3 | THET 365 | 3 |
| GEF 8 | 3 | THET 400 | 1 |
| General Elective | 3 | GEF 8 | 3 |
| | 17 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 401 | 3 | THET 302 | 3 |
| THET 440S | 2 | THET 441S | 2 |
| THET 442S | 2 | THET 443S | 2 |
| THET 444S | 3 | THET 445S | 3 |
| THET 447S | 1 | THET 447S | 1 |
| THET 460 | 3 | General Elective | 3 |
| | 14 | | 14 |

Total credit hours: 122

# Major Learning Outcomes

## ACTING

**Common Body of Knowledge and Skills for B.F.A. Theatre students**

Students must acquire:

Technical skills requisite for artistic self-expression in at least one major area of production (for example, acting, design/technology, playwriting, musical theatre) and those skills must be progressively developed to the highest level appropriate to the particular area of concentration.

1. An overview understanding of the major aspects, techniques, and directions in the area of concentration.
2. Fundamental, comprehensive understanding of the various elements and basic interrelated processes of creation, interpretation, performance, and production.
3. Fundamental, conceptual understanding of the expressive possibilities of theatre.
4. Knowledge and skills sufficient to work in both collaborative and individual roles in matters of theatre interpretation.
5. Growth in artistry, technical skills, collaborative competence, and knowledge of repertory through regular performance and production experiences. Students must have such experiences throughout the degree program.
6. Repertory. Students must acquire:
    a. Familiarity with theatre literature of various historical periods, cultural sources, and modes of presentation.
    b. Experience with specific repertories and comparative standards of production quality through performance, academic study, and attendance at productions.
7. Theoretical and Historical Studies
    a. Students must acquire:
        i. The ability to analyze plays perceptively and to evaluate them critically.
        ii. An understanding of the common elements and vocabulary of theatre and of the interaction of these elements, and be able to employ this knowledge in analysis, including analyses of their productions.
        iii. The ability to place works of theatre in historical and stylistic contexts and have some understanding of the cultural milieu in which they were created.
        iv. The ability to develop and defend informed judgments about theatre.
    b. Technology. Students must acquire a working knowledge of technologies and equipment applicable to their area(s) of specialization.
8. Synthesis. While synthesis is a lifetime process, by the end of undergraduate studies students should be able to work independently on a variety of professional problems by combining, as appropriate to the issue, their capabilities in performance, repertory, theory, history, and technology, as well as other fields they have studied.

Upon completion of any B.F.A. professional undergraduate degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the area of specialization including significant technical mastery, the capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.
2. Students must demonstrate their competence by developing a body of work for evaluation in the major area of study. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
3. Students must have the ability to communicate ideas, concepts, and requirements to theatre professionals and laypersons related to the practice of the major field. Such communication may involve oral, written, visual, and musical media.

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**Bachelor of Fine Arts in Acting**

Essential Competencies, Experiences, and Opportunities:

1. Demonstrated ability to act (i.e., to project one’s self believably in word and action into imaginary circumstances, evoked through improvisation or text).
2. Demonstrated ability to engage effectively in improvisations both by oneself and in an ensemble.
3. Demonstrated ability to create characters convincingly from plays drawn from different genres and styles in an ensemble relationship with other actors.
4. A developed technique for analyzing the specific tasks required in performing varied characters from written plays.

5. Understanding of the specific demands of the acting styles for major periods and genres of dramatic literature.
6. Clear, articulate, and expressive speech, normally with demonstrated ability to use appropriate tools and systems to learn and perform dialects, and the ability to perform effectively in verse plays.
7. A flexible, strong, and controlled voice with trained breath support; appropriate vocal range and freedom from vocal and postural tension in rehearsal and performance; demonstrated ability to use the voice effectively as an instrument for characterization together with the ability to project the voice effectively in theatre spaces of varying sizes and in media productions.
8. A flexible, relaxed, and controlled body trained in basic stage movement disciplines, including dance and mime; demonstrated ability to use the body effectively on stage as an instrument for characterization and to be responsive to changing time/rhythm demands and spatial relationships.
9. An overview understanding of makeup materials and techniques.
10. Demonstrated comprehension of the basic business procedures of the actor's profession, including audition procedures, résumés, agents, and so forth.
11. Solo and ensemble performance experience in a variety of formal and informal settings shall be provided throughout the degree program including the opportunity for a significant role in a major production no later than the senior year.

# Dance, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Dance program offers a four-year undergraduate program leading to a Bachelor of Arts (BA) degree. Students have the opportunity to develop and hone dance technique that offers both an experiential and theoretical dance education. A variety of dance genres and subjects are at the core of the degree, presenting students with the opportunity to study Ballet, Modern, Jazz, Tap, Contemporary, and Hip-hop, as well as World Dance, Choreography, Dance History, Dance Criticism, Nutrition, Yoga, and much more.

While emphasis is on technique and theory, on and off-campus performance and production opportunities allow students to fully immerse themselves, and experience the creative process that Dance has to offer.

The program works to enrich the overall dance education of the student instilling the importance and contributions that Dance has to offer and its place within our culture and society. Interested BA Dance students may also simultaneously pursue another major of interest. The nature of the BA program allows for a merging of the student's interests and career aspirations.

Also available are a Dance minor, a Dance Science track though Exercise Physiology, and a Dance Education track through Education.

## Performance Opportunities

The School of Theatre & Dance presents a dance concert at the end of each semester that showcases student choreography. Participation/casting in these performances is by audition and is required of all dance majors.

The School also presents a fully produced annual dance concert, *Dance Now!*, in the spring semester. Featuring a program of faculty and guest artist works, with student dancers and choreographers, *Dance Now!* is the School's premier dance concert for the year.

The Dance Program participates annually in the West Virginia Dance Festival, and the American College Dance Association conference. Dance majors have also presented their creative work at state-wide and national research conferences.

The Dance Program offers study-abroad opportunities during the summer as well as full semester immersion programs in dance through the WVU Office of Global Affairs.

## Admissions for 2026-2027

Students must meet all WVU Undergraduate Admissions entrance requirements. Prior to admission into the BA Dance program, applicants must successfully pass an audition and interview. The School of Theatre & Dance will administer auditions each semester for entrance into the program. Typically, auditions will be held in November and early spring semester in Morgantown. Additional auditions may also be scheduled. Audition information can be found on the College's website (https://creativeartsandmedia.wvu.edu)or by contacting the CCAM Office of Recruitment at (304) 293-4339.

Major Code: 3707

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 21 |
| Dance Major Requirements | | 99 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, and 5 | | 19 |
| THET 191 | First-Year Seminar | 2 |
| Total Hours | | 21 |

## Dance Major Requirements

| Code | Title | Hours |
|---|---|---|
| **DANCE STUDIES** | | **21** |
| PALM 205 | Introduction to Human Anatomy | |
| DANC 170 | Introduction to Dance (Fulfills GEF 6) | |
| DANC 260S | Fundamentals of Choreography | |
| DANC 370 | Dance History (Fulfills Writing and Communication Skills Requirement) | |
| HN&F 200 | Nutrition/Activity/Health | |
| MUSC 111 | Introduction to Music | |
| or MUSC 112 | Mozart to Metallica: Music and Society | |
| THET 401 | Capstone Experience (Capstone) | |
| **PRODUCTION (one of the following):** | | **3** |
| THET 103<br>& THET 104 | Stagecraft<br>and Stagecraft Lab | |
| THET 105<br>& THET 106 | Costuming<br>and Costuming Lab | |

| | | |
|---|---|---|
| THET 220 | Fundamentals of Lighting | |
| THET 221 | Theatre Makeup | |
| **DANCE TECHNIQUE (16 credits from the following):** | | **16** |
| Note: The level and frequency of repeated courses shall be determined by the student's advisor and the section's instructor to ensure satisfactory progression of technique. | | |
| Fundamental Technique Courses: | | |
| DANC 100S | Fundamentals of Dance Techniques | |
| DANC 110S | Fundamentals of Ballet (may be repeated 2 times) | |
| DANC 130S | Fundamentals of Jazz (may be repeated 2 times) | |
| Intermediate Technique Courses: | | |
| DANC 210S | Intermediate Ballet (may be repeated 2 times) | |
| DANC 220S | Intermediate Modern (may be repeated 3 times) | |
| DANC 230S | Intermediate Jazz (may be repeated 3 times) | |
| Advanced Technique Courses: | | |
| DANC 310S | Intermediate/Advanced Ballet (may be repeated 4 times) | |
| DANC 320S | Advanced Modern (may be repeated 3 times) | |
| DANC 330S | Advanced Jazz (may be repeated 3 times) | |
| **PRACTICUM (4 credits from the following):** | | **4** |
| DANC 200 | Dance Practicum (may be repeated 2 times) | |
| DANC 300 | Dance Practicum (may be repeated 2 times) | |
| DANC 400 | Choreography Practicum | |
| THET 200 | Production Practicum (may be repeated 2 times) | |
| THET 213 | Intermediate Stage Management | |
| **DANC ELECTIVES** | | **16** |
| **Non-DANC Electives** | | **12** |
| **ART Elective** | | **3** |
| **MUSC Elective** | | **3** |
| **REQUIRED MINOR (Will Fulfill GEF 8)** | | **15** |
| **WORLD LANGUAGES** | | **6** |
| FRCH 101 | Elementary French 1 (Fulfills GEF 7) | |
| FRCH 102 | Elementary French 2 | |
| Skills Assessment | | |
| Total Hours | | 99 |

## SKILLS ASSESSMENT

Each student dance major shall successfully complete a skills assessment/review at the end of each semester of their sophomore, junior, and senior years. These reviews serve to monitor and record the student's progress toward the completion of the degree. The reviews will be administered by the Director of Dance and shall include feedback from the entire dance faculty. At the discretion of the Director of Dance, students who do not successfully pass the skills assessment/review will be either put on probationary status or removed from the program.

## MINOR REQUIREMENT

Students are also required to complete a minor (fifteen credit hours) for the degree.  Please see the following link for a full list of minors (http://catalog.wvu.edu/undergraduate/minors/). Students are encouraged to meet with their academic advisors prior to declaring a minor.  (Students who complete a second major or dual degree are not required to complete a minor.)

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 191 | 2 | DANC 210S | 2 |
| DANC 170 (GEF 6) | 3 | DANC 220S | 2 |
| DANC 110S | 2 | FRCH 102 | 3 |
| GEF 3 | 3 | ENGL 101 (GEF 1) | 3 |
| MUSC 111 or 112 | 3 | Minor course | 3 |

| | | | |
|---|---|---|---|
| FRCH 101 (GEF 7) | | 3 Production Course | 3 |
| | | 16 | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DANC 230S | | 2 PALM 205 | 3 |
| DANC 260S | | 3 DANC 200 | 1 |
| Dance Technique course | | 2 MUSC elective | 3 |
| ENGL 102 (GEF 1) | | 3 DANC Elective | 2 |
| ART elective | | 3 GEF 2B Science | 4 |
| | | Minor course | 3 |
| | | 13 | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HN&F 200 | | 3 DANC 370 | 3 |
| Dance Technique courses | | 4 DANC 300 | 1 |
| DANC Elective | | 3 DANC Elective | 2 |
| Minor course | | 3 Non-DANC Electives | 6 |
| GEF 4 | | 3 Minor Course | 3 |
| | | 16 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DANC 310S | | 2 THET 401 | 3 |
| DANC 400 | | 2 Non-DANC Elective | 3 |
| Minor Course | | 3 Non-DANC Elective | 3 |
| DANC Electives | | 4 DANC Elective | 3 |
| GEF 5 | | 3 DANC Elective | 2 |
| | | 14 | 14 |

Total credit hours: 120

## Dance Education Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all coursework applied to the Area of Emphasis. | | |
| C&I 365 | Dance and Movement in PK-12 Schools | 2 |
| EDUC 408 | Art Integration in the Elementary Classroom | 3 |
| EDP 301 | Learning in PreK-Adult Educational Settings | 3 |
| SPED 404 | Special Education in Contemporary Society | 3 |
| DANC 492 | Directed Study | 3 |
| or C&I 490 | Teaching Practicum | |
| Total Hours | | 14 |

## Major Learning Outcomes

### DANCE

Upon competition of the BA in Dance, students will be able to:

- Identify and work conceptually with the elements of dance in a variety of dance genres
- Understand the choreographic processes, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural ideas and contexts
- Appreciate a wide selection of dance repertory, the principal eras, genres, and cultural sources
- Develop and defend critical evaluations
- Demonstrate a fundamental knowledge of the body and of kinesiology as applicable to work in dance
- Show an understanding of procedures for realizing a variety of dance styles
- Perform basic through advanced dance techniques within the student’s area of interest

- Exhibit knowledge and/or skills in one or more areas of dance beyond basic coursework and performance appropriate to the individual's needs and interests, and be consistent with the goals and objectives of the specific liberal arts degree program being followed
- Understand the place of dance as an art form and educational tool within a social context, globally and on the national level

# Musical Theatre, B.F.A

## Degree Offered

- Bachelor of Fine Arts

## Nature of the Program

The School of Theatre & Dance and the School of Music offer a Bachelor of Fine Arts (BFA) in Musical Theatre with the goal to train students for successful careers in musical and stage performance in the competitive entertainment industry. Over the four-year course of study, musical theatre majors will take classes in acting, voice, dance, choreography, theatre history, stage production, music theory, musical theatre literature, and other special topics.

Freshmen and sophomore students receive four to six hours of acting instruction per week as well as beginning work in music, voice and dance. In the sophomore year, students receive an additional four hours per week in stage movement and in voice and speech. These first two years of performance study coincide with a rigorous and wide-ranging liberal arts course work.

## Musical Theatre Studio

The junior and senior years for the BFA in Musical Theatre are known as the Musical Theatre Studio and continue the student's work in voice, dance and acting with twenty hours a week dedicated to actor training.

This conservatory-style training within an academic setting allows the Musical Theatre Studio faculty to elevate and intensify the training with a select group of students (*see Student Assessment below*). The students in Musical Theatre Studio will also have opportunities to train with faculty within our Studio Acting Program with potential classes in Meisner training, Shakespeare, Comedic Styles and Auditioning.

The BFA students in the Musical Theatre Studio along with our MFA Acting students and the BFA students in the Studio Acting Program are the core of the School's casting pool. Students will have the opportunity to perform in one to two major musical or opera productions along with four to five other main stage offerings as well as 10-12 workshop and second stage opportunities per year.

## Student Assessment

Routine assessment is vital to the continued growth and success of the BFA in Musical Theatre. This assessment includes and occurs with daily in-class critiques, faculty reviews, end-of-semester evaluations as well as rehearsals and public performances. These types of assessment, both formal and informal, monitor the development of the BFA student's technique and process development, their artistic growth and commitment, and application of the craft and study of Musical Theatre to the other liberal arts.

Examples of student assessment and progress within the BFA in Musical Theatre include:

1. Audition for entry into the program.
   - Requirements for auditioning and specific dates for our Audition/Portfolio Days may be found on the College of Creative Arts and Media website.
2. Auditions for credit-bearing performance opportunities (THET 200/300/400):
   - Musical Theatre majors will participate in a number of opportunities designed to incorporate classroom and process skills into a public performance.
   - At the completion of each of these productions, the students will receive an evaluation of their participation.
3. End-of-sophomore year assessment for continuation in the BFA in Musical Theatre and advancement to the Musical Theatre Studio.
   - After two years of actor training and study, there is an assessment process for students to move on to the Musical Theatre Studio and their junior year of study. This process allows the Musical Theatre faculty to ascertain a student's potential for professional development as an actor. This assessment includes review of a student's GPA, credit hours, an essay of professional goals, attendance, class participation as well as an audition of material and genres covered within the first two years of study.
   - Students seen as having professional potential and a good academic standing will proceed into their junior year and the Musical Theatre Studio.
   - Students seen within this assessment as not having professional potential or with academic issues are not invited to continue to the Musical Theatre Studio. These students may be advised to consider different degree programs within or outside the School of Theatre & Dance. They may also be advised to continue their studies in Theatre and Acting, improve their academic standing and re-audition for the Musical Theatre Studio in the following year.
4. End-of-semester jury reviews for continuation in the program:

- At the end of each semester, each Musical Theatre Studio student will take part in an evaluation that consists of a discussion of the student's progress in the areas of talent, trainability, demeanor, professional discipline and potential as well as the demonstrated acquisition of the identified learning goals.
- These evaluations serve to monitor and record the student's progress toward the completion of the degree.
- The reviews will be administered by the Area Coordinator for Performance and shall include participation and feedback from theatre, music, and dance faculty.
- Evaluation of the students in the Musical Theatre Studio include voice juries (a requirement in the curriculum for Voice) and consultation with the Dance faculty on student proficiency.
- Written evaluations will be used to indicate areas of strength and weakness. The written evaluation will be shared with each student, and a copy will be placed in the student's advising file to be used as part of the on-going assessment of the student's progress in the program.

5. At the discretion of the Area Coordinator for Performance and in consultation with the Director of the School of Theatre and Dance, students who do not successfully pass the evaluation will be either put on probationary status or removed from the program.

## Admissions for 2026-2027

Students must meet all WVU Undergraduate Admissions entrance requirements. Prior to admission into the BFA Musical Theatre program, applicants must successfully pass an audition to assess their talent level and potential for success in the major. These auditions assess the proficiency levels in the areas of acting, dance, and vocal performance.

- The School of Theatre & Dance in conjunction with the School of Music will administer auditions each semester for entrance into the program.
- Applicants must schedule their audition directly with the School of Theatre & Dance. Typically, auditions will be held in November and early spring semester in the Canady Creative Arts Center. Additional virtual auditions may also be scheduled.
- Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339.

Major Code: 3712

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 41 |
| Musical Theatre Major Requirements | | 80 |
| Total Hours | | 121 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, 7, and 8 | | 25 |
| THET 191 | First-Year Seminar | 2 |
| General Electives | | 14 |
| Total Hours | | 41 |

## Musical Theatre Major Requirements

| Code | Title | Hours |
|---|---|---|
| **History/Literature Courses** | | |
| THET 100 | First-Year Practicum | 1 |
| THET 120 | History of Musical Theatre (Fulfills GEF 8) | 3 |
| THET 301 | History of Western Theatre (Fulfills GEF 8) | 3 |
| THET 365 | Western Theatre History 2: Enlightenment to Contemporary (Fulfills Writing and Communication Skills Requirement) | 3 |
| **Production** | | **7** |
| THET 221 | Theatre Makeup | |
| Select 1 of the following pairs: | | |
| THET 103<br>& THET 104 | Stagecraft<br>and Stagecraft Lab | |
| THET 105<br>& THET 106 | Costuming<br>and Costuming Lab | |
| **Theatre Performance** | | |
| THET 144S | Fundamentals of Acting | 3 |
| THET 240S | Fundamental Vocal Technique 1 | 2 |
| THET 242S | Fundamentals of Movement | 2 |
| THET 244 | Intermediate Acting | 3 |
| THET 348S | Studio Scene Study 1 | 1 |
| THET 348S | Studio Scene Study 1 | 1 |
| THET 447S | Studio Scene Study 2 | 1 |
| THET 447S | Studio Scene Study 2 | 1 |
| **Studio Courses** | | |
| THET 355S | Musical Theatre Studio | 3 |
| THET 355S | Musical Theatre Studio | 3 |
| THET 455S | Advanced Musical Theatre Studio | 3 |
| THET 455S | Advanced Musical Theatre Studio | 3 |
| **Dance** | | **10** |
| DANC 110S | Fundamentals of Ballet | |
| DANC 130S | Fundamentals of Jazz | |
| DANC 140S | Fundamentals of Tap | |
| DANC 255S | Dance Styles for Musical Theatre | |
| Select one of the following: | | |
| DANC 210S | Intermediate Ballet | |
| DANC 220S | Intermediate Modern | |
| DANC 230S | Intermediate Jazz | |
| DANC 240S | Intermediate Tap | |
| **Music Performance** | | **18** |
| MUSC 139S | Voice Class 2 | |
| MUSC 166 | Theory for Music Theatre 1 | |
| MUSC 167 | Theory for Music Theatre 2 | |
| MUSC 226 | Applied Music: Voice (Repeated twice for 2 hours each) | |

| | | |
|---|---|---|
| MUSC 326 | Applied Music: Voice (Repeated twice for 2 hours each) | |
| MUSC 426 | Applied Music: Voice (Repeated twice for 2 hours each) | |
| **Practicum** | | **4** |
| THET 200 | Production Practicum (Repeated twice for a total of 2 credits) | |
| THET 400 | Advanced Production Practicum (Repeated twice for a total of 2 credits) | |
| **Capstone** | | |
| THET 401 | Capstone Experience | 3 |
| or THET 450S | The Complete Performer | |
| **DANC Electives** | | **2** |
| Total Hours | | 80 |

*

Courses listed as the secondary option are by permission only.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 191 | 2 | ENGL 101 (GEF 1) | 3 |
| DANC 110S | 2 | DANC 130S | 2 |
| MUSC 139S | 1 | MUSC 139S | 1 |
| MUSC 166 | 2 | MUSC 167 | 2 |
| THET 100 | 1 | THET 144S | 3 |
| THET 103<br>& THET 104 | 4 | GEF 3 | 3 |
| DANC Electives | 2 | | |
| | 14 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | MUSC 226 | 2 |
| DANC 140S | 2 | THET 120 (GEF 8) | 3 |
| MUSC 226 | 2 | THET 200 | 1 |
| THET 200 | 1 | THET 221 | 3 |
| THET 242S | 2 | THET 240S | 2 |
| THET 244 | 3 | THET 301 (GEF 8) | 3 |
| GEF 4 | 3 | GEF 5 | 3 |
| | 16 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DANC 255S | 1 | DANC 210S | 2 |
| MUSC 326 | 2 | MUSC 326 | 2 |
| THET 348S | 1 | THET 348S | 1 |
| THET 355S | 3 | THET 355S | 3 |
| THET 365 | 3 | THET 400 | 1 |
| GEF 2B Science | 4 | Electives | 6 |
| GEF 7 | 3 | | |
| | 17 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| DANC 255S | 1 | MUSC 426 | 2 |
| MUSC 426 | 2 | THET 401 or 450S | 3 |
| THET 400 | 1 | THET 447S | 1 |
| THET 447S | 1 | THET 455S | 3 |
| THET 455S | 3 | Electives | 5 |

| | | |
|---|---|---|
| GEF 8 | 3 | |
| Elective | 3 | |
| | 14 | 14 |

Total credit hours: 121

## Area of Emphasis

- Dance (p. 619)

## Dance Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum of nine hours must be at the 300-level or higher. | | |
| **Core Courses** | | |
| DANC 260S | Fundamentals of Choreography | 3 |
| DANC 370 | Dance History | 3 |
| **Dance Technique Courses** | | **8** |
| Select four of the following: | | |
| DANC 210S | Intermediate Ballet | |
| DANC 310S | Intermediate/Advanced Ballet | |
| DANC 120S | Fundamentals of Modern Dance Technique | |
| DANC 220S | Intermediate Modern | |
| DANC 320S | Advanced Modern | |
| DANC 230S | Intermediate Jazz | |
| DANC 240S | Intermediate Tap | |
| **Dance Elective Courses** | | **4-6** |
| Select from the following: | | |
| DANC 372 | Dance Criticism | |
| DANC 251S | World Dance | |
| DANC 300 | Dance Practicum | |
| DANC 360S | Advanced Choreography | |
| DANC 400 | Choreography Practicum | |
| DANC 495 | Independent Study | |
| DANC 420S | Modern Repertory (Or any other Repertory class at the 400-level) | |
| Total Hours | | 18 |

## Major Learning Outcomes

### MUSICAL THEATRE

**Common Body of Knowledge and Skills for B.F.A. Theatre students**

Students must acquire:

Technical skills requisite for artistic self-expression in at least one major area of production (for example, acting, design/technology, playwriting, musical theatre) and those skills must be progressively developed to the highest level appropriate to the particular area of concentration.

1. An overview understanding of the major aspects, techniques, and directions in the area of concentration.
2. Fundamental, comprehensive understanding of the various elements and basic interrelated processes of creation, interpretation, performance, and production.
3. Fundamental, conceptual understanding of the expressive possibilities of theatre.
4. Knowledge and skills sufficient to work in both collaborative and individual roles in matters of theatre interpretation.
5. Growth in artistry, technical skills, collaborative competence, and knowledge of repertory through regular performance and production experiences. Students must have such experiences throughout the degree program.

6. Repertory. Students must acquire:
    a. Familiarity with theatre literature of various historical periods, cultural sources, and modes of presentation.
    b. Experience with specific repertories and comparative standards of production quality through performance, academic study, and attendance at productions.
7. Theoretical and Historical Studies
    a. Students must acquire:
        i. The ability to analyze plays perceptively and to evaluate them critically.
        ii. An understanding of the common elements and vocabulary of theatre and of the interaction of these elements, and be able to employ this knowledge in analysis, including analyses of their productions.
        iii. The ability to place works of theatre in historical and stylistic contexts and have some understanding of the cultural milieu in which they were created.
        iv. The ability to develop and defend informed judgments about theatre.
    b. Technology. Students must acquire a working knowledge of technologies and equipment applicable to their area(s) of specialization.
8. Synthesis. While synthesis is a lifetime process, by the end of undergraduate studies students should be able to work independently on a variety of professional problems by combining, as appropriate to the issue, their capabilities in performance, repertory, theory, history, and technology, as well as other fields they have studied.

Upon completion of any B.F.A. professional undergraduate degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the area of specialization including significant technical mastery, the capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.
2. Students must demonstrate their competence by developing a body of work for evaluation in the major area of study. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
3. Students must have the ability to communicate ideas, concepts, and requirements to theatre professionals and laypersons related to the practice of the major field. Such communication may involve oral, written, visual, and musical media.

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**Bachelor of Fine Arts in Musical Theatre**

1. Essential Competencies, Experiences, and Opportunities (in addition to those stated for all B.F.A. degree programs above)
    a. Achievement of the highest possible level of performance as an actor-singer. Studies in acting shall continue throughout the entire degree program.
    b. Thorough development of skills in acting and skills in dance as appropriate to musical theatre.
    c. Thorough development in basic musical skills including voice performance, musicianship, and music theory. Studies in voice should continue throughout the degree program.
    d. Opportunities to develop a high level of skill in sight-singing.
    e. Opportunities for performance in workshops and full productions of musical theatre in a variety of formal and informal settings. Performance of a significant role in at least one full production during advanced study is regarded as an essential experience.
    f. Opportunities for developing repertory and techniques for auditions.

# Theatre, B.A.

## Degree Offered

- Bachelor of Arts

## Nature of the Program

The Bachelor of Arts degree offers a broad-based program of study combining a liberal arts education with a general theatre curriculum.

The B.A. meshes perfectly with minors, and especially double majors, potentially increasing interest from future graduate schools or employers. Typically, the B.A. student in Theatre is one who chooses not to specialize in any one area of the art form, but prefers instead to keep as many educational and career options open as possible. The B.A. program is also well-suited for students looking to explore multiple areas of study within the theatre discipline, such as stage management, directing, or producing.

## Admissions for 2026-2027

The BA in Theatre does not require an audition or interview, but applicants must meet all University undergraduate admissions requirements (https://ccarts.wvu.edu/academics/audition-and-portfolio-review-day/).

For further information, please contact the College of Creative Arts and Media Recruitment Office at (304) 293-4339.

Major Code: 3708

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 44 |
| Theatre Major Requirements | | 76 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, and 8 | | 28 |
| THET 191 | First-Year Seminar | 2 |
| General Electives | | 14 |
| Total Hours | | 44 |

## Theatre Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Theatre Studies:** | | |
| THET 100 | First-Year Practicum | 1 |
| THET 113 | Stage Management Principles | 3 |
| THET 230 | Text Analysis | 3 |
| THET 302 | Directing | 3 |
| THET 401 | Capstone Experience | 3 |
| **Theatre History:** | | |
| THET 170 | World Theatre and Drama (GEF 7) | 3 |
| THET 301 | History of Western Theatre | 3 |
| THET 365 | Western Theatre History 2: Enlightenment to Contemporary (Fulfills Writing and Communication Skills Requirement) | 3 |
| THET 460 | Contemporary Drama | 3 |
| **Production:** | | |
| Select one of the following sequences: | | 4 |
| THET 103 & THET 104 | Stagecraft and Stagecraft Lab | |
| THET 105 & THET 106 | Costuming and Costuming Lab | |
| **Performance:** | | |
| DANC 100S | Fundamentals of Dance Techniques | 2 |
| THET 144S | Fundamentals of Acting (Fulfills GEF 6) | 3 |
| THET 462S | Puppetry | 3 |
| **Practicum:** | | **5** |
| Select 5 credits from the following: | | |
| THET 200 | Production Practicum (may be repeated up to two credits) | |
| THET 213 | Intermediate Stage Management | |
| THET 300 | Practicum (may be repeated up to two credits) | |
| THET 400 | Advanced Production Practicum (may be repeated up to three credits) | |
| Theatre Electives (THET) | | 16 |
| Non-Theatre Electives | | 18 |
| Total Hours | | 76 |

## SUGGESTED PLAN OF STUDY BA IN THEATRE

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Select one of the following: | 4 | DANC 100S | 2 |
| THET 103 & THET 104 | | ENGL 101 (GEF 1) | 3 |
| THET 105 & THET 106 | | THET 113 | 3 |
| THET 100 | 1 | THET 144S (GEF 6) | 3 |
| THET 170 (GEF 7) | 3 | GEF 3 | 3 |
| THET 191 | 2 | GEF 5 | 3 |
| GEF 4 | 3 | | |
| General Elective | 2 | | |
| | 15 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | THET 200 | 1 |
| THET 200 | 1 | THET 301 | 3 |

| | | | |
|---|---|---|---|
| THET 230 | | 3 THET Elective | 3 |
| GEF 2 | | 4 Non-THET Elective | 3 |
| Non-THET Elective | | 3 GEF 8 | 3 |
| General Elective | | 3 | |
| | | 17 | 13 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 302 | | 3 THET 365 | 3 |
| THET 400 | | 1 THET 400 | 1 |
| THET 462S | | 3 THET Electives | 6 |
| THET Elective | | 3 Non-THET Elective | 3 |
| GEF 8 | | 3 GEF 8 | 3 |
| General Elective | | 3 | |
| | | 16 | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 400 | | 1 THET 401 | 3 |
| THET 460 | | 3 THET Elective | 1 |
| THET Elective | | 3 Non-THET Electives | 6 |
| Non-THET Elective | | 3 General Elective | 3 |
| General Elective | | 3 | |
| | | 13 | 13 |

Total credit hours: 120

# Major Learning Outcomes

## B.A. THEATRE

## ESSENTIAL CONTENT AND COMPETENCIES

**General Education**

1. Competencies. Specific competency expectations are determined by the institution. Normally, students graduating with liberal arts degrees have:

- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency, and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand, and evaluate work in a variety of disciplines.
- The capacity to explain and defend views effectively and rationally.
- Understanding of and experience in one or more art forms other than theatre.

2. Operational Guidelines. These competencies are usually developed through studies in English composition and literature; foreign languages; history, social studies, and philosophy; visual and performing arts; natural science; technology; and mathematics. Precollegiate study, regular testing and counseling, and flexibility in course requirements are elements in achieving these competencies.

**Theatre Studies**

1. Competencies. Students holding undergraduate liberal arts degrees must have:

- The ability to develop and defend informed judgments about theatre.
- An acquaintance with a wide selection of theatre repertory including the principal eras, genres, and cultural sources.
- An understanding of playwriting and production processes, aesthetic properties of style, and the way these shape and are shaped by artistic and cultural forces.
- The ability to think conceptually and critically about text, performance, and production.

2. Operational Guidelines. Objectives of this type are ordinarily emphasized in courses such as acting, speech, play analysis, design technology, history and literature of the theatre, and through regular practical and intimate contact with living theatre.

**Performance and Theatre Electives**

1. Competencies. Students holding undergraduate liberal arts degrees must have:

- Ability in areas of performance and production or playwriting appropriate to individual needs and interests, consistent with the goals and objectives of the specific liberal arts degree program being followed.
- An understanding of procedures and approaches for realizing a variety of theatrical styles.
- Intermediate to advanced competence in one or more theatre specializations in creation, performance, scholarship, or teaching.

2. Operational Guidelines:

- The work in this area includes acting, design/technology, other aspects of participation in theatre productions, and studies in scholarly or pedagogical aspects of theatre.
- In addition to electives in general education, further studies in theatre, including performance, should be possible through a selection of additional courses.
- Institutions have various policies concerning the granting of credit for performance and production in liberal arts curricula, including the relegation of performance to extracurricular activity. Such policies are taken into account when curricular proportions are considered.

# Theatre Design and Technology, B.F.A

## Degree Offered

- Bachelor of Fine Arts

## Nature of the Program

The B.F.A. in Theatre Design & Technology introduces the student to all aspects of theatre and is coupled with an extensive breadth of liberal arts requirements drawing from many other disciplines throughout the University. The program is designed for the student who intends to pursue a professional theatre career, graduate study in theatre, or who may choose to enter a related profession where design and technology skills are highly desirable.

The core curriculum in this B.F.A. program allows the student to learn all facets of theatre design and technology. Through upper level courses and elective options students can hone their skills in a specified career path such as costumes, lighting, scenery, sound, or technical direction. Throughout the course of study, students must demonstrate a talent and ability in more than one area of the art form. Training also involves active participation in the production program and the opportunity to design fully-produced mainstage productions. Emphasis on hands-on learning in the theatre and laboratories with state-of-the-art equipment is at the core of the Design & Technology Program.

In addition to completing the required coursework, students enrolled in the design and technology program must participate in a portfolio review at the end of each semester beginning with their sophomore year.  Furthermore, additional mid-term assessments may be required at the discretion of the Director of the School of Theatre and Dance or the Design & Technology Program Director.  Students must successfully complete these assessments to be allowed to continue in the program.

## Admissions for 2026-2027

Students must meet all WVU Undergraduate Admissions entrance requirements.  Prior to admission into the BFA Theatre Design and Technology program, applicants must successfully pass an interview and portfolio review.  The portfolio review consists of theoretical and/or realized production work.

The School of Theatre & Dance will administer these interviews and portfolio reviews typically in November and early spring semester in Morgantown.  Additional interview and review dates may also be scheduled.  Audition information can be found on the College's website or by contacting the CCAM Office of Recruitment at (304) 293-4339.

Major Code: 3713

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 37 |
| Theatre Design & Technology Major Requirements | | 83 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 4, 5, and 8 | | 28 |
| THET 191 | First-Year Seminar | 2 |
| General Electives | | 7 |
| Total Hours | | 37 |

## Theatre Design & Technology Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Theatre Studies** | | |
| Select one of the following (GEF 6): | | 3 |
| THET 102 | Acting | |
| THET 144S | Fundamentals of Acting | |
| THET 170 | World Theatre and Drama (GEF 7) | 3 |
| THET 302 | Directing | 3 |
| THET 327S | History of Costume and Decoration 1 | 3 |
| THET 328S | History of Costume and Decoration 2 | 3 |
| THET 360 | Western Theatre History 1: Greeks to Restoration | 3 |
| THET 365 | Western Theatre History 2: Enlightenment to Contemporary (Fulfills Writing and Communication Skills Requirement) | 3 |
| **Design & Technology** | | |
| Foundation | | |
| THET 103 | Stagecraft | 3 |
| THET 104 | Stagecraft Lab | 1 |
| THET 105 | Costuming | 3 |
| THET 106 | Costuming Lab | 1 |
| THET 113 | Stage Management Principles | 3 |

| | | |
|---|---|---|
| THET 220 | Fundamentals of Lighting | 3 |
| THET 222S | Drafting for the Stage | 3 |
| THET 225S | Introduction to Stage Design 1 | 3 |
| THET 226S | Introduction to Stage Design 2 | 3 |
| THET 315S | Portfolio Development | 3 |
| Intermediate Technical | | |
| Select three from the following: | | 9 |
| THET 213 | Intermediate Stage Management | |
| THET 214 | Production Management Principles | |
| THET 219S | Intermediate Costume Construction | |
| THET 221 | Theatre Makeup | |
| THET 310S | Stagecraft 2 | |
| THET 312 | Theatrical Rigging | |
| THET 317 | Costume Pattern Drafting Techniques | |
| THET 321S | Stage Properties | |
| THET 329S | Computer Assisted Design for the Stage | |
| THET 330S | Rendering Techniques | |
| THET 375S | Puppet Construction | |
| Advanced Technical | | |
| Select three of the following: | | 9 |
| THET 410 | Light Console Programming | |
| THET 414 | Advanced Production Management | |
| THET 417 | Tailoring | |
| THET 418 | Draping for Costumes | |
| THET 422S | Advanced Stage Makeup | |
| THET 423S | Costume Crafts | |
| THET 424 | Advanced Technical Production | |
| THET 425S | Advanced Costume Construction | |
| THET 426 | Automation | |
| THET 427 | Lighting Technology | |
| THET 428S | Scene Painting | |
| THET 429S | Sound Seminar | |
| THET 435 | Theatre Health and Safety | |
| Design | | |
| Select three of the following: | | 9 |
| THET 322S | Scene Design | |
| THET 323S | Advanced Scene Design | |
| THET 324S | Costume Design 1 | |
| THET 325S | Lighting Design | |
| THET 326S | Advanced Costume Design | |
| THET 421S | Lighting Design 2 | |
| **Practicum** | | |
| THET 100 | First-Year Practicum | 1 |
| Production/Stage Management Practicum Courses [**] | | 2 |
| THET 200 | Production Practicum | |
| THET 206S | Stage Management Seminar | |
| Advanced Practicum Courses [***] | | 3 |
| THET 400 | Advanced Production Practicum | |
| THET 406S | Advanced Stage Management Seminar | |
| **Capstone** | | |

| | | |
|---|---|---|
| THET 401 | Capstone Experience | 3 |
| Total Hours | | 83 |

*****

Actual number of credits will be determined by the number and level of the elected GEF courses.

******

Students may complete this requirement with any combination of two credits of THET 200 and/or THET 206S.

*******

Students may complete this requirement with any combination of three credits of THET 400 and/or THET 406S.

## SUGGESTED PLAN OF STUDY DESIGN/TECHNOLOGY EMPHASIS

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 103 & THET 104 | 4 | ENGL 101 (GEF 1) | 3 |
| THET 170 (GEF 7) | 3 | THET 105 & THET 106 | 4 |
| THET 191 | 2 | THET 113 | 3 |
| GEF 4 | 3 | THET 144S or 102 (GEF 6) | 3 |
| GEF 3 | 3 | THET 100 | 1 |
| | | GEF 5 | 3 |
| | 15 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | THET 200 | 1 |
| THET 200 | 1 | THET 226S | 3 |
| THET 220 | 3 | THET 365 | 3 |
| THET 222S | 3 | Intermediate Tech Course 1 | 3 |
| THET 225S | 3 | GEF 2 | 4 |
| THET 360 | 3 | Elective | 1 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Select one of the following: | 3 | Select one of the following: | 3 |
| THET 322S | | THET 323S | |
| THET 324S | | THET 326S | |
| THET 325S | | THET 421S | |
| THET 327S | 3 | THET 328S | 3 |
| THET 400 | 1 | THET 302 | 3 |
| Intermediate Tech Course 2 | 3 | THET 400 | 1 |
| GEF 8 | 6 | Advanced Tech Course 1 | 3 |
| | | GEF 8 | 3 |
| | 16 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| THET 315S | 3 | THET 401 | 3 |
| Select one of the following: | 3 | Advanced Tech Course 2 | 3 |
| THET 322S | | Advanced Tech Course 3 | 3 |
| THET 323S | | Elective | 3 |
| THET 325S | | | |
| THET 400 | 1 | | |
| Intermediate Tech Course 3 | 3 | | |

| | | |
|---|---|---|
| Elective | 3 | |
| | 13 | 12 |

Total credit hours: 120

# Major Learning Outcomes

## THEATRE DESIGN AND TECHNOLOGY

**Common Body of Knowledge and Skills for B.F.A. Theatre students**

Students must acquire:

Technical skills requisite for artistic self-expression in at least one major area of production (for example, acting, design/technology, playwriting, musical theatre) and those skills must be progressively developed to the highest level appropriate to the particular area of concentration.

1. An overview understanding of the major aspects, techniques, and directions in the area of concentration.
2. Fundamental, comprehensive understanding of the various elements and basic interrelated processes of creation, interpretation, performance, and production.
3. Fundamental, conceptual understanding of the expressive possibilities of theatre.
4. Knowledge and skills sufficient to work in both collaborative and individual roles in matters of theatre interpretation.
5. Growth in artistry, technical skills, collaborative competence, and knowledge of repertory through regular performance and production experiences. Students must have such experiences throughout the degree program.
6. Repertory. Students must acquire:
    a. Familiarity with theatre literature of various historical periods, cultural sources, and modes of presentation.
    b. Experience with specific repertories and comparative standards of production quality through performance, academic study, and attendance at productions.
7. Theoretical and Historical Studies
    a. Students must acquire:
        i. The ability to analyze plays perceptively and to evaluate them critically.
        ii. An understanding of the common elements and vocabulary of theatre and of the interaction of these elements, and be able to employ this knowledge in analysis, including analyses of their productions.
        iii. The ability to place works of theatre in historical and stylistic contexts and have some understanding of the cultural milieu in which they were created.
        iv. The ability to develop and defend informed judgments about theatre.
    b. Technology. Students must acquire a working knowledge of technologies and equipment applicable to their area(s) of specialization.
8. Synthesis. While synthesis is a lifetime process, by the end of undergraduate studies students should be able to work independently on a variety of professional problems by combining, as appropriate to the issue, their capabilities in performance, repertory, theory, history, and technology, as well as other fields they have studied.

Upon completion of any B.F.A. professional undergraduate degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the area of specialization including significant technical mastery, the capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work.
2. Students must demonstrate their competence by developing a body of work for evaluation in the major area of study. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
3. Students must have the ability to communicate ideas, concepts, and requirements to theatre professionals and laypersons related to the practice of the major field. Such communication may involve oral, written, visual, and musical media.

**Bachelor of Fine Arts in Design & Technology**

Essential Competencies, Experiences, and Opportunities (in addition to those stated for all degree programs above)

1. Ability to conceptualize and realize a design aesthetic consistent with the overall artistic concepts of a production.
2. Ability to understand and articulate basic elements and principles of design theory.
3. Ability to understand and articulate basic elements and principles of composition related to line, shape, color, texture, and sound
4. Understanding of the aesthetic use of color.
5. Understanding of the aesthetic use of sound.
6. Ability to communicate design ideas and realities to other personnel involved in the production, including directors, other designers, stage managers, and actors.
7. Ability to produce and communicate design ideas with freehand drawings.
8. Ability to provide formalized, accurate production models and drawings by hand and/or through the use of current industry standard software programs.
9. Fundamental knowledge of the total design process, including the progression of raw materials through multiple design “shops” and the roles that various craftspeople play in the creation of a finished product.
10. Fundamental knowledge of décor, architecture, furniture, dress, crafts, and art as they relate to various historical periods.
11. Ability to demonstrate an understanding of basic engineering principles (electrical, mechanical, and/or structural) as they relate to chosen design specializations.
12. Knowledge of federal, state, and local health and safety codes, best practices, and industry standards as they relate to theatrical venues and production elements.
13. Preparation and presentation of a professional résumé and a portfolio of design- and technology-related work that demonstrate one’s abilities, strengths, processes, and experiences.
14. Opportunities for experience in the design/technology aspects of theatre in a variety of formal and informal settings throughout the entire degree program, including an opportunity to design and/or create the technology for at least one fully realized production that will be presented before an audience prior to graduation.

# College Wide Degree

## Degree Offered

- Bachelor of Multidisciplinary Studies

# Multidisciplinary Studies, B.MdS.

## Degree Offered

- Bachelor of Multidisciplinary Studies

## Nature of the Program

The College of Creative Arts and Media Multidisciplinary Studies (MDS) program enables students to earn a Bachelor of Multidisciplinary Studies (B.MdS.) degree by following an individualized course of study based on their own academic interests and goals. Combined with the University’s General Education Foundations, the degree allows students to choose three different academic minors to create their own educational plan. At least two of the three minors must be from programs within the College of Creative Arts and Media. The third minor can be from the College of Creative Arts and Media or from one of the other minor programs available at West Virginia University. Students who decide to have all three minors from the College of Creative Arts and Media can only have two from the same area (art, dance, music, theatre, or media).

Each MDS course of study culminates with a “capstone” project where MDS students demonstrate what they have learned during their time at West Virginia University. The capstone must be selected from one of the capstone opportunities offered by the College of Creative Arts and Media where the student has completed a minor.

Students in the College’s MDS program are welcome to participate in the many performance, exhibition, internship, and study-abroad opportunities offered by the College. Participation may require the completion of certain coursework and/or a successful audition/review process.

## Scholarships and Financial Aid

The College of Creative Arts and Media offers a limited number of special College-based scholarship awards for freshmen and current students enrolled in its programs. College-based awards are granted on the demonstration of outstanding talent, academic achievement, and the demonstration of potential success in the MDS program.

Information regarding both University and College of Creative Arts and Media Scholarships can be found on the College's website.

**For more information about the College of Creative Arts MDS program, please contact:**

Recruitment Coordinator
College of Creative Arts and Media
West Virginia University
P.O. Box 6111
Morgantown, WV 26506-6111
Phone: (304) 293-4339
Email: ccarecruitment@mail.wvu.edu

## Admissions for 2026-2027

Acceptance into the College of Creative Arts and Media Bachelor of Multidisciplinary Studies (BMDS) program is contingent upon admission to WVU as an undergraduate student. Some Creative Arts and Media minors require that the student must complete a successful audition/review process in order to enroll and/or complete the course of study. When required, the audition/review is a preliminary assessment of a student's potential for program success and should be completed before declaring the minor. Also, due to capacity limitations, enrollment in some Creative Arts and Media minors may be limited.

Interested students are advised to check the requirements for each minor of interest. Minor requirements are listed under the individual programs in this catalog. Students who wish to transfer from another major within the University are required to have a 2.0 GPA to enter the CCAM BMDS program.

Major Code: 3718

Click here to view the Suggested Plan of Study (p. 631)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Bachelor of Multidisciplinary Studies Degree Requirements

| Code | Title | Hours |
|---|---|---|
| Minimum GPA of 2.0 | | |
| **GEF Requirements** * | | **34** |
| Select 1 of the following: | | 2 |
| ART 191 | First-Year Seminar | |
| MUSC 191 | First-Year Seminar | |
| THET 191 | First-Year Seminar | |

**Minor Requirements**

| | |
|---|---|
| A grade of C- or better is required in all minor coursework | |
| Minimum GPA of 2.0 in each minor or the GPA required for the specific minor (whichever is higher) | |
| None of the courses required in the minors can be used to satisfy GEF requirements | |
| If a course fulfills a requirement in more than one minor, an additional course from one of the minor's list of recommended electives or advanced study courses must be completed. | |
| At least 60 credit hours of 200-400 level coursework is required | |
| College of Creative Arts Minor 1 | 18 |
| College of Creative Arts Minor 2 | 18 |
| Minor 3 (any University minor) | 18 |
| **College of Creative Arts Capstone** | **2-3** |
| To be chosen from a School in the College of Creative Arts where a minor is completed | |
| Grade of C- or higher is required | |
| School of Arts and Design Capstone Courses: | |
| ARHS 401 Senior Project-Capstone | |
| ART 413S Senior Projects in Painting | |
| ART 425S Graphic Design: Senior Project | |
| ART 426S Senior Projects in Sculpture | |
| ART 430S Senior Projects in Printmaking | |
| ART 440S Senior Projects in Ceramics | |
| ART 470S Senior Projects in Intermedia | |
| School of Music Capstone Courses: | |
| MUSC 435 Repertoire:Voice | |
| MUSC 467 Major Project in Theory, Composition, or Music History | |
| MUSC 487 Residency 2 Seminar | |
| MUSC 488 Recital | |
| MUSC 492 Directed Study | |
| MUSC 435A Repertoire: Piano | |
| School of Theatre & Dance Capstone Courses: | |
| THET 401 Capstone Experience | |
| THET 450S The Complete Performer | |
| Electives * | 28 |
| Total Hours | 120 |

*

Used to reach 120 minimum credit hours for the degree. The total credit hours for the degree may vary depending upon the requirements of the individual minors selected, as well as courses selected in the GEF.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | GEF 3 | 3 |
| Select one of the following: | 2 | Minor 1 Course | 3 |
| ART 191 | | Minor 2 Course | 3 |
| MUSC 191 | | Minor 3 Course | 3 |
| THET 191 | | Elective | 3 |
| Minor 1 Course | 3 | | |
| Minor 2 Course | 3 | | |
| Elective | 3 | | |
| | 14 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | GEF 5 | 3 |

| | | | |
|---|---|---|---|
| GEF 4 | | 3 GEF 2 | 4 |
| Minor 1 Course | | 3 Minor 2 Course | 3 |
| Minor 3 Course | | 3 Minor 3 Course | 3 |
| Elective | | 3 Elective | 3 |
| | | 15 | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 6 | | 3 GEF 7 | 3 |
| Minor 1 Course | | 3 GEF 8 | 3 |
| Minor 2 Course | | 3 Minor 1 Course | 3 |
| Minor 3 Coures | | 3 Minor 2 Course | 3 |
| Elective | | 3 Elective | 3 |
| | | 15 | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEF 8 | | 3 GEF 8 | 3 |
| Elective | | 3 Elective | 3 |
| Capstone Course | | 3 Minor 2 Course | 3 |
| Minor 1 Course | | 3 Minor 3 Course | 3 |
| Minor 3 Course | | 3 Elective | 3 |
| | | 15 | 15 |

Total credit hours: 120

# Major Learning Outcomes

## MULTIDISCIPLINARY STUDIES

The Bachelor of Multidisciplinary Studies in the Arts (BMdS) allows students to follow an individualized course of study based on their own academic interests in the Arts.

- Demonstration of knowledge and/or skills in two or more areas of study (minors) within the College beyond basic coursework and performance appropriate to the individual's needs and interests.
- The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency, and rhetorical force.
- An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences, and with the main forms of analysis of the historical and quantitative techniques needed for investigating the workings and developments of modern society.
- An ability to address culture and history from a variety of perspectives.
- Understanding of, and experience in thinking about, moral and ethical problems.
- The ability to respect, understand and evaluate work in a variety of disciplines and particularly in one or more aspects of the Arts.
- The capacity to explain and defend views effectively and rationally.
- The ability to conceive, create and practice one or more specific areas of the Arts.
- Understanding the similarities, differences and relationships among the various forms of Art.
- A demonstration of the conceptual and practical relationship between at least two areas of the Arts combined with a third area related to the student's specific academic and personal interests and goals.

# Dentistry

## Degrees Offered

- Bachelor of Science in Dental Hygiene

## Nature of the Program

The establishment of the integrated baccalaureate degree program in dental hygiene at West Virginia University in September 1961 was a milestone in dental hygiene education. The program stands out as one of the top dental hygiene programs nationally as shown by the students' commitment to excellence. The integrated curriculum in dental hygiene combines the advantages of both liberal arts and the professional aspects of education. Graduates from the program are awarded a bachelor of science degree in dental hygiene.

The dental hygiene curriculum is rigorous and provides excellent preparation for the practice of dental hygiene in numerous practice settings. The curriculum requires successful completion of a total of 133 credit hours and is constructed in accordance with the standards specified for a dental hygiene program set forth by the American Dental Association Commission on Dental Accreditation (CODA). The WVU Dental Hygiene Program has been fully accredited by (CODA) since 1965; most recently receiving full accreditation status with no reporting requirements in 2024.

The dental hygiene program has a strong commitment to providing care and educational programs to residents of West Virginia, which is demonstrated by the required 125 hours of service learning and clinical care courses. To provide students in the dental hygiene program with the necessary clinical experience that is required, the School of Dentistry maintains and operates dental clinics in the Robert C. Byrd Health Sciences Center School of Dentistry and Suncrest Towne Center. Through the West Virginia University Institute for Community and Rural Health (WVUICRH), students are required to provide direct patient care for the citizens of West Virginia at a rural site during the summer session between their junior and senior year.

The WVU dental hygiene program has an excellent reputation for producing outstanding clinicians and many faculty members as well as graduates are recognized as leaders in dental education and organized dentistry. Please visit Dental Hygiene Excellence and Distinction (https://dentistry.hsc.wvu.edu/students/bachelor-of-science/excellence-and-distinction/) for more information.

## The Profession

Dental hygiene is an exciting profession with many rewarding and challenging career opportunities which include clinical/patient care, administration, education, research, and sales/marketing. The educational background of a dental hygienist provides the knowledge, attitudes, and skills necessary to be successful in a wide variety of careers. From providing clinical care to research to public administration, dental hygiene opens the door to many successful career options (https://dentistry.hsc.wvu.edu/students/bachelor-of-science/career-possibilities/). Dental hygienists are employed in diverse settings such as private dental practices; clinics; hospitals; long-term care facilities/rehabilitation centers; dental hygiene education; national, state, and local government agencies; and private business/industry. As a licensed health professional and oral health educator, the dental hygienist has an important role in the overall health and welfare of the public. The dental hygienist is an integral part of the dental team, providing direct patient care based on the prevention of disease. The duties and responsibilities of dental hygienists vary from state to state but may include oral prophylaxis (removing stains and deposits from teeth); root debridement; exposing radiographs; application of preventive and therapeutic agents; local delivery of antimicrobial agents; nutritional counseling; oral, head, and neck cancer screenings; monitoring nitrous oxide sedation; and administration of local anesthesia. For an overview of the profession, please visit the Dental Hygiene website (https://dentistry.hsc.wvu.edu/students/bachelor-of-science/).

## Academic and Professional Standards

Students enrolled in the Dental Hygiene Program are held to high Academic and Professional Standards throughout their time in the Program. Please visit the Dental Hygiene Student Resources page (https://dentistry.hsc.wvu.edu/students/bachelor-of-science/dental-hygiene-student-resources/) for the Dental Hygiene Academic and Professional Standards, Student Rights and Responsibilities, additional policies, and guidelines.

## FACULTY

### CHAIR AND PROGRAM DIRECTOR

- Amy D. Funk, Professor - MSDH
  (West Virginia University)

### PROFESSORS

- M. Suann Gaydos - MSDH, NCTTP
  (West Virginia University)
- Alcinda K. T. Shockey - DHSc, MA, BSDH, RDH, CHS-IV, CTTS, CNTA
  (NOVA Southeastern University)
- Ashlee B. Sowards - BSDH, MSDH, CTTS
  (West Virginia University)

## ASSISTANT PROFESSORS

- Dawn Ann Dean - MSDH, RDH, FADHA, CTTS
  (West Virginia University)
- Kaitlyn McQuain - BSDH, MSDH
  (West Virginia University)
- Elizabeth Southern Puette - RDH, MSDH, CTTS
  (Old Dominion University)

# Admissions for 2026-2027

Major Code: 8014

## APPLICATION DEADLINES FOR 2025 - 2026

- First Time Freshman (fall 2025 admission) - **August 1, 2025 - February 1, 2026**
- Spring Admit Freshman* (spring 2027 admission) = **August 1, 2025 - October 1st, 2025**
- Advanced Standing Sophomore* (fall 2026 admission) = **August 1, 2025 - February 1, 2026**

***Must be granted departmental approval; more information provided below.***

## GENERAL INFORMATION

Students are admitted into the Dental Hygiene Program through a competitive process in which all applications are reviewed by the Dental Hygiene Admissions Committee. **All applicants must apply to the Dental Hygiene Program and submit test scores (ACT, SAT, or ALEKS), transcripts, and all required Program documents to be considered for an interview for admission into the Program**.

There are two types of admission into the Dental Hygiene Program - Freshman entry (Direct Admission **OR** via Healthcare Pathways with Dental Hygiene Interest) and Advanced Standing admission (spring semester freshman admission **OR** fall semester sophomore admission). Current college students **cannot directly transfer** into the program; they must make application and complete the admissions process as described below.

The Dental Hygiene Admissions committee reviews all applications, and emphasis is placed on scholastic achievement in science courses as well as overall grade point average and involvement in community service activities. Physical strength with the ability to sit and stand is required, fine precision bilateral manipulative hand/motor skills, adequate visual acuity, eye/hand/foot coordination, and emotional stability are essential characteristics for individuals who wish to enter and continue in the dental hygiene program. Applicants must meet other medical qualifications as required. Reasonable accommodations will be considered for students in conjunction with the WVU Office of S (https://accessibilityservices.wvu.edu/)tudent Accommodations (https://osa.wvu.edu/).

## FRESHMAN ADMISSION

**To be considered for an interview for admission as a freshman student for direct admit or via healthcare pathways (see information below), applicants must:**

- Apply to the Dental Hygiene Program by the deadlines listed above
- Submit the following with your application:
  - All current transcripts
  - ACT minimum math score of 20 **OR**
  - SAT minimum math score of 520 **OR**
  - ALEKS math placement test score of 40 or higher **Please routinely check your MIX email account for more information on ALEKS*
- Submit the following to the Dental Hygiene Office directly:
  - Shadowing forms - minimum of eight hours of direct observation of a registered dental hygienist are required, but more hours are recommended
  - Shadowing essay (https://dentistry.wvu.edu/media/1673/dental-hygiene-applicant-shadowing-form.pdf) - describe the shadowing experience (procedures, patients, communication, infection control, personal protective equipment, etc.)

Applicants that do not meet minimum requirements for admission (see above) will be placed in Healthcare Pathways in the Center for Learning, Advising, and Student Success (CLASS) (https://advisingcenter.wvu.edu/). Current college students and/or graduates may be considered for admission into the freshman class based on the availability of openings in the class.

### FIRST TIME FRESHMAN (FTF) ENTRY

As an integrated four-year program, there are no prerequisite college courses required for first time freshman entry, but additional science courses on the high school level are recommended. There are two opportunities for freshman admission to the WVU Dental Hygiene Program - Direct Admission **OR** via Healthcare Pathways with Dental Hygiene Interest.

All applicants must meet all of the University admission requirements (https://admissions.wvu.edu/how-to-apply/first-time-freshmen/admission-requirements/) in addition to minimum Program requirements listed above to be considered for the Dental Hygiene Program.

### Direct Admission

Applicants that meet the direct admission requirements listed below are provisionally accepted and will be guaranteed an interview with the Dental Hygiene Admissions committee. The direct admit applicant must complete a successful interview with the admissions committee and have submit all required information by the deadline (test scores, transcripts, departmental documents, etc.) to have a dedicated position in the upcoming class. **No applicants will be interviewed or considered for direct admission until the testing requirements are completed.**

To be provisionally accepted via **direct admission**, applicants must:

- Complete all departmental admission criteria (see How to Apply below) **AND**
- Minimum high school grade point average of 3.7 **AND**
- Meet at least one of the following:
  - ACT Composite score 24 with a minimum math score of 20 **OR**
  - SAT EBRW and Math 1180 with a minimum math score of 520

### Healthcare Pathways with Dental Hygiene Interest

Applicants that do not meet the requirements for direct admission will be placed in Healthcare Pathways with Dental Hygiene interest in CLASS. Applicants in Healthcare Pathways with Dental Hygiene Interest who meet the minimum Program requirements may be considered for admission into the Dental Hygiene Program (first time freshman entry) provided there are remaining openings in the class.

## ADVANCED STANDING ADMISSION

Applicants may be eligible to enter the program as a spring semester freshman or an advanced standing sophomore. **This does not require a separate application**; students must follow the dental hygiene application process (see 'How to Apply' below). Interested students **must contact the Department** directly to request consideration and be granted approval to apply for either spring **OR** advanced standing sophomore admission.

Advanced standing a**dmission is limited by class size and successful completion of college courses does not guarantee advanced standing admission**. Current college students and/or graduates may be considered for admission as an advanced standing student based on the availability of openings in the class.

## ADVANCED STANDING SPRING SEMESTER FRESHMAN ADMISSION

To be considered for Spring admission, applications are **due by October 1st of the preceding fall semester**. Admission is based on a minimum cumulative and science grade point average of 3.0 and successful completion (with a grade of C or better) of Chemistry 111 and Chemistry 111L or a higher-level Chemistry course (didactic and laboratory) and additional courses as prescribed in the first semester of the Dental Hygiene Curriculum Plan.

## ADVANCED STANDING FALL SEMESTER SOPHOMORE ADMISSION

To be considered as an advanced standing sophomore, applications are **due by February 1st** of the preceding spring semester. Admission is based on a minimum cumulative and science grade point average of 3.0 and successful completion (with a grade of C or better) of all science courses prescribed in the first year of the Dental Hygiene Curriculum Plan.

## HOW TO APPLY

To apply to the program, please visit the Bachelor of Science in Dental Hygiene Apply Now (https://dentistry.hsc.wvu.edu/apply-now/bachelor-of-science-in-dental-hygiene/) page and follow the directions provided. **Applications for the 2026 fall semester are available from August 1, 2025 to February 1, 2026**.

To be considered for the Dental Hygiene Program, applicants must choose Dental Hygiene in the WVU on-line application. Additionally, all applicants, regardless of admission type, must complete all of the Departmental Admission requirements before your application will be reviewed by the Dental Hygiene Admissions Committee.

## DEPARTMENTAL ADMISSION REQUIREMENTS

Please send these documents electronically to the Dental Hygiene Administrative Assistant (lgroover@hsc.wvu.edu).

1. Shadowing forms (https://dentistry.hsc.wvu.edu/media/1673/dental-hygiene-applicant-shadowing-form.pdf) - a minimum of eight hours of direct observation of a registered dental hygienist are required, although more are recommended
2. Shadowing essay – describe the shadowing experience (procedures, patients, communication, infection control, personal protective equipment, etc.)

The most qualified applicants will be invited to interview with the Dental Hygiene Admissions Committee. This personal interview will be conducted in a question/answer format. After the interview, if for any reason the Committee does not feel that the applicant is an acceptable candidate for the Program, they will not be offered admission to the Program. This also applies to those applicants that have been offered provisional admission through the direct admit process. Prior to the interview, applicants must confirm via email (lgroover@hsc.wvu.edu), receipt of the email message from the Department of

Dental Hygiene that they will be attending the scheduled interview session. Failure to respond within 10 working days from the aforementioned email will forfeit further review of your application.

Following the interview with the Dental Hygiene Admissions Committee, successful applicants will be offered conditional acceptance and will receive an email via their MIX account from the Dental Hygiene Admissions Committee outlining the New Student Requirements (https://dentistry.hsc.wvu.edu/students/bachelor-of-science/new-student-requirements/). Final acceptance to the Department of Dental Hygiene at West Virginia University is contingent on successful completion of new student requirements and of the following:

1. Successful completion and submission of all courses currently enrolled and submit all final transcripts.
2. Complete the Criminal Background document. Scan and email this document to Dental Hygiene Administrative Assistant (lgroover@hsc.wvu.edu) as soon as possible to reserve the offered position in the Program.
3. Complete required health evaluation forms and immunizations by August 1st prior to the first semester of the program or an alternative date provided by the Program.
4. Attend WVU New Student Orientation on one of the dates provided by the Dental Hygiene program.
5. Attend the Dental Hygiene Welcome Back/Academic Session event.

If you are not offered a position in the Dental Hygiene Program, you may still be accepted into WVU.

## DEGREE COMPLETION PROGRAM

Registered dental hygienists may be admitted to the Department of Dental Hygiene as a full-time student. Interested dental hygienists **must contact the Department** directly to request consideration and be granted approval to apply for the degree completion program. **Admission is limited by class size** and successful completion of a certificate or associate degree from an accredited dental hygiene program in the United States or Canada does not guarantee entrance into the Program. Lower-level credits may be transferred (see "Suggested Dental Hygiene Curriculum") based on their equivalency to current WVU coursework. Applicants are required to submit official transcripts, a copy of their dental hygiene license and/or proof of successful completion of both national and clinical board exams, minimum of 3.0 overall and science grade point averages, and a personal essay on why you want to complete your baccalaureate degree in Dental Hygiene. Additionally, please submit the previous/current program of study with catalog descriptions of the courses completed. Applicants are responsible for the submission of a complete record package. Applications can be obtained after August 1st of the year preceding application to the program. Please contact the Dental Hygiene office (lgroover@hsc.wvu.edu) for more information about this program.

## Accreditation

The Bachelor of Science in Dental Hygiene program within the School of Dentistry has specialized accreditation through the Commission on Dental Accreditation of the American Dental Association. Since the beginning of the program, it has held full accreditation status.

Click here to view the Suggested Plan of Study (p. 638)

# Bachelor of Science in Dental Hygiene

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 13 |
| Dental Hygiene Major Requirements | | 120 |
| Total Hours | | 133 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF 1, 6, and 7 | | 12 |
| DTHY 191 | First-Year Seminar | 1 |
| Total Hours | | 13 |

## Dental Hygiene Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in BIOL, CHEM, HN&F, MICB, PALM, PCOL, and DTHY courses. | | |
| BIOL 102 | General Biology 2 | 3 |
| BIOL 102L | General Biology 2 Laboratory | 1 |
| CHEM 111 & 111L | Survey of General, Organic, and Biological Chemistry 1 and Survey of Chemistry 1 Laboratory (GEF 2B) | 4 |
| CHEM 112 & 112L | Survey of General Organic Biological Chemistry 2 and Survey of Chemistry 2 Laboratory | 4 |
| COMM 104 | Fundamentals of Public Communication (GEF 5) | 3 |
| HN&F 171 | Introduction to Human Nutrition (GEF 8) | 3 |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| MICB 200 | Medical Microbiology | 3 |
| PALM 107 | Introduction to Human Anatomy and Physiology | 4 |
| PALM 207 | Human Anatomy and Physiology 2 | 4 |
| PALM 309 | Oral Histology | 2 |
| PALM 300 | Introduction to Pathology | 3 |
| PALM 302 | Oral Pathology | 3 |
| PCOL 260 | Pharmacology | 3 |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| PSYC 241 | Introduction to Human Development (GEF 8) | 3 |
| SOC 101 | Introduction to Sociology (GEF 8) | 3 |
| DTHY 101 | Introduction to Dental Hygiene | 2 |
| DTHY 185 | Oral Anatomy | 2 |
| DTHY 186 | Dental Anatomy | 2 |
| DTHY 205 | Theory and Practice of Prevention | 2 |
| DTHY 210 | Dental Radiology | 2 |
| DTHY 211 | Dental Radiology | 1 |
| DTHY 220 | Dental Nursing Techniques | 2 |
| DTHY 225 | Dental Hygiene Techniques | 4 |
| DTHY 226 | Clinical Dental Hygiene | 1 |
| DTHY 300 | Anesthesia for Dental Hygiene | 1 |
| DTHY 350 | Public Health | 2 |
| DTHY 351 | Dental Health Education (Fulfills Writing and Communication Skills Requirement) | 3 |
| DTHY 360 | Dental Materials | 3 |
| DTHY 361 | Expanded Functions | 2 |

| | | |
|---|---|---|
| DTHY 363 | Periodontics 1 | 1 |
| DTHY 364 | Periodontics 2 | 2 |
| DTHY 366 | Technical Expression and Dental Literature | 1 |
| DTHY 370 | Dental Hygiene Clinical Methods | 2 |
| DTHY 372 | Clinical Dental Hygiene 1 | 2 |
| DTHY 374 | Clinical Dental Hygiene 2 | 3 |
| DTHY 378 | Dental Hygiene Teaching Methods | 2 |
| DTHY 402 | Dental Hygiene Ethics and Practice | 1 |
| DTHY 405 | Advanced Clinical Dental Hygiene 1 | 4 |
| DTHY 406 | Advanced Clinical Dental Hygiene 2 | 3 |
| DTHY 407 | Advanced Dental Hygiene Methods 2 | 2 |
| DTHY 440 | Senior Integration Seminar | 1 |
| DTHY 445 | Applied Pharmacology | 1 |
| DTHY 450 | Dental Health Education 2 | 2 |
| DTHY 451 | Dental Health Education 3 | 2 |
| DTHY 478 | Clinical Evaluation | 1 |
| DTHY 490 | Teaching Practicum | 2 |
| DTHY 491 | Professional Field Experience | 4 |
| DTHY 492 | Directed Study | 1 |
| DTHY 495 | Independent Study | 1 |
| DTHY 497 | Research | 1 |
| Community Service Requirement (Please see advisor) | | |
| Total Hours | | 120 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 111 & 111L (GEF 2B) | 4 | BIOL 102 | 3 |
| COMM 104 (GEF 5) | 3 | BIOL 102L | 1 |
| DTHY 191 | 1 | CHEM 112 & 112L | 4 |
| HN&F 171 (GEF 8) | 3 | DTHY 101 | 2 |
| MATH 124 (GEF 3) | 3 | ENGL 101 (GEF 1) | 3 |
| PSYC 101 (GEF 4) | 3 | PALM 107 | 4 |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| DTHY 185 | 2 | DTHY 186 | 2 | DTHY 226 | 1 |
| DTHY 205 | 2 | DTHY 211 | 1 | PCOL 260 (Web) | 3 |
| DTHY 210 | 2 | DTHY 220 | 2 | | |
| PALM 207 | 4 | DTHY 225 | 4 | | |
| MICB 200 | 3 | ENGL 102 (GEF 1) | 3 | | |
| PSYC 241 (GEF 8) | 3 | SOC 101 (GEF 8) | 3 | | |
| | | PALM 309 | 2 | | |
| | 16 | | 17 | | 4 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| DTHY 350 | 2 | DTHY 300 | 1 | DTHY 491 | 4 |
| DTHY 360 | 3 | DTHY 351 | 3 | | |
| DTHY 363 | 1 | DTHY 361 | 2 | | |
| DTHY 366 | 1 | DTHY 364 | 2 | | |

| | | | | |
|---|---|---|---|---|
| DTHY 370 | 2 | DTHY 374 | 3 | |
| DTHY 372 | 2 | DTHY 378 | 2 | |
| PALM 300 | 3 | DTHY 492 | 1 | |
| GEF | 3 | PALM 302 | 3 | |
| | 17 | | 17 | 4 |

**Fourth Year**

| Fall | Hours | Spring | Hours | |
|---|---|---|---|---|
| DTHY 402 | 1 | DTHY 406 | 3 | |
| DTHY 405 | 4 | DTHY 407 | 2 | |
| DTHY 440 | 1 | DTHY 451 | 2 | |
| DTHY 445 | 1 | DTHY 490 | 2 | |
| DTHY 450 | 2 | or Advisor Approved Elective | | |
| DTHY 478 | 1 | GEF | 3 | |
| DTHY 495 | 1 | | | |
| DTHY 497 | 1 | | | |
| | 12 | | 12 | |

Total credit hours: 133

# Major Learning Outcomes

## BACHELOR OF SCIENCE IN DENTAL HYGIENE (BSDH)

**Program Goals:**

Goal 1 Provide a high-quality program that prepares dental hygienists to:

- Model professional, ethical, and inclusive behavior in all aspects of patient care, community engagement, and personal conduct.
- Foster a humanistic culture, open communication, and respect for diversity for all students, faculty, staff, and students.
- Apply critical thinking to integrate current scientific principles and technology with the provision of evidence-based, comprehensive oral health care.
- Perform to the level of clinical competency those legally approved oral health care services as defined by the West Virginia State Board of Dental Examiners and laboratory competency for oral health care services legally permitted in other states.
- Coordinate and administer oral health services for all patients including disabled, medically compromised, marginalized population groups, etc. in a variety of practice settings.
- Engage in intra- and interprofessional collaboration with community leaders and health care professionals to promote oral health awareness and manage the oral health needs of West Virginia and beyond through participation in professional organizations and service activities.
- Provide didactic and clinical instruction in allied dental education programs.
- Pursue professional development through self-study, continuing education, research, additional health care programs/degrees, and/or advanced/graduate education at the masters or doctoral levels.

Goal 2 Recruit, admit, and retain highly qualified students with diverse experiences and perspectives.

Goal 3 Create an environment conducive to faculty promotion, retention, and personal and professional growth.

**Program Competencies:**

Professional, Respectful Conduct for a Diverse and Ethical Practice

1. PRDE1 Demonstrate the concepts of professionalism, ethics, law, and practice regulations to the provision of oral health care services and personal conduct.

2. PRDE2 Utilize mindfulness to explore inequities surrounding social justice, diversity, and inclusion to embrace respectful behavior in interpersonal communications, conduct, and patient care.

3. PRDE3 Integrate awareness of mental, emotional, physical, and spiritual health pertaining to self and others' overall well-being.

4. PRDE4 Investigate career path opportunities within the scope of the dental hygiene profession.

5. PRDE5 Appreciate lifelong learning and personal growth within career development.

Interprofessional Educational Opportunities

6. IPEO1 Engage in intra- and interprofessional educational opportunities that foster a collaborative learning environment to appropriately address patient/client's health care needs.

Dental Hygiene Patient Care

7. DHPC1 Integrate general education, biomedical, dental hygiene, and dental sciences concepts to the provision of oral health care services.

8. DHPC2 Employ the dental hygiene process of care which includes assessment, planning, implementation, and evaluation components that are both evidence-based and patient/client-centered.

9. DHPC3 Utilize critical thinking skills to personalize dental hygiene care with appropriate modification of delivery services to children, adolescents, adults, geriatrics, and patients/clients with special needs.

10. DHPC4 Accurately identify, develop, and implement individualized dental hygiene treatment plans based on clients' periodontal classification which may include moderate to severe periodontal disease.

11. DHPC5 Perform evidence-based and patient/client-centered dental hygiene supportive treatment and expanded function procedures as permissible in West Virginia and other states' dental hygiene scope of practice.

12. DHPC6 Recognize medical and dental emergencies that may be encountered in dental hygiene practice and provide appropriate interventions, including basic life support.

13. DHPC7 Enhance social awareness, knowledge, and skills through enriching clinical experiences involving dental specialties, hospital dentistry, underserved populations, innovation center for education and technology, and other learning opportunities.

Tobacco Treatment Specialist Certification

14. TOBC1 Obtain tobacco treatment specialist certification utilizing curricular content and the 5 A's (Ask, Advise, Assess, Assist, & Arrange) to execute evidence-based tobacco/vaping cessation strategies for all tobacco users.

Community Dental Health Coordinator Certification

15. CDHC1 Obtain Community Dental Health Coordinator certification utilizing curricular content, interprofessional communication, and participation/ organization of community health service projects.

Community Health Promotion

16. CMHP1 Assess, plan, implement, and evaluate community-based oral health programs to promote health and prevent disease among diverse population groups.

17. CMHP2 Encourage a culture of action through outreach, community service, and experiential learning experiences.

Critical Thinking and Research

18. CTRS1 Utilize critical thinking skills to evaluate scientific literature and new innovations for implementation into dental hygiene profession.

19. CTRS2 Design, execute, analyze, and present a research project utilizing the scientific method.

Dental Hygiene Educational Methods

20. DHED1 Develop didactic, clinical, and laboratory course materials through integration of educational methodologies for application within allied dental education programs.

# Engineering and Mineral Resources- Benjamin M. Statler College of

E-mail: statler-info@mail.wvu.edu (statler-info@mail.wvu.edu)

## Degrees Offered

- Bachelor of Science in Aerospace Engineering (B.S.A.E.)*
- Bachelor of Science in Biomedical Engineering (B.S.Bm.E.)*
- Bachelor of Science in Chemical Engineering (B.S.Ch.E.)*
- Bachelor of Science in Civil Engineering (B.S.C.E.)*
- Bachelor of Science in Computer Engineering (B.S.Cp.E.)*
- Bachelor of Science in Computer Science (B.S.C.S.)#
- Bachelor of Science in Cybersecurity (B.S.)#
- Bachelor of Science in Electrical Engineering (B.S.E.E.)*
- Bachelor of Science in Engineering Technology (B.S.)
- Bachelor of Science in Environmental Engineering (B.S.)
- Bachelor of Science in Industrial Engineering (B.S.I.E.)*
- Bachelor of Science in Mechanical Engineering (B.S.M.E.)*
- Bachelor of Science in Mining Engineering (B.S.Min.E.)*
- Bachelor of Science in Petroleum and Natural Gas Engineering (B.S.P.N.G.E.)*
- Bachelor of Science in Robotics Engineering (B.S.)

* Accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
# Accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.

## Dual Degrees Offered

- Aerospace Engineering and Mechanical Engineering
- Civil Engineering and Mining Engineering
- Computer Engineering and Computer Science
- Computer Engineering and Electrical Engineering

## Nature of Program

The Benjamin M. Statler College of Engineering and Mineral Resources (Statler College) undergraduate degree programs are administered through seven academic departments:

- Chemical and Biomedical Engineering
- Lane Department of Computer Science and Electrical Engineering
- Industrial and Management Systems Engineering
- Mechanical, Materials, and Aerospace Engineering
- Mining Engineering
- Petroleum and Natural Gas Engineering
- Wadsworth Department of Civil and Environmental Engineering

All undergraduate programs are recognized by industry as providing excellent preparation for the engineering profession. They are planned to give students a balanced background in the basic sciences, engineering sciences, engineering analysis, the humanities, and the social sciences. In addition, each curriculum features creative programs in engineering synthesis and design. This blend of science and practice gives students the tools to solve today's problems and the background to develop the expertise needed for their future success in the profession. Our graduates enjoy a multitude of career opportunities in our world's most vital industries.

The Statler College is committed to providing high-quality educational programs for all undergraduate students, so that graduates of the College will:

- Be proficient in their chosen field
- Develop and maintain professional ethics and understand the comprehensive impact of engineering solutions on a diverse, interconnected, and global society
- Continue in their education on a life-long basis through both formal study and self-directed inquiry

The faculty uses modern teaching techniques including programmed material, guest lectures by visiting authorities, team projects, and in-house industrial assignments to provide a breadth of training experiences. Teaching laboratories are equipped with modern instruments, machines, and tools to improve and enrich the student's understanding of engineering principles and problems. Numerous computer laboratories and facilities are available for classroom work.

College programs are geared to provide graduates with a sound background upon which to enter the industrial workforce or to pursue graduate study in engineering, medicine, law, or business. A number of industries in West Virginia and the region provide meaningful and financially rewarding summer employment for students. These training opportunities often lead to professional positions upon graduation.

## Curricula

During the first two years, students acquire fundamental knowledge in mathematics, basic sciences, and introductory engineering topics. Engineering design, computer-based experience, and communication skills are integrated throughout the curriculum. In the third and fourth years, the curriculum builds upon the fundamental engineering concepts toward an integrated educational experience, preparing students to pursue a successful professional career and life-long learning. Technical electives allow students to develop depth in a specialty area or breadth among several fields. Study in the humanities and social sciences play an integral part of our programs, enabling students to understand and appreciate the technological, social, and cultural changes that challenge the world and providing the context of our ethical and responsible duties to society.

## Time to Completion of Degree

All undergraduate, single degree programs in the college are structured so that they can be completed in eight semesters of full-time study if a student starts in Calculus I (MATH 155).

## Degree Requirements

To be eligible to receive a bachelor's degree, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum grade point average of 2.00 for all courses taken at WVU, a major grade point average of 2.00 or better in courses completed within the student's major, and a minimum overall grade point average of 2.00. A maximum of one math or science lecture course with a grade of D+, D, or D- may apply toward a Statler College degree. All course attempts are included in the major GPA calculation according to university policy.

Graduating students are expected to complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

## Cooperative (Co-op) Education and Internship Programs

The co-op opportunity is available to any student with a minimum 2.25 GPA interested in pursuing a degree in any major offered by the Statler College. The professional development experience combines practical on-the-job experience with the classroom education of a four-year engineering curriculum. Co-ops are arranged with an employer for various work periods and may involve one or more academic semesters and/or summer terms. Internships are professional work experiences which generally occur during summer terms. Participation in internships, co-ops, or both is strongly recommended of all Statler College students.

## Learning Abroad Programs

Students are strongly encouraged to prepare for their careers through learning abroad. The college participates in numerous international exchange programs for undergraduates, as well as the International Student Exchange Program (ISEP) managed through the WVU Education Abroad Office. There are short-term classes led by WVU faculty, semester and year-long exchange programs, study abroad programs, and service learning opportunities via Engineers Without Borders. The college strongly encourages students to participate in these unique study abroad opportunities. Individual program details vary, but in general, provide Statler College students the opportunity to take part in a study abroad experience that may be for a summer, semester, or full academic year taking courses that count toward their degree so graduation need not be delayed. Students are encouraged to visit the WVU Education Abroad website for more detailed information.

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## ADMINISTRATION

### DEAN

- Pedro J. Mago - Ph.D. (University of Florida)

### ASSOCIATE DEAN FOR ACADEMICS AND STUDENT PERFORMANCE

- Robin S. Hissam - Ph.D. (University of Delaware)

### ASSOCIATE DEAN OF RESEARCH

- Xingbo Liu - Ph.D. (University of Science & Technology, Beijing)

### ASSOCIATE DEAN FOR STUDENT, FACULTY, AND STAFF ENGAGEMENT

- Cerasela Zoica Dinu - Ph.D. (Dresden University of Technology, Germany)

### ASSISTANT DEAN FOR ADMINISTRATION

- R. Jason Dean - M.A. (West Virginia University)

## Admissions for 2026-2027

Statler College admission is based on high school grade point average and math placement. Students must also meet all other WVU admission requirements (https://admissions.wvu.edu/). Once admitted, students work with their academic advisor to create their degree plan and semester schedules based on initial math placement and specific degree requirements. Each degree plan is tailored to the level of academic preparation of the student to maximize the opportunity for success while meeting the requirements of their intended major.

### ENGINEERING AND COMPUTING PROGRAMS

Incoming students who achieve a 3.00 cumulative high school GPA or meet entry requirements to College Algebra (MATH 126) will be admitted.

- Students applying to engineering disciplines will be admitted to the Statler College engineering program and will matriculate to their major of choice after completing core courses. See details below in Matriculation into Engineering Majors.
- Students applying to Computer Science or Cybersecurity will be admitted directly into their major.

### ENGINEERING TECHNOLOGY PROGRAM

Any incoming students entering under regular or transfer admissions that meet WVU admission requirements (https://admissions.wvu.edu/) are directly admitted into the program.

### TRANSFER STUDENTS

Any incoming transfer student, internal or external to WVU, will be admitted once they meet the WVU Math Department's requirements of starting in College Trigonometry (MATH 128) or higher and have a cumulative 2.25 GPA or higher.

Any student transferring in with less than 24 credit hours and who do not meet the above transfer criteria will be evaluated based on the regular admission criteria.

### MATRICULATION INTO ENGINEERING MAJORS

Students can matriculate into the engineering discipline of their choice once they have successfully completed the following classes with a C- or better, and have a cumulative 2.00 GPA.

- MATH 155
- ENGR 101
- ENGR 191

## Certificate Programs

- Biomedical Engineering (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/biomedicalengineering/)
- Global Competency (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/globalcompetency/)
- Mine Safety Practices and Health (http://catalog.wvu.edu/undergraduate/undergraduatecertificate/minesafetypracticesandhealth/)

## Minors

- Aerospace Engineering (http://catalog.wvu.edu/undergraduate/minors/aerospace_engineering/)
- Biomedical Engineering (http://catalog.wvu.edu/undergraduate/minors/biomedicalengineering/)
- Biometric Systems Engineering (http://catalog.wvu.edu/undergraduate/minors/biom/)
- Chemical Engineering (http://catalog.wvu.edu/undergraduate/minors/chemical_engineering/)
- Computer Science (http://catalog.wvu.edu/undergraduate/minors/cs/)
- Cybersecurity (http://catalog.wvu.edu/undergraduate/minors/cybersecurity/)

- Engineering in Society (http://catalog.wvu.edu/undergraduate/minors/engineeringinsociety/)
- Engineering Leadership (http://catalog.wvu.edu/undergraduate/minors/engineeringleadership/)
- Mechanical Engineering (http://catalog.wvu.edu/undergraduate/minors/mechanical_engineering/)
- Robotics Engineering (http://catalog.wvu.edu/undergraduate/minors/robotics_engineering/)

## In this section:


- Procedures and Guiding Principles for Handling Transfer/Transient Credit (p. 644)
- Smart Device Policy (p. 645)
- Sanction Policy for Academic Integrity Offenses (p. 645)
- University Probation and Suspension (p. 645)
- Minimum Statler Academic Standards (p. 645)
- Statler College Dismissal Policy (p. 645)
- Graduation Requirements (p. 646)


## Procedures and Guiding Principles for Handling Transfer/Transient Credit

The Statler College strives to manage student transfer/transient credits in a fair, consistent, and uniform manner relative to students in the College who do not seek transfer/transient course credit and to exercise due diligence with meeting ABET prerequisite and curricular requirements for transfer credit. The College has adopted the following procedures/guiding principles to deal with transfer/transient credit issues.

**Credit Transfer Procedure**

Chemistry, engineering, geology, math, or physics courses transferred to WVU for consideration of academic credit in the Statler College will be transferred as "Open Credit" (e.g., MATH 000, 1TC, 2TC, etc). The “open credit” will be reviewed to determine if it meets the academic requirements of the College and if so, processed by a course substitution action. The only exceptions to this policy will be if a student is transferring into the College:

- Advanced Placement Program (AP) credit
- International Baccalaureate (IB) credit
- College Level Examination Program (CLEP) credit
- Credit based on an approved Transient Approval Form by the dean or his designee before the course was taken
- Credit from a college or university with which Statler College has an approved articulation agreement
- Credit from a college or university listed in the University's Transfer Credit Database as directly equivalent to coursework at WVU

**Guidelines for College Approval of Requests for Transient Course Credit**

Students may request up to nine (9) credits of coursework to be taken in transient for use toward the degree requirements, defined to include mathematics, science, and Statler College courses. Students may request up to eighteen (18) credits of coursework in total, which includes English, Economics, general education elective courses, and free electives. For a request to take required course in transient, the student must present sufficient evidence that a course requested to be taken in transient is equivalent to the specified WVU course and allow for ample time for review.

An Undergraduate Transient Application will typically be approved if:

- The student has met the rank, prerequisite/co-requisite courses, etc., to take the course at WVU
- The prerequisite courses have been completed with a minimum grade of C- or better
- The requested course has the same number of credit hours and pre or co-requisites as the WVU course or has otherwise been deemed academically equivalent by Statler College

An Undergraduate Transient Application will not be approved if:

- The student has previously earned a D, F, or W in the equivalent course at WVU
- The student is currently enrolled at WVU to take coursework in the same term/semester in which they are applying to be a transient student at another institution.

Meeting the guidelines for a transient application does not guarantee approval of the transient application. The associate dean for academic affairs has the right to set conditions more stringent than those set forth in these guidelines, as well as the right to limit transient course credit. Transient requests for summer session will be reviewed after April 1.

**Courses Taken by Learning Abroad**

Courses taken on an approved learning abroad experience are exempt from the 9/18 credit limit of transient work. Students are encouraged to work with the Statler College Advising Center to develop an appropriate course plan in advance of the learning abroad experience. Courses should be reviewed for content and suitability for a reasonable course substitution to meet program requirements.

**Course Substitution Approval Process**

.A course designated as "open credit" can be petitioned for specific course credit through the established course substitution approval process. The student must present sufficient evidence that the course is equivalent to the specified WVU course. A course syllabus and transcript showing the student's grade in that course must be presented with the application for the course to be reviewed to determine equivalency. Since this review process may take significant time to complete, credit for courses presented for review within two weeks of the beginning of a semester may not be awarded credit in time for the student to register for a subsequent course for which the transfer course is a prerequisite. To be approved to apply toward a Statler College degree, courses taken must have an earned grade of C- or better.

For external transfer students that are sophomore level or above, have earned a C- or better in MATH 155, MATH 156, at least two approved laboratory science courses and have completed at least three credit hours in a discipline specific course, then they may request to take an approved elective (or approved transfer credit) as a substitute for either ENGR 101 or 102 or the combination.

## Smart Device Policy

Students are encourage to have their own laptops. The Statler College will require starting in Fall 2025 that its entering freshmen and transfer students to have their own laptops for use in classes and projects. Suggested computer specification can be found here (https://it.wvu.edu/services/student-resources/student-technology-faq/).

The use of programmable calculators or smart devices (including smart-phones, smart watches, tablets, laptops, cameras, wearable devices, etc.) on exams and quizzes prohibited unless specifically indicated by the instructor. Students are expected to have webcams for their laptops or desktop computers.

## Sanction Policy for Academic Integrity Offenses

Graduates of the Statler College have the obligation to serve humanity with integrity, fairness, tolerance, and respect. Computing and engineering professionals are held to the highest standard of conduct. Academic integrity is fundamental to meeting this obligation and standard of conduct. Academic integrity offenses are processed through the Office of Academic Integrity, and sanctions are determined by that office in consultation with faculty members and college administrators.

## University Probation and Suspension

Students with a cumulative grade point average below 2.00 in all University coursework will be subject to probation and suspension by the University. Please refer to the Undergraduate Academic Probation and Suspension Policy found in the Undergraduate Information section of this catalog for further information on WVU probation and suspension.

## Minimum Statler Academic Standards

The Statler College has established academic standards to ensure the quality of our programs, and to make sure students are making adequate progress towards their degree.

- A maximum of one math or science lecture course with a grade of D+, D, or D- may apply toward a Statler College degree.
- Students must maintain minimum GPAs (Statler, WVU, and overall or cumulative) of 2.00.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall or cumulative GPA is computed based on all work taken at WVU and transfer work.

Students who fail to meet any of the above standards are not eligible for graduation.

## Statler College Dismissal Policy

Students may be placed on academic contract for a variety of academic progress concerns such as failure to progress within their major, petitioning for an additional attempt within a course, etc. Students become eligible for dismissal from the Statler College if they fail to meet the requirements of their academic contract.

While dismissed, students will not be able to register for any Statler College specific courses. A student who has been dismissed for academic performance must petition to be readmitted to the Statler College; the decision to readmit will be on a case-by-case basis and is not guaranteed. A student who has preregistered for classes and is subsequently dismissed shall have their registration in Statler College courses automatically canceled.

Dismissal from Statler College due to academic integrity offenses is a permanent dismissal. If a student is readmitted to the Statler College and subsequently dismissed a second time, they may not return to the Statler College.

## Graduation Requirements

To be eligible to receive a bachelor's degree, a student is required to complete satisfactorily the number of semester hours of work as specified in the program curriculum. Students must achieve a minimum GPA of 2.00 for all courses taken at WVU, a Statler GPA of 2.00, and a cumulative GPA average of 2.00. A maximum of one math or science lecture course with a grade of D+, D, or D- may apply toward a Statler College degree. Course attempts are included in the major GPA calculation according to university policy.

Graduating students are expected to complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

## Accreditation

ABET accredits college and university programs in the disciplines of applied and natural science, computing, engineering and engineering technology at the associate, bachelor and master degree levels. With ABET accreditation, students, employers and society can be confident that a program meets the quality standards that produce graduates prepared to enter a global workforce.

The following programs within the Benjamin M. Statler College of Engineering and Mineral Resources are accredited by the Computing Accreditation Committee (CAC) of ABET, http://www.abet.org.

- Computer Science
- Cybersecurity

The following programs within the Benjamin M. Statler College of Engineering and Mineral Resources are accredited by the Engineering Accreditation Commission (EAC) of ABET, https://www.abet.org.

- Aerospace Engineering
- Biomedical Engineering
- Biometric Systems Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering
- Mining Engineering
- Petroleum & Natural Gas Engineering

# Department of Chemical and Biomedical Engineering

## Degrees Offered

- Bachelor of Science in Biomedical Engineering (B.S.Bm.E.)
- Bachelor of Science in Chemical Engineering (B.S.Ch.E.)
- Accelerated Bachelor's/Master's Program in Biomedical Engineering
- Accelerated Bachelor's/Master's Program in Chemical Engineering

## Nature of the Programs

The Department of Chemical and Biomedical Engineering offers undergraduate degrees in chemical engineering (ChE) and biomedical engineering (BMEG). Chemical engineers focus on processes that convert raw materials such as crude oil, biomass, coal and natural gas into value-added finished products such as plastics, paints, detergents and pharmaceuticals. Biomedical engineers are trained to work at the interface of engineering and biomedical sciences, and they focus on developing engineering skills and applying them to materials, processes and procedures used in medicine and biology. Both degree programs require a strong background in chemistry, mathematics, and physics.

The chemical engineering curriculum is structured uniquely with a heavy emphasis on design, beginning in the sophomore year. Graduates with a BSChE degree are prepared for positions in production, product and process development, sales and marketing, management and also research. There is a large concentration of chemical industry in the area, and the ChE program benefits from interactions with industrial practitioners.

The biomedical engineering program offers significant flexibility of study through a variety of electives. With the participation of faculty from several engineering departments, students learn about cells and tissues but also topics such as imaging and mechanics. Students are exposed to both engineering and clinical aspects of the field through interactions with faculty both in engineering and WVU Health Sciences Center. Graduates with a BSBmE degree are prepared for solving the health-related problems and improving the quality of life of the aging population within the state and the nation.

Students in both programs are also prepared for graduate school in engineering and for professional schools in business, law and medicine.

# FACULTY

## CHAIR

- Srinivas Palanki - Ph.D. (University of Michigan)
  Process systems engineering, Chemical process control, Bioengineering

## PROFESSORS

- Debangsu Bhattacharyya - Ph.D. (Clarkson University)
  GE Plastics Material Engineering Professor. Artificial intelligence and machine learning, Biomimetic and other advanced control Nonlinear state estimation, Condition monitoring, Sensor placement, Bayesian analysis, Multi-scale dynamic modeling, Fuel cells and electrolyzers, Carbon caputre, H2 production, Biomass conversion, and energy systems.
- Zoica Cerasela Dinu - Ph.D. (Max Planck Inst of Molecular Cell Biology & Genetics & Dresden University of Technology)
  Associate Dean for Student, Faculty and Staff Engagement. Nanomaterials, Bionanotechnology, Biomimetics, Catalysis and Biocatalysis
- Pradeep Fulay - Ph.D. (University of Arizona)
  Advanced electronics, Magnetic materials and devices, Flexible electronics, Synthesis and processing of nanomaterials
- Rakesh Gupta - Ph.D. (University of Delaware)
  Berry Professor. Polymer processing, Rheology, Non-Newtonian fluid mechanics, Composite materials
- John (Jianli) Hu - Ph.D. (Tsinghua University)
  Statler Chair Professor. Catalysis and Reaction Engineering, Utilization of Natural Gas, CO2 and Biomass
- David J. Klinke - Ph.D. (Northwestern University)
  Systems Biology, Kinetics, Cellular Signal Transduction Pathways, Immunology, Mathematical Modeling, Bioengineering
- Fernando V. Lima - Ph.D. (Tufts University)
  Process design and operability, Model-based control and Optimization, State estimation and process identification, Modular energy systems and sustainability

## ASSISTANT PROFESSORS

- Margaret F. Bennewitz - Ph.D. (Yale University)
  Biomedical imaging, Fluorescence intravital lung microscopy, MRI contrast agents, Nano drug delivery systems, Microfluidics, Tumor microenvironment, Cancer metastasis, Toxicology
- Stephen M. Cain - Ph.D. (University of Michigan)
  MEMS inertial sensor applications, Wearable sensor applications, Real-world biomechanics, Upper extremity biomechanics, Human gait, Sports biomechanics, Experimental methods, Bicycle dynamics, Medication adherence
- Moriah Katt - Ph.D. (Johns Hopkins University)
  Blood-brain barrier, Tissue engineering, Stroke, Drug delivery, Stem cells
- Wenyuan Li - Ph.D. (West Virginia University)
  Solid state ionics, Solid oxide fuel/electrolysis cells, High temperature electrochemistry, Shale gas conversion and utilization, CO2 utilization
- Oishi Sanyal - Ph.D. (Michigan State University)
  Membrane for water treatment and desalination, Self-assembly based surface modification, Molecular sieving materials, Natural gas and Flue gas purification
- Soumya K. Srivastava - Ph.D. (Mississippi State University)
  Point-of-care (POC) medical diagnostic platforms and environmental bio-separations using electrokinetics, Transport phenomena, Fluid dynamics, and Dielectric spectroscopy
- Yuhe Tian - Ph.D. (Texas A&M University)
  Process systems engineering, Computer-aided process intensification, Process synthesis and optimization, Multi-scale sustainable energy systems, Hybrid mechanistic/data-driven modeling
- Yuxin Wang - Ph.D. (Chinese Academy of Science)
  Plastic upcycling, Natural gas and CO2 utilization, Biofuel, and Catalysis

### TEACHING PROFESSOR

- Robin S. Hissam - Ph.D. (University of Delaware)
  Associate Dean of Academics and Student Performance. Biomaterials, Polypeptides, Drug delivery, Bioengineering and materials science

### TEACHING ASSISTANT PROFESSOR

- Jeremy S. Hardinger - Ph.D. (West Virginia University)
- Anika Pirkey - Ph.D. (West Virginia University)

### PROFESSORS EMERITUS

- Eung H. Cho - Ph.D. (University of Utah)
  Mineral processing, Leaching, Solvent extraction, Environmental science
- Eugene V. Cilento - Ph.D. (University of Cincinnati)
  Physiological Transport Phenomena, Biomedical Engineering, Image Analysis, Mathematical Modeling
- Dady B. Dadyburjor - Ph.D. (Delaware)
  Catalysis, Reaction Engineering
- Edwin L. Kugler - Ph.D. (Johns Hopkins)
  Catalysis, Adsorption, Coal Liquefaction
- Joseph A. Shaeiwitz - Ph.D. (Carnegie-Mellon)
  Design, Design Education, Outcomes Assessment
- Alfred H. Stiller - Ph.D. (University of Cincinnati)
  Physical/inorganic/solution chemistry, Coal liquefaction, Carbon science
- Charter D. Stinespring - Ph.D. (West Virginia University
  Semiconductor Growth and Etching, Surface Kinetics, Thin Films, Electronic Materials
- Richard Turton - Ph.D. (Oregon State University)
  WVU Bolton Professor, ,P.E.; Process systems engineering, Particle and powder technology, Chemical process design
- Ray Y. K. Yang - Ph.D. (Princeton)
  Biochemical and Chemical Engineering, Nonlinear Dynamics
- John W. Zondlo - Ph.D. (Carnegie Mellon University)
  Coal Enhancement and Utilization, Carbon Science, Fuel Cells

# Biomedical Engineering, B.S.Bm.E.

## Degree Offered

- Bachelor of Science in Biomedical Engineering (B.S.Bm.E.)

## Nature of the Program

The biomedical engineering discipline is among the fastest growing engineering disciplines due to the rapid advancement of medical technologies and treatment and diagnosis strategies; in fact, many are claiming this century as the one that will revolutionize the biological sciences. These advancements will provide immense benefits for society globally. The biomedical engineering curriculum is designed to give graduates a broad background in the areas of biomedical engineering, including biomaterials, biomechanics and biomedical imaging. Students have the ability to design a set of technical electives based on interest and career aspirations.  The goal for these electives is to enhance a student's knowledge in one or more of the focus areas so they can be prepared for graduate school, any professional school, or a job in a specific industry. The Bachelor of Science degree in Biomedical Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Bioengineering and Biomedical Engineering.

## Program Educational Objectives

- Graduates will be engaged in their professional careers and/or post graduate training as demonstrated by their abilities to identify and solve important biomedical engineering problems, develop and implement new and valuable ideas with potential applications to healthcare, and to engage in lifelong learning opportunities.
- Graduates will be able to work competitively in diverse professional environments as demonstrated by their abilities to work on teams and independently, to provide leadership, and to communicate effectively to a variety of audiences.
- Graduates will behave professionally and ethically, be committed to responsible safety practices, and articulate the societal impact of their work.

Click here to view the Suggested Plan of Study (p. 652)

# Curriculum in Biomedical Engineering

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Biomedical Engineering degree:

- Complete a minimum of 127 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 46 |
| Biomedical Engineering Program Requirements | | 57 |
| Total Hours | | 127 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| Choose one of the following: | | 4 |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory (GEF 8) | |
| BIOL 101<br>& 101L<br>& BIOL 102<br>& BIOL 102L | General Biology 1<br>and General Biology 1 Laboratory<br>and General Biology 2<br>and General Biology 2 Laboratory | |
| BIOL 235 | Human Physiology | 3 |
| or BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| CHEM 115<br>& 115L<br>& CHEM 116<br>& CHEM 116L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory<br>and Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 8 |
| CHEM 233 | Organic Chemistry 1 | 3 |
| CHEM 233L | Organic Chemistry 1 Laboratory | 1 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | 4 |
| STAT 215 | Introduction to Probability and Statistics ** | 3 |
| or IENG 213 | Engineering Statistics | |
| Total Hours | | 46 |

## Biomedical Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| BMEG 201 | Introduction to Biomedical Engineering | 4 |
| BMEG 310 | Biomedical Imaging | 3 |
| BMEG 230 | Numerical Methods in Biomedical Engineering | 3 |
| BMEG 311 | Biomaterials | 3 |
| BMEG 315 | Transport Phenomena in Biological Systems | 4 |
| BMEG 340 | Biomechanics | 4 |
| BMEG 321 | Thermodynamics and Kinetics for Biomedical Engineering | 3 |
| BMEG 420<br>& 420L | Biomedical Instrumentation<br>and Biomedical Instrumentation Laboratory | 4 |
| BMEG 455/455S | Biomedical Senior Design 1 (Fulfills Writing and Communication Skills Requirement) | 4 |
| BMEG 456S | Biomedical Senior Design 2 | 3 |
| EE 221 | Introduction to Electrical Engineering | 3 |
| EE 221L | Introduction to Electrical Engineering Laboratory | 1 |
| **Technical Electives (18 Credit Hours)** | | |
| Science Electives: Choose at least 6 credit hours from the following: | | 6 |
| AGBI 410 | Introductory Biochemistry | |
| AGBI 410L | Introduction to Biochemistry Laboratory | |
| BIOL 107 | Biotechnology and Society | |
| BIOL 219<br>& 219L | Cellular and Molecular Biology<br>and Cellular & Molecular Biology Laboratory | |
| BIOL 302 | Biometry | |
| BIOL 324 | Molecular Genetics | |
| BIOL 324L | Molecular Genetics Laboratory | |
| BIOL 348 | Neuroscience 1 | |
| BIOL 349 | Neuroscience 2 | |
| BMM 339 | Introduction to Human Biochemistry | |
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory | |
| CHEM 234 | Organic Chemistry 2 | |
| CHEM 234L | Organic Chemistry 2 Laboratory | |
| CHEM 310<br>& 310L | Instrumental Analysis<br>and Instrumental Analysis Laboratory | |
| CHEM 335<br>& 335L | Methods of Structure Determination<br>and Methods of Structure Determination Laboratory | |
| CHEM 341<br>& 341L | Physical Chemistry: Brief Course<br>and Physical Chemistry: Brief Course Laboratory | |
| CHEM 462 | Biochemistry 2 | |
| CHEM 462L | Biochemistry 2 Laboratory | |
| CHPR 332 | Safety Education Principles and Content | |
| FIS 314<br>& 314L | Introduction to Microscopy<br>and Introduction to Microscopy Laboratory | |
| PALM 205 | Introduction to Human Anatomy | |
| PHIL 331 | Health Care Ethics | |
| PHYS 211 | Introduction to Mathematical Physics | |
| PHYS 314 | Introductory Modern Physics | |
| PHYS 321 | Optics | |
| Engineering Electives: Choose at least 9 credit hours from the following: | | 9 |
| BMEG 480 | Cellular Machinery | |
| BMEG 481 | Applied Bio-Molecular Modeling | |
| BMEG 482 | Introduction to Tissue Engineering | |
| BMEG 497 | Research | |

| | |
|---|---|
| BMEG 498 | Honors Research |
| CHE 461 | Polymer Science and Engineering |
| CHE 462 | Polymer Processing |
| CHE 531 | Mathematical Methods in Chemical Engineering |
| CPE 271 | Introduction to Digital Logic Design |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory |
| EE 223 | Electrical Circuits |
| EE 251 | Digital Electronics |
| EE 327 | Signals and Systems 1 |
| EE 329<br>& 329L | Signals and Systems 2<br>and Signals and Systems Laboratory |
| EE 455 | Introduction to Microfabrication |
| EE 465 | Introduction to Digital Image Processing |
| EE 528 | Biomedial Microdevices |
| IENG 213 | Engineering Statistics ** |
| IENG 360 | Human Factors Engineering |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory |
| MAE 241 | Statics |
| MAE 242 | Dynamics |
| MAE 243 | Mechanics of Materials |
| MAE 343 | Intermediate Mechanics of Materials |
| MSEN 350 | Materials Science |
| Other Elective: Choose at least 3 credit hours from the Science or Engineering Electives | 3 |
| Total Hours | 57 |

**

IENG 213 cannot fulfill both the statistics requirement and a technical elective.

## Suggested Plan of Study

It is important for students to take courses in the order specified in the Plan of Study as much as possible; all prerequisites and concurrent requirements must be observed.  A typical B.S.Bm.E degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115<br>& 115L (GEF 8) | 4 | CHEM 116<br>& 116L | 4 |
| CHEM 115<br>& 115L (GEF 2B) | 4 | ENGL 101 (GEF 1) | 3 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | MATH 156 (GEF 8) | 4 |
| MATH 155 (GEF 3) | 4 | PHYS 111<br>& 111L (GEF 8) | 4 |
| | 15 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMEG 201 | 4 | BIOL 235 | 3 |
| EE 221 | 3 | BMEG 230 | 3 |
| EE 221L | 1 | CHEM 233 | 3 |
| ENGL 102 (GEF 1) | 3 | CHEM 233L | 1 |
| PHYS 112<br>& 112L | 4 | MATH 261 | 4 |

| | | | |
|---|---|---|---|
| MATH 251 | 4 | STAT 215 | 3 |
| | 19 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMEG 311 | 3 | BMEG 310 | 3 |
| BMEG 321 | 3 | BMEG 315 | 4 |
| BMEG 420 & 420L | 4 | BMEG 340 | 4 |
| GEF Course 4 | 3 | GEF Course 5 | 3 |
| | | GEF Course 6 | 3 |
| | 13 | | 17 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMEG 455 & 455S | 4 | BMEG 456S | 3 |
| Science Technical Elective | 3 | Science Technical Elective | 3 |
| Engineering Technical Elective | 3 | Technical Elective | 3 |
| GEF Course 7 | 3 | Two Engineering Technical Electives | 6 |
| | 13 | | 15 |

Total credit hours: 127

## Accelerated Program

- BSBME Biomedical Engineering and MSBME Biomedical Engineering (p. 653)

## Accelerated Bachelor's/Master's in Biomedical Engineering

Students must fulfill all degree requirements for the B.S.BmE in Biomedical Engineering and all the requirements of the M.S.BmE in Biomedical Engineering. Students must also meet all the requirements of the ABM.

### ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 127 |
| Shared Bachelor's/Master's Coursework | | 12 |
| Graduate Coursework | | 18 |
| Total Hours | | 157 |

### SHARED COURSEWORK CURRICULUM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Courses completed must be at the 400 or 500 level. At least one course must be at the 500 level. | | |
| See BSBME and MSBME for list of elective course options. | | |
| **Courses:** | | |
| Engineering Technical Elective | | 3 |
| Science Technical Elective | | 3 |
| Science Technical Elective | | 3 |
| Technical Elective | | 3 |
| Total Hours | | 12 |

### SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as much as possible; all prerequisite and concurrent requirements must be observed. A typical ABM B.S.Bm.E.. & M.S.Bm.E. degree program completes degree requirements in five year is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115 & 115L (GEF 8) | 4 | CHEM 116 & 116L | 4 |
| CHEM 115 & 115L (GEF 2B) | 4 | ENGL 101 (GEF 1) | 3 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | MATH 156 (GEF 8) | 4 |
| MATH 155 (GEF 3) | 4 | PHYS 111 & 111L (GEF 8) | 4 |
| | 15 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMEG 201 | 4 | BIOL 235 | 3 |
| CHEM 233 & 233L | 4 | BMEG 230 | 3 |
| ENGL 102 (GEF 1) | 3 | EE 221 & 221L | 4 |
| MATH 251 | 4 | MATH 261 | 4 |
| PHYS 112 & 112L | 4 | STAT 215 | 3 |
| | 19 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMEG 311 | 3 | BMEG 310 | 3 |
| BMEG 321 | 3 | BMEG 315 | 4 |
| BMEG 420 & 420L | 4 | BMEG 340 | 4 |
| GEF 4 | 3 | GEF 6 | 3 |
| GEF 5 | 3 | Engineering Technical Elective* | 3 |
| | 16 | | 17 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMEG 455 & 455S | 4 | BMEG 456S | 3 |
| Engineering Technical Elective* | 3 | Engineering Technical Elective | 3 |
| Science Technical Elective | 3 | Science Technical Elective* | 3 |
| GEF 7 | 3 | Technical Elective* | 3 |
| | 13 | | 12 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMEG 501 | 3 | BMEG 602 | 3 |
| BMEG 601 | 3 | Graduate Elective | 3 |
| BMEG 697 | 3 | BMEG 697 | 3 |
| | 9 | | 9 |

Total credit hours: 145

* Indicates courses that will be shared between the BS and MS programs

# Major Learning Outcomes

## BIOMEDICAL ENGINEERING

Upon graduation, all Bachelors of Science students in Biomedical Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

These outcomes are achieved via rigorous individual courses in all basic areas of biomedical engineering, the natural and life sciences, mathematics, humanities, and social sciences. A flexible electives program allows specialization in areas such as biochemistry, biomechanics, biomaterials, and bioelectronics.

The Chemical and Biomedical Engineering Department uses an outcomes-assessment plan for continuous program improvement. Course work and design projects, in conjunction with yearly interviews provide the measures of learning outcomes. These outcomes-assessment results provide feedback to the faculty to improve teaching and learning processes.

# Chemical Engineering, B.S.Ch.E.

## Degree Offered

- Bachelor of Science in Chemical Engineering (B.S.Ch.E.)

## Nature of the Program

The chemical engineering curriculum is designed to give graduates a broad background in chemical engineering processes and to prepare them to become practicing engineers. Graduates are prepared for positions in operations, development, design, construction, and management of chemical plants, environmental processes, life sciences, and materials processing. These industries convert raw materials, such as ethylene and other organic feedstocks, via chemical and physical changes to produce economically desirable products such as plastics, detergents, paints, and adhesives. Students with this background are also prepared for graduate school in engineering and science as well as for any professional school. The Bachelor of Science degree in Chemical Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Chemical, Biochemical, Biomolecular Engineering.

## Program Educational Objectives

- Graduates will be successful in their professional careers and/or post graduate training as demonstrated by their identification and subsequent solution of problems, development of new and valuable ideas, pursuit of continual professional development, and application of chemical engineering and related skills to new challenges.
- Graduates will be able to succeed in diverse professional environments, working effectively in multifunctional teams and independently, providing leadership, and communicating effectively.
- Graduates will demonstrate professional character exhibited by their ethical behavior, their commitment to responsible safety practices, and their dedication to maintain accountability for the global, societal, and environmental impact of their work.

Click here to view the Suggested Plan of Study (p. 661)

## Curriculum in Chemical Engineering

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |

| | |
|---|---|
| F2A/F2B - Science & Technology | 4-6 |
| F3 - Math & Quantitative Reasoning | 3-4 |
| F4 - Society & Connections | 3 |
| F5 - Human Inquiry & the Past | 3 |
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Chemical Engineering degree:

- Complete a minimum of 128 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 36 |
| Chemical Engineering Program Requirements | | 68 |
| Total Hours | | 128 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |

| | | |
|---|---|---|
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| First Year Chemistry (GEF 2B): | | 8 |
| CHEM 115<br>& 115L<br>& CHEM 116<br>& CHEM 116L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory<br>and Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| Physics: | | |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| Total Hours | | 36 |

## Chemical Engineering Major Requirements

| Code | Title | Hours |
|---|---|---|
| CHE 221 | Material and Energy Balance | 4 |
| CHE 230 | Numerical Methods for Chemical Engineering | 3 |
| CHE 321 | Chemical Engineering Thermodynamics and Kinetics | 4 |
| CHE 322 | Unit Operations 1 | 4 |
| CHE 323 | Unit Operations 2 | 4 |
| CHE 315 | Chemical Engineering Transport Analysis | 3 |
| CHE 325 | Chemical Reaction Engineering | 3 |
| CHE 351L | Chemical Process Laboratory | 2 |
| CHE 355 | Process Simulation and Design | 3 |
| CHE 435 | Chemical Process Control | 3 |
| CHE 452L | Chemical Engineering Senior Laboratory | 2 |
| CHE 452S | Chemical Engineering Senior Laboratory Analysis | 1 |
| CHE 455<br>& 455S | Chemical Process Design 1<br>and Chemical Process Design 1 Studio | 4 |
| CHE 456S | Chemical Process Design 2 | 3 |
| CHE 475 | Chemical Process Safety | 3 |
| **Technical Electives** | | |
| Engineering Science Electives | | 6 |
| Advanced Science Electives | | 7 |
| Advanced Chemistry Elective (3hrs) | | |
| Life Science Elective (4hrs) | | |
| Other Technical Electives | | 9 |
| Total Hours | | 68 |

## TECHNICAL ELECTIVES

| Code | Title | Hours |
|---|---|---|
| **Engineering Science Electives** | | **6** |
| BMEG 201 | Introduction to Biomedical Engineering | |
| BMEG 311 | Biomaterials | |
| BMEG 480 | Cellular Machinery | |
| BMEG 481 | Applied Bio-Molecular Modeling | |
| BMEG 482 | Introduction to Tissue Engineering | |
| CE 310 | Civil Engineering Materials | |
| CE 332 | Introduction to Transportation Engineering | |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | |
| CE 351<br>& 351L | Introductory Soil Mechanics<br>and Introductory Soil Mechanics Laboratory | |
| CHE 414 | Coal Conversion Engineering | |
| CHE 461 | Polymer Science and Engineering | |
| CHE 462 | Polymer Processing | |
| CHE 463 | Polymer Composites Processing | |
| CHE 466 | Electronic Materials Processing | |
| CHE 471 | Biochemical Engineering | |
| CHE 472 | Biochemical Separations | |
| CHE 476 | Pollution Prevention | |
| CHE 495 | Independent Study | |
| CHE 496 | Senior Thesis | |
| CHE 498 | Honors | |
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | |
| EE 223<br>& 223L | Electrical Circuits<br>and Electrical Circuits Laboratory | |
| IENG 213 | Engineering Statistics *Completion of IENG 213 and STAT 215 will not fulfill two elective requirements. | |
| IENG 220<br>& 220L | Re-Engineering Management Systems<br>and Re-Engineering Management Systems Laboratory | |
| IENG 377 | Engineering Economy | |
| IENG 461 | System Safety Engineering | |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | |
| MAE 215 | Introduction to Aerospace Engineering | |
| MAE 241 | Statics | |
| MAE 242 | Dynamics | |
| MAE 243 | Mechanics of Materials | |
| MAE 244L | Dynamics and Strength Laboratory | |
| MAE 425 | Internal Combustion Engines | |
| MAE 473 | Bioengineering | |
| MSEN 350 | Materials Science | |
| PNGE 200 | Introduction to Petroleum Engineering | |
| **Advanced Chemistry Electives** | | **3** |
| AGBI 410<br>& 410L | Introductory Biochemistry<br>and Introduction to Biochemistry Laboratory | |
| AGBI 512 | Nutritional Biochemistry | |
| BMM 339 | Introduction to Human Biochemistry | |
| BMEG 311 | Biomaterials | |

| | | |
|---|---|---|
| BMEG 480 | Cellular Machinery | |
| BMEG 481 | Applied Bio-Molecular Modeling | |
| BMEG 482 | Introduction to Tissue Engineering | |
| CHE 466 | Electronic Materials Processing | |
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory | |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | |
| CHEM 310<br>& 310L | Instrumental Analysis<br>and Instrumental Analysis Laboratory | |
| CHEM 312 | Environmental Chemistry | |
| CHEM 348<br>& 348L | Physical Chemistry 2<br>and Physical Chemistry 2 Laboratory | |
| MSEN 350 | Materials Science | |
| **Life Sciences Electives** | | **4** |
| AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory | |
| AEM 401<br>& 401L | Environmental Microbiology<br>and Environmental Microbiology Laboratory | |
| BIOL 101<br>& 101L<br>& BIOL 102<br>& BIOL 102L | General Biology 1<br>and General Biology 1 Laboratory<br>and General Biology 2<br>and General Biology 2 Laboratory | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| BIOL 235 | Human Physiology | |
| GEN 371<br>& 371L | Principles of Genetics<br>and Principles of Genetics Laboratory | |
| PSIO 241 | Elementary Physiology | |
| **Other Technical Electives** | | **9** |
| AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory | |
| AEM 401<br>& 401L | Environmental Microbiology<br>and Environmental Microbiology Laboratory | |
| AGBI 410<br>& 410L | Introductory Biochemistry<br>and Introduction to Biochemistry Laboratory | |
| BMM 339 | Introduction to Human Biochemistry | |
| BIOL 105 | Environmental Biology | |
| BIOL 105L | Environmental Biology Laboratory | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| BIOL 219<br>& 219L | Cellular and Molecular Biology<br>and Cellular & Molecular Biology Laboratory | |
| BIOL 221 | Ecology and Evolution | |
| BIOL 235 | Human Physiology | |
| BMEG 201 | Introduction to Biomedical Engineering | |
| BMEG 311 | Biomaterials | |
| BMEG 480 | Cellular Machinery | |
| BMEG 481 | Applied Bio-Molecular Modeling | |
| BMEG 482 | Introduction to Tissue Engineering | |
| CE 310 | Civil Engineering Materials | |

| | |
|---|---|
| CE 332 | Introduction to Transportation Engineering |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory |
| CE 351<br>& 351L | Introductory Soil Mechanics<br>and Introductory Soil Mechanics Laboratory |
| CHE 414 | Coal Conversion Engineering |
| CHE 461 | Polymer Science and Engineering |
| CHE 462 | Polymer Processing |
| CHE 463 | Polymer Composites Processing |
| CHE 466 | Electronic Materials Processing |
| CHE 471 | Biochemical Engineering |
| CHE 472 | Biochemical Separations |
| CHE 476 | Pollution Prevention |
| CHE 496 | Senior Thesis |
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory |
| CHE 497 | Research |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory |
| CHEM 310<br>& 310L | Instrumental Analysis<br>and Instrumental Analysis Laboratory |
| CHEM 312 | Environmental Chemistry |
| CHEM 348<br>& 348L | Physical Chemistry 2<br>and Physical Chemistry 2 Laboratory |
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory |
| CS 220 | Discrete Mathematics |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory |
| EE 223<br>& 223L | Electrical Circuits<br>and Electrical Circuits Laboratory |
| ESWS 155 | Elements of Environmental Protection |
| GEN 371<br>& 371L | Principles of Genetics<br>and Principles of Genetics Laboratory |
| GEOL 203 | Physical Oceanography |
| IENG 213 | Engineering Statistics *Completion of IENG 213 and STAT 215 will not fulfill two elective requirements. |
| IENG 220<br>& 220L | Re-Engineering Management Systems<br>and Re-Engineering Management Systems Laboratory |
| IENG 377 | Engineering Economy |
| IENG 461 | System Safety Engineering |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory |
| MAE 215 | Introduction to Aerospace Engineering |
| MAE 241 | Statics |
| MAE 242 | Dynamics |
| MAE 243 | Mechanics of Materials |
| MAE 244L | Dynamics and Strength Laboratory |
| MAE 425 | Internal Combustion Engines |
| MAE 473 | Bioengineering |
| MSEN 350 | Materials Science |
| MATH 303 | Introduction to the Concepts of Mathematics |
| PHYS 211 | Introduction to Mathematical Physics |

| | |
|---|---|
| PHYS 314 | Introductory Modern Physics |
| PSIO 241 | Elementary Physiology |
| STAT 215 | Introduction to Probability and Statistics *Completion of IENG 213 and STAT 215 will not fulfill two elective requirements. |
| SUST 101 & 101L | Sustainable Earth and Sustainable Earth Laboratory |

*

Completion of both IENG 213 and STAT 215 will not count as two separate electives as the course content is significantly similar.

## SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.Ch.E degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 2) | 4 | MATH 156 (GEF 8) | 4 |
| ENGL 101 (GEF 1) | 3 | ENGR 102 or CHE 102 | 3 |
| ENGR 101 | 2 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 191 | 1 | CHEM 116 & 116L | 4 |
| MATH 155 (GEF 3) | 4 | | |
| GEF 4 | 3 | | |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHE 221 | 4 | CHE 230 | 3 |
| CHEM 233 | 3 | MATH 261 | 4 |
| CHEM 233L | 1 | PHYS 112 & 112L | 4 |
| ENGL 102 (GEF 1) | 3 | GEF 5 | 3 |
| MATH 251 | 4 | GEF 6 | 3 |
| | 15 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHE 321 | 4 | CHE 323 | 4 |
| CHE 322 | 4 | CHE 325 | 3 |
| Life Science Elective | 4 | CHE 351L | 2 |
| GEF 7 | 3 | CHE 355 | 3 |
| Technical Elective | 3 | Engineering Science Elective | 3 |
| | 18 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHE 315 | 3 | CHE 435 | 3 |
| CHE 452L | 2 | CHE 456S | 3 |
| CHE 452S | 1 | CHE 475 | 3 |
| CHE 455 & 455S | 4 | Engineering Science Elective | 3 |
| Advanced Chemistry Elective | 3 | Technical Elective | 3 |
| Technical Elective | 3 | | |
| | 16 | | 15 |

Total credit hours: 128

## Accelerated Program

- BSCHE Chemical Engineering and MSCHE Chemical Engineering (p. 662)

## Accelerated Bachelor's/Master's in Chemical Engineering

Students must fulfill all degree requirements for the B.S.ChE in Chemical Engineering and all the requirements of the M.S.ChE in Chemical Engineering. Students must also meet all the requirements of the ABM.

### ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 116 |
| Shared Bachelor's/Master's Coursework | | 12 |
| Graduate Coursework | | 18 |
| Total Hours | | 146 |

### SHARED COURSEWORK CURRICULUM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Courses completed must be at the 400 or 500 level. At least one course must be at the 500 level. | | |
| See BSCHE and MSCHE for list of elective course options. | | |
| **Courses:** | | |
| CHE 475 | Chemical Process Safety | 3 |
| Engineering Science Elective | | 3 |
| Engineering Science Elective (500+ level CHE course) | | 3 |
| Technical Elective | | 3 |
| Total Hours | | 12 |

### SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical ABM BSCHE & MSCHE degree program that completes degree requirements in five years is as follows.

| First Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| CHEM 115 & 115L | 4 | CHEM 116 & 116L | 4 |
| ENGL 101 | 3 | ENGR 102 | 3 |
| ENGR 101 | 2 | MATH 156 | 4 |
| ENGR 191 | 1 | PHYS 111 & 111L | 4 |
| MATH 155 | 4 | | |
| GEF 4 | 3 | | |
| | 17 | | 15 |

| Second Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| CHE 221 | 4 | CHE 230 | 3 |
| CHEM 233 & 233L | 4 | MATH 261 | 4 |
| ENGL 102 | 3 | PHYS 112 & 112L | 4 |
| MATH 251 | 4 | GEF 5 | 3 |
| | | GEF 6 | 3 |
| | 15 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHE 321 | 4 | CHE 323 | 4 |
| CHE 322 | 4 | CHE 351L | 2 |
| GEF 7 | 3 | CHE 325 | 3 |
| Life Science Technical Elective | 4 | CHE 355 | 3 |
| Advanced Chemistry Elective | 3 | Technical Elective | 3 |
| | 18 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHE 315 | 3 | CHE 435 | 3 |
| CHE 452L & CHE 452S | 3 | CHE 456S | 3 |
| CHE 455 & 455S | 4 | CHE 475* | 3 |
| Technical Elective * | 3 | Engineering Science Elective (500+ level CHE course)* | 3 |
| Engineering Science Elective * | 3 | Technical Elective | 3 |
| | 16 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHE 531 | 3 | CHE 615 | 3 |
| CHE 620 | 3 | CHE 625 | 3 |
| Graduate CHE Elective (problem report or coursework) or CHE 697 | 3 | Graduate CHE Elective (coursework only) or CHE 697 | 3 |
| CHE 786 | 0 | CHE 786 | 0 |
| | 9 | | 9 |

Total credit hours: 146

*****

Indicates courses that will be shared with the MS requirements

# Major Learning Outcomes

## CHEMICAL ENGINEERING

Upon graduation, all Bachelors of Science students in Chemical Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The Chemical and Biomedical Engineering Department uses an outcomes-assessment plan for continuous program improvement. Course work and design projects, in conjunction with yearly interviews provide the measures of learning outcomes. These outcomes-assessment results provide feedback to the faculty to improve teaching and learning processes.

# Wadsworth Department of Civil and Environmental Engineering

## Degrees Offered

- Bachelor of Science in Civil Engineering (B.S.C.E.)
- Bachelor of Science in Environmental Engineering (B.S.ENVE)
- Accelerated Bachelor's/Master's Program in Civil Engineering

## Nature of the Programs

The CEE Department offers undergraduate degrees in civil engineering and environmental engineering. The environmental program will focus on developing engineering skills and understanding the principles of sustainability and applying them to problems related to air and water quality, treatment of anthropogenic waste streams, management of water resources, and environmental health. Civil engineering historically encompassed all engineering endeavors needed to provide the infrastructure for society to function. Because of its origin and history, civil engineering still embraces a wide variety of technological areas. In the Wadsworth Department of Civil and Environmental Engineering, these areas include:

- Construction
- Environmental and Water Resources
- Geotechnical
- Structures
- Transportation

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## FACULTY

### CHAIR

- Lian-Shin Lin - Ph.D. (Purdue University)
  Physicochemical and biological treatment, Innovative wastewater technologies, Emerging contaminants, sustainable development, Watershed pollution

### PROFESSORS

- Omar I. Abdul-Aziz - Ph.D. (University of Minnesota, Twin Cities)
  Ecological-Water Resources Engineering; Scaling of Hydro-Ecological and Biochemical Variables; Modeling of Stream Water Quality and Ecosystem Carbon; Fluid Mechanics; Hydrology
- Hung-Liang (Roger) Chen - Ph.D. (Northwestern University)
  Structural dynamics, Structural experimentation, Dynamic soil-structure interaction, Damage in reinforced concrete structures, Nondestructive evaluation, Concrete
- Fei Dai - Ph.D. (Hong Kong Polytechnic University)
  Construction Engineering, Construction Management, Construction Information Technologies
- Hota GangaRao - Ph.D. (North Carolina State University)
  Maurice A. and Jo Ann Wadsworth Distinguished Professor, Director, Constructed Facilities Center. Director, NSF Center for Integration of Composites into Infrastructure, Mathematical modeling of engineering systems, Bridge engineering, Composite material characterization and implementation
- Lian-Shin Lin - Ph.D. (Purdue University)
  Physicochemical and biological treatment, Innovative wastewater technologies, Emerging contaminants, sustainable development, Watershed pollution
- David R. Martinelli - Ph.D. (University of Maryland)
  Transportation engineering, Traffic operations, Systems analysis, Infrastructure management
- John D. Quaranta - Ph.D., P.E. (West Virginia University)
  Geotechnical/Geo-Environmental Engineering, Soil Testing and Characterization, Soil and Mine Waste Dewatering, Geo-Synthetics, Soil and Groundwater Remediation

### ASSOCIATE PROFESSORS

- Karl Barth - Ph.D. (Purdue University)
  Steel structures; Bridge design and rehabilitation; Connections; Stability analysis; Experimental mechanics
- Leslie Clark Hopkinson - Ph.D. (Virginia Polytechnic Institute and State University)
  Surface hydrology, Environmental hydraulics, Ecological engineering, River mechanics
- Yoojung Yoon - Ph.D. (Purdue University)
  Infrastructure Asset Management, Risk Management in Construction, Project Management and Control, Construction Equipment Management

### ASSISTANT PROFESSORS

- Onur Avci - Ph.D.(Virginia Tech)
  Structural Engineering, Structural steel, Structural dynamics, Structural health monitoring, Structural damage detection. Machine Learning (ML) and Deep Learning (DL) applications in structural engineering. Blast protection of engineering structures, multi-functional materials.
- James Bryce - Ph.D. (Virginia Tech)
  Asphalt technology, pavement sustainability, pavement preservation, civil engineering materials, benefit-cost analysis, life cycle costing, and decision analysis.
- Emily Garner - Ph.D. (Virginia Polytechnic Institute and State University)
  Environmental Engineering and Microbiology, Wastewater reuse and sustainable water treatment, Microbial ecology, Application of molecular tools and next generation sequencing technologies, Drinking water
- Kevin Orner - Ph.D. (University of South Florida)
  Environmental Engineering, Wastewater Treatment, Resource Recovery, Water Quality, Engineering Education, Sustainable Development Engineering
- Dimitra Pyrialakou - Ph.D. (Purdue University)
  Transportation Engineering, Transportation Planning and Evaluation, Public and Rail Transportation, Airport Operations, Transportation Econometrics

### RESEARCH ASSISTANT PROFESSORS

- Rufieng Liang - Ph.D. (Chinese Academy of Sciences Institute of Chemistry)
  Fiber Reinforced Polymer Composites, Engineering Plastics, Green Materials, Sustainable Infrastructure

### PROFESSORS EMERITUS

- Ronald W. Eck - Ph.D. (Clemson University)
- Udaya B. Halabe - Ph.D. (Massachusetts Institute of Technology)
  Nondestructive evaluation and in-situ condition assessment of structures and materials, Elastic and electromagnetic (radar) wave propagation, Structural analysis and design, Structural dynamics and wind/earthquake resistant design
- W. Joseph Head - Ph.D. (Purdue University)
- Larry D. Luttrell - Ph.D. (Cornell University)
- William A. Sack - Ph.D. (Michigan State University)
- Hema J. Siriwardane - Ph.D. (Virginia Polytechnic Institute and State University)
  Geomechanics/geotechnical engineering, Finite element method, Computer applications
- John P. Zaniewski - Ph.D. (University of Texas)

### ASSOCIATE PROFESSORS EMERITUS

- Robert N. Eli - Ph.D. (University of Iowa)
- Darrell R. Dean Jr. - Ph.D. (Purdue University)

For specific information on the following programs please see the links to the right:

- Civil Engineering, B.S.C.E.
- Environmental Engineering, B.S.ENVE

# Civil Engineering, B.S.C.E.

## Degree Offered

- Bachelor of Science in Civil Engineering (B.S.C.E.)

## Nature of the Program

Civil engineers work with problems that directly impact the health and economic vitality of people and communities. These problems include waste disposal, environmental pollution, transportation systems analysis and design, water resource development, and the design, construction, and rehabilitation of constructed facilities such as dams, bridges, buildings, and highways.

Thus, the challenges and opportunities for a civil engineer lie in combining technical competence with a human concern for the applications of technology.  To help students to understand their role in the community, to be effective in working with design teams involving other engineers and other professionals, and to be effective in written and spoken communications, the curriculum attempts to give a meaningful educational experience in the humanities, social studies, English, and economics.

The goal of the undergraduate curriculum in civil engineering is to prepare graduate civil engineers to meet the present and the future infrastructural and environmental needs of society. This requires an education based on scientific and engineering fundamentals as well as one that incorporates experience in engineering design using modern technology. Because the systems they design impact the public directly, civil engineers must be aware of the social and environmental consequences of their designs. Graduates must be prepared to work and communicate with other professionals in a variety of associations and organizations. Ethics and life-long learning are essential components in the education of civil engineers.

During the course of study, civil engineering students are given a solid grounding in mathematics, physics, and chemistry. Added to this is extensive development of the fundamentals of materials science, construction, water and environmental, soils, structural, and transportation systems engineering. This broad base of knowledge is provided to assure that civil engineers are educated in all branches of the profession and to permit continuous learning throughout a professional lifetime. Throughout the program, each student works with an academic advisor in the selection of electives. Specialization in one or more of the branches of civil engineering is possible by selection of a sequence of technical electives during the junior and senior years.

The Bachelor of Science degree in civil engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Civil Engineering.

## Program Educational Objectives

- The graduates will be successful in their professional careers as civil engineers in industry, public agencies, and/or post-graduate education.
- The graduates will continue to develop professionally and serve in leadership roles.
- The graduates will be successful in demonstrating their obligations to the profession, to their employer, and to society.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Civil Engineering:

- Complete a minimum of 123 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree

- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at West Virginia University. The Overall GPA is computed based on all work taken at West Virginia University and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 31 |
| Civil Engineering Program Requirements | | 71 |
| Total Hours | | 123 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. * | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| Choose one of the following: | | 4 |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | |
| Total Hours | | 31 |

## Civil Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CE 201 | Introduction to Civil Engineering | 1 |
| CE 210<br>& 210L | Introduction to Computer Aided Design and Drafting for Civil Engineers<br>and Introduction to Computer Aided Design and Drafting for Civil Engineers Laboratory | 3 |
| CE 301 | Engineering Professional Development | 1 |
| CE 321 | Fluid Mechanics for Civil Engineers | 3 |
| CE 479 | Integrated Civil Engineering Design-Capstone | 3 |
| CE 332 | Introduction to Transportation Engineering | 3 |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | 4 |
| CE 351<br>& 351L | Introductory Soil Mechanics<br>and Introductory Soil Mechanics Laboratory | 4 |
| CE 361<br>& 361L | Structural Analysis 1<br>and Structural Analysis 1 Laboratory | 4 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| WRIT 305 | Technical Writing | 3 |
| IENG 377 | Engineering Economy | 3 |
| MAE 241 | Statics (minimum grade of C-) * | 3 |
| MAE 242 | Dynamics * | 3 |
| MAE 243 | Mechanics of Materials (minimum grade of C-) * | 3 |
| **CE Design Electives** | | **6** |
| Choose two of the following: | | |
| CE 411 | Pavement Design | |
| CE 415 | Flexible Pavements | |
| CE 423 | Water System Design | |
| CE 431 | Highway Engineering | |
| CE 451 | Foundations Engineering | |
| CE 453 | Earthwork Design | |
| CE 462 | Reinforced Concrete Design | |
| CE 463 | Steel Design | |
| CE 464 | Timber Design | |
| CE 466 | Steel Design 2 | |
| CE 468 | Building Design | |
| ENVE 441 | Water Treatment Principles and Design | |
| ENVE 442 | Wastewater Treatment | |
| ENVE 443 | Decentralized Wastewater Treatment | |
| ENVE 447 | Air Pollution Control | |
| ENVE 449 | Sustainable Development Engineering | |
| **CE Open Electives: **** | | **15** |
| Choose five of the following: | | |
| CE 305<br>& 305L | Introduction to Geomatics<br>and Introduction to Geomatics Laboratory | |
| CE 310 | Civil Engineering Materials | |
| CE 413 | Construction Scheduling | |
| CE 414 | Construction Engineering | |
| CE 416 | Advanced Concrete Materials | |
| CE 417 | Infrastructure Asset Management 1 | |
| CE 418 | Construction Estimating | |
| CE 425 | Engineering Hydrology | |
| CE 427 | Water Resources Engineering | |
| CE 429 | Ecological Engineering | |

| | |
|---|---|
| CE 430 | Data Analysis in Civil and Environmental Engineering |
| CE 433 | Urban Transportation Planning and Design |
| CE 434 | Public Transportation |
| CE 435 | Railway Engineering |
| CE 436 | Pedestrian/Bike Transportation |
| CE 439 | Traffic Engineering and Operations |
| CE 443 | Environmental Science and Technology |
| CE 445 | Properties of Air Pollutants |
| CE 454 | Geotechnical Engineering Field Methods |
| CE 461 | Structural Analysis 2 |
| CE 493 | Special Topics |
| CE 495 | Independent Study |
| CE 497 | Research |
| ENVE 348 | Environmental Engineering Processes |
| ENVE 446 | Air Pollution and Climate Change |
| ENVE 448 | Public Health Engineering |
| SAFM 470 | Managing Construction Safety |
| **Engineering/Math/Science Electives ***** | **6** |
| Choose two of the following: | |
| AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory |
| AEM 401<br>& 401L | Environmental Microbiology<br>and Environmental Microbiology Laboratory |
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory |
| CHEM 231<br>& 231L | Organic Chemistry: Brief Course<br>and Organic Chemistry: Brief Course Laboratory |
| DSGN 470 | Leadership in Energy and Environmental Design Green Building Systems |
| GEOG 350<br>& 350L | Geospatial Problem Solving<br>and Geospatial Problem Solving Laboratory |
| GEOL 342 | Structural Geology for Engineers |
| GEOL 373 | Introduction to Petroleum Geology |
| GEOL 488 | Environmental Geochemistry |
| IENG 331 | Computer Applications in Industrial Engineering |
| IENG 350 | Introduction to Operations Research |
| IENG 360 | Human Factors Engineering |
| IENG 445 | Project Management for Engineers |
| IENG 455 | Simulation by Digital Methods |
| IENG 473 | Team Facilitation |
| MAE 316 | Analysis of Engineering Systems |
| MAE 320 | Thermodynamics |
| MAE 335 | Incompressible Aerodynamics |
| MAE 423 | Heat Transfer |
| MAE 432 | Engineering Acoustics |
| MAE 446 | Mechanics of Composite Materials |
| MAE 473 | Bioengineering |
| MATH 303 | Introduction to the Concepts of Mathematics |
| MATH 318 | Perspectives on Mathematics and Science |
| MATH 341 | Introduction to Algebraic Structures |
| MATH 343 | Introduction to Linear Algebra |
| MATH 375 | Applied Modern Algebra |
| MATH 376 | Foundations, Functions and Regression Models |
| MATH 378 | Discrete Mathematics |

| | |
|---|---|
| MATH 420 | Numerical Analysis 1 |
| MATH 441 | Applied Linear Algebra |
| MATH 451 | Introduction to Real Analysis 1 |
| MATH 456 | Complex Variables |
| MATH 465 | Partial Differential Equations |
| MINE 306 | Mineral Property Evaluation |
| PHYS 211 | Introduction to Mathematical Physics |
| PHYS 314 | Introductory Modern Physics |
| PHYS 321 | Optics |
| PHYS 331 | Theoretical Mechanics 1 |
| PHYS 333 | Electricity and Magnetism 1 |
| PHYS 376L | Research Methods Laboratory |
| STAT 312 | Intermediate Statistical Methods |
| STAT 313 | Introductory Design and Analysis |
| STAT 331 | Sampling Methods |
| Total Hours | 71 |

*****

Any courses transferred from outside of WVU must be a C- or better.

******

Any approved Design Electives or CE 493 that are not otherwise used can also be used.

*******

Any CE or ENVE 400 level course not otherwise used can also be used.

## Suggested Plan of Study

| **First Year** | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| MATH 155 (GEF 3) | 4 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | PHYS 111 & 111L (GEF 8) | 4 |
| CHEM 115 & 115L (GEF 2) | 4 | GEF 6 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 7 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |
| **Second Year** | | | |
| **Fall** | **Hours** | **Spring** | **Hours** |
| MAE 241 | 3 | MAE 243 | 3 |
| MATH 251 | 4 | MAE 242 | 3 |
| CE 210 & 210L | 3 | MATH 261 | 4 |
| CE 201 | 1 | STAT 215 | 3 |
| ENGL 102 (GEF 1) | 3 | CE 332 | 3 |
| Select one of the following (GEF 8): | 4 | | |
| BIOL 115 & 115L | | | |
| SUST 101 & 101L | | | |
| | 18 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 321 | 3 | CE 351 & 351L | 4 |
| CE 347 & 347L | 4 | CE 301 | 1 |
| CE 361 & 361L | 4 | Two CE Open Electives | 6 |
| ECON 201 (GEF 4) | 3 | CE Design Elective | 3 |
| WRIT 305 | 3 | | |
| | 17 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE Design Elective | 3 | CE Open Elective | 3 |
| Two CE Open Electives | 6 | CE 479 | 3 |
| IENG 377 | 3 | Two ENGR/MATH/Science Electives | 6 |
| | 12 | | 12 |

Total credit hours: 123

## Accelerated Program

- BSCE Civil Engineering and MSCE Civil Engineering (p. 671)

## Accelerated Bachelor's/Master's in Civil Engineering

Students must fulfill all degree requirements for the B.S.C.E. in Civil Engineering and all the requirements of the M.S.C.E. in Civil Engineering. Students must also meet all the requirements of the ABM.

### ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 111 |
| Shared Bachelor's/Master's Coursework | | 12 |
| Graduate Coursework | | 18 |
| Total Hours | | 141 |

### SHARED COURSEWORK CURRICULUM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Courses completed must be at the 400 or 500 level. MS option will dictate number of courses required at the 500 level. | | |
| See BSCE and MSCE for list of elective course options | | |
| **Courses:** | | |
| CE Open Elective | | 3 |
| CE Open Elective | | 3 |
| CE Open Elective | | 3 |
| CE Open Elective | | 3 |
| Total Hours | | 12 |

### SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (GEF 3) | 4 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | PHYS 111 & 111L (GEF 8) | 4 |

| | | | |
|---|---|---|---|
| CHEM 115 & 115L (GEF 2) | 4 | GEF 6 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 7 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 241 | 3 | MAE 243 | 3 |
| MATH 251 | 4 | MAE 242 | 3 |
| CE 210 & 210L | 3 | MATH 261 | 4 |
| CE 201 | 1 | STAT 215 | 3 |
| ENGL 102 (GEF 1) | 3 | CE 332 | 3 |
| Select one of the following (GEF 8): | 4 | | |
| BIOL 115 & 115L | | | |
| GEOL 101 & 101L | | | |
| | 18 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 321 | 3 | CE 351 & 351L | 4 |
| CE 347 & 347L | 4 | CE 301 | 1 |
| CE 361 & 361L | 4 | CE Open Elective | 3 |
| ECON 201 (GEF 4) | 3 | ENGR/MATH/Science Elective | 3 |
| WRIT 305 | 3 | CE Design Elective | 3 |
| | 17 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE Design Elective | 3 | CE Open Elective† | 3 |
| Two CE Open Electives† | 6 | CE 479 | 3 |
| IENG 377 | 3 | ENGR/MATH/Science Elective | 3 |
| | | CE Open Elective† | 3 |
| | 12 | | 12 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| CE 697 (or Elective) | 3 | CE 697 (or Elective) | 3 |
| | 9 | | 9 |

Total credit hours: 141

†
Indicates courses that will be shared with the MS requirements

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Mining Engineering and Bachelor of Science in Civil Engineering:

- Complete a minimum of 151 credit hours
- Satisfy WVU's undergraduate degree requirements

- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at West Virginia University. The Overall GPA is computed based on all work taken at West Virginia University and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 38 |
| Mining Engineering and Civil Engineering Program Requirements | | 92 |
| Total Hours | | 151 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. * | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |

| | | |
|---|---|---|
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | 4 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| GEOL 342 | Structural Geology for Engineers | 3 |
| Total Hours | | 38 |

## Mining Engineering and Civil Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CE 201 | Introduction to Civil Engineering | 1 |
| CE 301 | Engineering Professional Development | 1 |
| CE 321 | Fluid Mechanics for Civil Engineers | 3 |
| CE 332 | Introduction to Transportation Engineering | 3 |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | 4 |
| CE 351<br>& 351L | Introductory Soil Mechanics<br>and Introductory Soil Mechanics Laboratory | 4 |
| CE 361<br>& 361L | Structural Analysis 1<br>and Structural Analysis 1 Laboratory | 4 |
| CE 479 | Integrated Civil Engineering Design-Capstone | 3 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| IENG 377 | Engineering Economy | 3 |
| MAE 241 | Statics (minimum grade of C-) | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials (minimum grade of C-) | 3 |
| MAE 320 | Thermodynamics | 3 |
| MINE 201<br>& 201L | Mine Surveying<br>and Mine Surveying Laboratory | 3 |
| MINE 205 | Underground Mining Systems | 3 |
| MINE 206 | Surface Mining Systems | 4 |
| MINE 261 | Engineering CAD | 2 |
| MINE 306 | Mineral Property Evaluation | 3 |
| MINE 331 | Mine Ventilation | 3 |
| MINE 382 | Mine Power Systems | 3 |
| MINE 411<br>& MAE 411L | Rock Mechanics/Ground Control<br>and Advanced Mechatronics Laboratory | 4 |
| MINE 425<br>& 425L | Mineral Processing<br>and Mineral Processing Laboratory | 4 |
| or MINE 427<br>& 427L | Coal Preparation<br>and Coal Preparation Laboratory | |
| MINE 471 | Mine and Safety Management | 3 |
| MINE 483S | Mine Design-Exploration Mapping | 3 |
| MINE 484 | Mine Design-Report Capstone | 4 |
| CE Design Electives [+] | | 6 |
| CE Open Electives [+] | | 6 |
| Total Hours | | 92 |

**+**

See BSCE degree (p. 665) for list of electives

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical dual B.S.Min.E. and B.S.C.E. degree program that completes degree requirements in five years is as follows:

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (GEF 3) | 4 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | PHYS 111 & 111L (GEF 8) | 4 |
| CHEM 115 & 115L (GEF 2) | 4 | SUST 101 & 101L | 4 |
| ENGL 101 (GEF 1) | 3 | GEF 6 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 201 | 1 | ENGL 102 | 3 |
| MAE 241 | 3 | MAE 242 | 3 |
| MATH 251 | 4 | MATH 261 | 4 |
| MINE 201 & 201L | 3 | MINE 206 | 4 |
| MINE 205 | 3 | PHYS 112 & 112L | 4 |
| MINE 261 | 2 | | |
| | 16 | | 18 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 321 | 3 | CE 332 | 3 |
| GEOL 342 | 3 | CE 351 & 351L | 4 |
| MAE 243 | 3 | MINE 331 | 3 |
| MAE 320 | 3 | MINE 427 & 427L | 4 |
| STAT 215 | 3 | | |
| | 15 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 347 & 347L | 4 | CE 301 | 1 |
| CE 361 & 361L | 4 | CE Design Elective | 3 |
| MINE 306 | 3 | CE Design Elective | 3 |
| MINE 382 | 3 | IENG 377 | 3 |
| | | CE Open Elective | 3 |
| | 14 | | 13 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 201 | 3 | CE Open Elective | 3 |
| MINE 411 & 411L | 4 | CE 479 | 3 |
| MINE 471 | 3 | MINE 484 | 4 |

| | | |
|---|---|---|
| MINE 483S | 3 GEF 7 | 3 |
| | 13 | 13 |

Total credit hours: 151

## Major Learning Outcomes

### CIVIL ENGINEERING

Upon graduation, all Bachelors of Science students in Civil Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Environmental Engineering, B.S.

## Degree Offered

- Bachelor of Science (B.S.)

## Nature of the Program

The environmental engineering degree program fosters cross-disciplinary educational and research collaborations as well as novel approaches to address regional and global environmental issues. The program allows students to choose from different areas of emphasis, including water supply and resources; water quality engineering for human society; air pollution, control, and climate change; and environmental health, risks, and public health. To incorporate real-world training, students will have access to a network of industrial partners that include engineering firms, municipalities, nonprofit organizations and government agencies.

## Program Educational Objectives

- The graduates will engage meaningfully and effectively with diverse local, state, and global stakeholders to develop environmental engineering solutions.
- The graduates will behave ethically and responsibly, continue their professional development, and participate fully in their profession and society.
- The graduates will Apply their technical and civic knowledge in developing and implementing sustainable and inclusive solutions that protect public and environmental health.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Environmental Engineering:

- Complete a minimum of 123 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR

150, and CS 101. The WVU GPA is computed based on all work taken at West Virginia University. The Overall GPA is computed based on all work taken at West Virginia University and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 35 |
| Environmental Engineering Program Requirements | | 67 |
| Total Hours | | 123 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| Total Hours | | 35 |

## Environmental Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ENVE 348 | Environmental Engineering Processes | 3 |
| ENVE 352<br>& 352L | Geoenvironmental Engineering<br>and Introductory Geoenvironmental Laboratory | 4 |

| | | |
|---|---|---|
| ENVE 449 | Sustainable Development Engineering | 3 |
| CE 201 | Introduction to Civil Engineering | 1 |
| CE 210<br>& 210L | Introduction to Computer Aided Design and Drafting for Civil Engineers<br>and Introduction to Computer Aided Design and Drafting for Civil Engineers Laboratory | 3 |
| CE 301 | Engineering Professional Development | 1 |
| CE 321 | Fluid Mechanics for Civil Engineers | 3 |
| ENVE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | 4 |
| CE 425 | Engineering Hydrology | 3 |
| ENVE 479 | Environmental Systems Design | 3 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| WRIT 305 | Technical Writing | 3 |
| IENG 377 | Engineering Economy | 3 |
| MAE 241 | Statics | 3 |
| MAE 320 | Thermodynamics | 3 |
| Design Electives: | | 6 |
| CE 423 | Water System Design | |
| ENVE 441 | Water Treatment Principles and Design | |
| ENVE 442 | Wastewater Treatment | |
| ENVE 443 | Decentralized Wastewater Treatment | |
| ENVE 447 | Air Pollution Control | |
| Environmental Electives: * | | 12 |
| ARE 420 | Adaptation and Mitigation Strategies for Addressing Climate Change | |
| CE 427 | Water Resources Engineering | |
| ESWS 355 | Environmental Sampling and Analysis | |
| ENVE 446 | Air Pollution and Climate Change | |
| ENVE 448 | Public Health Engineering | |
| ENVP 415<br>& 415L | Hazardous Waste Training<br>and Hazardous Waste Training Laboratory | |
| PNGE 447 | Introduction to Carbon Capture and Storage | |
| PUBH 243 | Issues in Environmental Health | |
| PUBH 337 | Climate Change and Public Health | |
| PUBH 442 | Public Health in the Workplace | |
| Science and Engineering Electives: ** | | 6 |
| AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory | |
| AEM 401<br>& 401L | Environmental Microbiology<br>and Environmental Microbiology Laboratory | |
| AGBI 410<br>& 410L | Introductory Biochemistry<br>and Introduction to Biochemistry Laboratory | |
| ESWS 415<br>& 415L | Soil Survey and Land Use<br>and Soil Survey and Land Use Laboratory | |
| CE 430 | Data Analysis in Civil and Environmental Engineering | |
| CE 453 | Earthwork Design | |
| CE 454 | Geotechnical Engineering Field Methods | |
| CHE 471 | Biochemical Engineering | |
| CHE 472 | Biochemical Separations | |
| CHE 476 | Pollution Prevention | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| CHEM 231<br>& 231L | Organic Chemistry: Brief Course<br>and Organic Chemistry: Brief Course Laboratory | |
| DSCI 209 | Data Science Pipelines with Python and R | |
| DSGN 470 | Leadership in Energy and Environmental Design Green Building Systems | |

| | |
|---|---|
| ESWS 425 & 425L | Environmental Soil Management and Environmental Soil Management Laboratory |
| ESWS 455 | Reclamation of Disturbed Soils |
| GEOG 350 & 350L | Geospatial Problem Solving and Geospatial Problem Solving Laboratory |
| GEOL 462 | Introductory Hydrogeology |
| GEOL 463 | Physical Hydrogeology |
| GEOL 472 | Sustainable Energy |
| MAE 243 | Mechanics of Materials |
| MINE 441 | Mining Environmental Management |
| SAFM 411 | General Industry Safety |
| RESM 480 | Environmental Regulation |
| Total Hours | 67 |

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Any Design Electives that are not otherwise used can also be used.

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Any Environmental Electives that are not otherwise used can also be used.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (GEF 3) | 4 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | PHYS 111 & 111L (GEF 8) | 4 |
| CHEM 115 & 115L (GEF 2) | 4 | GEF 6 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 7 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 241 | 3 | MATH 261 | 4 |
| MATH 251 | 4 | ENVE 347 & 347L | 4 |
| CE 201 | 1 | STAT 215 | 3 |
| CE 210 & 210L | 3 | GEOL 101 & 101L | 4 |
| ENGL 102 (GEF 1) | 3 | | |
| BIOL 115 & 115L | 4 | | |
| | 18 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 321 | 3 | Design Elective | 3 |
| MAE 320 | 3 | CE 301 | 1 |
| IENG 377 | 3 | CE 425 | 3 |
| ECON 201 | 3 | WRIT 305 | 3 |
| ENVE 348 | 3 | ENVE 352 & 352L | 4 |
| | 15 | | 14 |

| **Fourth Year** | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| Design Elective | 3 | ENVE 479 | 3 |
| Environmental Electives | 6 | Science and Engineering Elective | 3 |
| Science and Engineering Elective | 3 | Environmental Electives | 6 |
| ENVE 449 | 3 | | |
| | 15 | | 12 |

Total credit hours: 123

## Major Learning Outcomes

### ENVIRONMENTAL ENGINEERING

Upon graduation, all Bachelors of Science students in Environmental Engineering will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

These outcomes are achieved via rigorous individual courses in all basic areas of environmental engineering, the natural and life sciences, mathematics, humanities, and social sciences.

The Wadsworth Department of Civil and Environmental Engineering uses an outcomes-assessment plan for continuous program improvement. The design projects, in conjunction with yearly interviews and questionnaires, provide the measures of learning outcomes. These outcomes-assessment results provide feedback to the faculty to improve teaching and learning processes.

# Lane Department of Computer Science & Electrical Engineering

## Degrees Offered

- Bachelor of Science in Computer Engineering (B.S.Cp.E.)
- Bachelor of Science in Computer Science (B.S.C.S.)
- Bachelor of Science in Cybersecurity (B.S.)
- Bachelor of Science in Electrical Engineering (B.S.E.E.)
- Joint Bachelor of Science in Robotics Engineering (B.S.) - With MMAE Department
- Accelerated Bachelor's/Master's Program in Electrical Engineering

## Nature of the Programs

The Department offers undergraduate degrees in computer science, electrical engineering, computer engineering, and cybersecurity. Each of these disciplines deals with the creation and processing of information. Our degree programs provide a strong theoretical background as well as practical experience gained through hands-on projects and research. Our undergraduate programs provide students with the skills required for a broad range of jobs in industry, government, academia, business, and research. We begin with a strong common foundation in mathematics and add a variety of degree-specific courses on the fundamentals of electronics, computer systems, computer science, energy systems, communication, cybersecurity, AI/ML, robotics, and biometric systems. Each of the degree programs provides a broad spectrum of knowledge in its field but also provides the opportunity for specialization through emphasis areas, electives, independent research projects, and directed studies. All four undergraduate degrees include an interdisciplinary capstone design experience culminating the final year of study. The program also provides a broad general education foundation necessary to put technical knowledge into perspective.

# FACULTY

## CHAIR

- Anurag Srivastava - Ph.D. (Illinois Institute of Technology)
  Power system operation and control, Cyber-Power systems, Enhanced grid resiliency and sustainability, Physics-Aware machine learning

## PROFESSORS

- Donald Adjeroh - Ph.D. (Chinese University of Hong Kong)
  Associate Department Chair and Graduate Coordinator for Computer Science. Multimedia information systems (image, video, and audio), Distributed multimedia systems, Data analytics
- Muhammad Choudhry - Ph.D. (Purdue University)
  Associate Department Chair and Graduate Coordinator for Computer Engineering and Electrical Engineering. Power system control, DC transmission, Stability, Power electronics
- Gianfranco Doretto - Ph.D. (University of California - Los Angeles)
  Computer vision, Statistical pattern recognition, Biometrics, Image processing, Computer graphics
- Parviz Famouri - Ph.D. (University of Kentucky)
  Associate Department Chair. Analysis and control of electrical machines, Motor drives, Power electronics, Electric vehicles
- Katerina Goseva-Popstojanova - Ph.D. (Ss. Cyril and Methodius University)
  Software engineering, Cybersecurity, Empirical studies, Data analytics
- David Graham - Ph.D. (Georgia Institute of Technology)
  Analog signal processing
- Yuxin Liu - Ph.D. (Louisiana Tech University)
  Biotechnology/bioengineering, BioMEMS and microfluidics, Cellular sensors, Tissue engineering
- Y. V. Ramana Reddy - Ph.D. (West Virginia University)
  Artificial intelligence, Knowledge-based simulation, Computer graphics
- Natalia Schmid - Ph.D. (Washington University, St. Louis)
  Detection and Estimation, Statistical Signal and Image Processing, Biometrics, Information Theory, Wireless Sensor Networks, Signal Processing for Radio Astronomy
- K. Subramani - Ph.D. (University of Maryland)
  Scheduling, Computational biology, Computational complexity, Polyhedral combinatorics
- Matthew Valenti - P.E., Ph.D. (Virginia Tech)
  Communication Theory, Wireless Networks, Error Control Coding
- Brian Woerner - Ph.D. (University of Michigan)
  Wirelesss communications, Networking, Cybersecurity

## ASSOCIATE PROFESSORS

- Kevin Bandura - Ph.D. (Carnegie Mellon University)
  Radio astronomy, Digital signal processing, Antennas
- Jeremy Dawson - Ph.D. (West Virginia University)
  Photonics, Nanofabrication, Biometrics data sensing, Rapid DNA analysis
- Sarika Khushalani-Solanki - Ph.D. (Mississippi State University)
  Power/energy conversion, Power systems, Controls, Signals and systems

## TEACHING ASSOCIATE PROFESSOR

- Mohamed Hefeida - Ph.D. (University of Illinois-Chicago)
  Digital design, Computer Architecture, Advanced communication systems, Cross-layer design and optimizations
- Jignesh Solanki - Ph.D. (Mississippi State University)
  Power engineering, Smart grids, Decentralized control of power systems, Control and automation of distribution and transmission systems

## ASSISTANT PROFESSORS

- Amr El-Wakeel - Ph.D. (Queen's University)
  Intelligent and connected vehicles and systems, The internet of things, Healthcare informatics and applications
- Prashnna Gyawali - Ph.D. (Rochester Institute of Technology)
  Machine learning for healthcare, unbiased, fair, and explainable ML, generative AI and multimodal AI
- Nima Karimian - Ph.D. (University of Connecticut)
  Biometrics security, Applied machine learning in cybersecurity
- Sara Tehranipoor - Ph.D. (University of Connecticut)
  Hardware security, Applied machine learning

- Piotr Wojciechowski - Ph.D. (West Virginia University)
  Theoretical computer science in artificial intelligence and data science

## TEACHING ASSISTANT PROFESSOR

- Tom Devine - Ph.D. (West Virginia University)
  Software engineering, Operating systems, Data science, Machine learning
- Brian Powell - Ph.D. (West Virginia University)
  Software engineering, Programming, Image processing

## TEACHING INSTRUCTORS

- Camille Hayhurst - M.S. (West Virginia University)
- Ron Reaser - M.S. (West Virginia University)

## RESEARCH ASSOCIATES

- Dale Dzielski - M.B.A., C.M.A., P.M.P. (Regent University)
  Director of Software Engineering Programs and Graduate Coordinator for Software Engineering. Software project management, Business process management/supply chain, Enterprise architecture, Architecture technical debt
- David Krovich - M.S. (West Virginia University)
  Cybersecurity, Networking, Operating systems, Open-source software

## LECTURERS

- Don McLaughlin - M.A. (West Virginia University)
- Kenneth Costello - M.S. (West Virginia University)
- Martin Dombrowski - M.S. (West Virginia University)
- Jeffrey Edgell - M.S. (Stephens Institute of Technology)
- Lawrence Jacowitz - Ph.D. (Ohio State University)
- Gregory Mundy - M.Sc. (West Virginia University)
- Cynthia Tanner - M.S. (West Virginia University)
- Rebecca Dawn Tarabrella
- Scott Warden - M.S. (West Virginia University)

## ADJUNCT PROFESSORS

- Xin Li - Ph.D. (Princeton University)
  Image Processing, Computer vision, Pattern recognition
- William Cawthorne - Ph.D. (West Virginia University)
  Electrified vehicles, Control systems, Software architecture, Engineering leadership
- Yu Gu - Ph.D. (West Virginia University)
  Robotics, Design, Automatic controls, Mechatronics
- Lawrence Hornak - Ph.D. (Rutgers University)
  Optics, Integrated optics, Micro/Nano structures and devices, Biosensors, Biometrics
- Guilherme Pereira - Ph.D. (Federal University of Minas Gerais, Brazil)
  Field robotics, Autonomous vehicles, Sensor fusion, Multi-robot systems
- Michael Yura - Ph.D. (Ohio State University)
  New and innovative biometric technology

## ADJUNCT ASSOCIATE PROFESSOR

- Thirimachos Bourlai - Ph.D. (University of Surrey)
  biomedical image processing, Pattern recognition
- Guodong Guo - Ph.D. (University of Wisconsin-Madison)
  Computer vision, Biometrics, Human computer interaction
- V. Jagannathan - Ph.D. (Vanderbilt University)
  Distributed intelligent systems, Internet and security technologies, Natural language processing
- Piyush Mehta - Ph.D. (University of Kansas)
  Space Weather, Ml applications for Space Situational Awareness
- Sumitra Reddy - Ph.D. (West Virginia University)
  Healthcare informatics, Componentware, Intelligent systems, Information technology evolution
- Arun Ross - Ph.D. (Michigan State University)

Biometrics

- Layth Sliman - Ph.D. (National Institute of Applied Science of Lyon)
  Security and trust by design, Cryptographical and access control paradigms adapted to artificial intelligence
- Luyi Wang - Ph.D. (West Virginia University)
- Xueyan Sherry Xu - Ph.D. (West Virginia University)
  Biomedical signal processing, Pattern recognition, Human vibration evaluation and risk assessment
- Yanfang Ye - Ph.D. (Xiamen University)
  Computer security, Malware detection, Machine learning

### ADJUNCT ASSISTANT PROFESSORS

- Omid Dehzangi - Ph.D. (Nanyang Technological University)
  Data structures, Expert and decision support systems, Big data, Data mining, Artificial intelligence
- Victor Fragoso - Ph.D. (University of California - Santa Barbara)
  Computer vision, Machine learning
- Bin Liu - Ph.D. (Rutgers University)
  Data mining, Machine learning
- Saiph Savage - Ph.D. (University of California - Santa Barbara)
  Machine learning, Human computer interaction, Data analytics for social networks
- Shuo Wang - Ph.D. (California Institute of Technology)
- Scott Zemerick - Ph.D. (West Virginia University)

### PROFESSORS EMERITI

- Hany Ammar - Ph.D. (University of Notre Dame)
- John Atkins - Ph.D. (University of Pittsburgh)
- Wils Cooley - Ph.D., P.E. (Carnegie Mellon University)
- Elaine Eschen - Ph.D. (Vanderbilt University)
- Ali Feliachi - Ph.D. (Georgia Tech)
  Power systems, Large-scale systems, Control
- Mark Jerabek - Ph.D., P.E. (Purdue University)
- Powsiri Klinkhachorn - Ph.D. (West Virginia University)
- Dimitris Korakakis - Ph.D. (Boston University)
  Semiconductor growth, Nanotechnology, Photonic devices, Biosensors
- Robert McConnell - Ph.D. (University of Kentucky)
- James Mooney - Ph.D. (Ohio State University)
- Roy Nutter Jr. - Ph.D., P.E. (West Virginia University)
- George Trapp - Ph.D. (Carnegie Mellon University)

# Computer Engineering, B.S.Cp.E.

## Degree Offered

- Bachelor of Science in Computer Engineering (B.S.Cp.E.)

## Nature of the Program

Computer engineers design, develop, test, and oversee the manufacture and maintenance of embedded computer hardware and software. As such, computer engineering combines portions of the knowledge of electrical engineers and computer scientists. Embedded computer systems include applications in the automotive, communications, radio and television, consumer electronics, aircraft, robotics, and health-care industries. In addition, computer engineers design, develop, test, manufacture, and maintain complex systems including digital communications systems such as cell phone networks, secure computer networks, and system-level software such as operating systems and applications software. The Bachelor of Science degree in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Computer Engineering.

Fundamental courses in the computer engineering areas of hardware and software are taken during the second year with general fundamental engineering courses included. The third and fourth years in the curriculum concentrate on areas of computer engineering in both software and hardware with technical electives provided to allow the student to acquire more depth in a preferred area of expertise.

## Program Educational Objectives

The Program Educational Objectives (PEO) of the Computer Engineering (CpE) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduates will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

Click here to view the Suggested Plan of Study (p. 686)

## Curriculum in Computer Engineering

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Computer Engineering degree:

- Complete a minimum of 122 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Fundamentals of Engineering Requirements | | 5 |

| | |
|---|---|
| Math and Science Requirements | 30 |
| Computer Engineering Program Requirements | 68 |
| Total Hours | 122 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8 ) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| MATH 375 | Applied Modern Algebra | 3 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 2) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics (GEF 8) | 3 |
| Total Hours | | 30 |

## Computer Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |
| CPE 453 | Data and Computer Communications | 3 |
| CPE 410S | Microcomputer Structures and Interfacing | 3 |
| or CPE 442 | Introduction to Digital Computer Architecture | |
| or CPE 484 | Real-Time Systems Development | |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |

| | | |
|---|---|---|
| CS 330<br>& 330L | Introduction to Software Engineering<br>and Introduction to Software Engineering Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| CS 450 | Operating Systems Structure | 4 |
| CSEE 380 | Engineering for Societal Impact | 2 |
| CSEE 480S | Capstone Project - Design | 2 |
| or CSEE 480 | Capstone Project - Design | |
| CSEE 481S | Capstone Project - Implementation | 3 |
| or CSEE 481 | Capstone Project - Implementation | |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 223<br>& 223L | Electrical Circuits<br>and Electrical Circuits Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| EE 327 | Signals and Systems 1 | 3 |
| EE 355<br>& 355L | Analog Electronics<br>and Analog Electronics Laboratory | 4 |
| CPE Elective (400-level or higher course in CPE subject code) [*, **] | | 3 |
| Lane Department Elective (400-level or higher course in BIOM, CPE, CS, CSEE, CYBE, EE, or ROBE subject codes) [*, **] | | 3 |
| Statler College Elective (300-level or higher course offered by Statler College) [**] | | 3 |
| Total Hours | | 68 |

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Students choosing an AOE in Cybersecurity are not required to take the CPE Elective (3 credits) or the Lane Departmental Elective (3 credits).

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A maximum of 3 credits of any applicable 491 course may be used toward elective requirements.

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.Cp.E. degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110<br>& 110L | 4 | CS 111<br>& 111L | 4 |
| ENGL 101 (GEF 1) | 3 | ENGR 102 | 3 |
| ENGR 101 | 2 | MATH 156 (GEF 8) | 4 |
| ENGR 191 | 1 | PHYS 111<br>& 111L (GEF 2) | 4 |
| MATH 155 (GEF 3) | 4 | | |
| GEF 5 | 3 | | |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 271<br>& 271L | 4 | CS 350 | 3 |
| EE 221<br>& 221L | 4 | EE 223<br>& 223L | 4 |
| MATH 251 | 4 | EE 251<br>& 251L | 4 |
| PHYS 112<br>& 112L (GEF 8) | 4 | MATH 261 | 4 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 310 & 310L | 4 | CPE 410S, 442, or 484 | 3 |
| CSEE 380 | 2 | CS 330 & 330L | 4 |
| EE 327 | 3 | ENGL 102 (GEF 1) | 3 |
| EE 355 & 355L | 4 | STAT 215 (GEF 8) | 3 |
| GEF 6 | 3 | GEF 7 | 3 |
| | 16 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 453 | 3 | CSEE 481S | 3 |
| CSEE 480S | 2 | CPE Elective | 3 |
| CS 450 | 4 | Lane Department Elective | 3 |
| MATH 375 | 3 | Statler College Elective | 3 |
| GEF 4 | 3 | | |
| | 15 | | 12 |

Total credit hours: 122

## Areas of Emphasis

- Artificial Intelligence
- Cybersecurity

## AREA OF EMPHASIS IN ARTIFICIAL INTELLIGENCE

| Code | Title | Hours |
|---|---|---|
| CS 472 | Artificial Intelligence | 3 |
| CS 474 | Introduction to Responsible and Safe AI | 3 |
| Select two of the following: | | 6 |
| CPE 420 | Introduction to Neural Networks | |
| CS 460 | Introduction to Big Data Engineering | |
| CS 473 | Introduction to Data Mining | |
| CS 476S | Applied Artificial Intelligence Studio | |
| EE 465 | Introduction to Digital Image Processing | |
| Total Hours | | 12 |

## AREA OF EMPHASIS IN CYBERSECURITY

| Code | Title | Hours |
|---|---|---|
| CPE 453 | Data and Computer Communications | 3 |
| CYBE 366 | Secure Software Development | 3 |
| CYBE 465 | Cybersecurity Principles and Practice | 3 |
| CYBE 467 | Ethical Hacking & Penetration Testing | 3 |
| Select one of the following: | | 3 |
| CYBE 435 | Computer Incident Response | |
| CYBE 466 | Host Based Cyber Defense | |
| Total Hours | | 15 |

## Dual Degree Programs

- Lane Department Programs (p. 688)
- B.S.Cp.E. Computer Engineering and B.S. Robotics Engineering (p. 688)

## Lane Department Programs

Students can simultaneously pursue two bachelor's degrees in the Lane Department. To successfully complete both degrees, students must meet all requirements of both programs and complete a minimum of 150 credit hours. As part of those 150 credit hours, 30 credit hours must be unique from the primary degree course requirements. Exact credit hours and classes will vary per student based on their choice of technical electives and emphasis courses.

The most common Lane Department major combinations are:

- Computer Engineering and Electrical Engineering
- Computer Engineering and Computer Science

Please refer to the catalog descriptions of each individual program for course and academic requirements which can include minimum grades and GPA, and elective choices.

## B.S.Cp.E. Computer Engineering and B.S. Robotics Engineering

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Computer Engineering and a Bachelor of Science in Robotics Engineering degree:

- Complete a minimum of 153 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 30 |
| Computer Engineering and Robotics Engineering Program Requirments | | 105-106 |
| Total Hours | | 153-154 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| MATH 375 | Applied Modern Algebra | 3 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 2B) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics (GEF 8) | 3 |
| Total Hours | | 30 |

## Computer Engineering and Robotics Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |
| CPE 453 | Data and Computer Communications | 3 |
| CPE 410S | Microcomputer Structures and Interfacing | 3 |
| or CPE 442 | Introduction to Digital Computer Architecture | |
| or CPE 484 | Real-Time Systems Development | |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 330<br>& 330L | Introduction to Software Engineering<br>and Introduction to Software Engineering Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| CS 450 | Operating Systems Structure | 4 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 223<br>& 223L | Electrical Circuits<br>and Electrical Circuits Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| EE 327 | Signals and Systems 1 | 3 |
| EE 355<br>& 355L | Analog Electronics<br>and Analog Electronics Laboratory | 4 |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | 3 |
| or ENGR 102 | Engineering Problem Solving 2 | |
| MAE 202 | Sophomore Seminar | 1 |

| | | |
|---|---|---|
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 460 | Automatic Controls | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| ROBE 413 | Robotic Manipulators | 3 |
| ROBE 414 | Robot Autonomy | 3 |
| Capstone Sequence (Select One Pathway) | | 6-7 |
| CSEE 380<br>& CSEE 480S<br>& CSEE 481S | Engineering for Societal Impact<br>and Capstone Project - Design<br>and Capstone Project - Implementation (7 Total Hours) | |
| ROBE 471S<br>& ROBE 472S | Principles of Engineering Design<br>and Engineering Systems Design (6 Total Hours) | |
| Technical Elective * | | 3 |
| Total Hours | | 105-106 |

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See BS CpE (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/lanedepartmentofcomputerscienceand/computer_engineering/#majortext) and BS Robotics (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/robe/#majortext) degrees for list of technical electives. Except CPE 412 Mobile Robotics.

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.Cp.E. / B.S. Robotics degree program that completes degree requirements in five years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110<br>& 110L | 4 | CS 111<br>& 111L | 4 |
| ENGL 101 | 3 | MAE 102 | 3 |
| ENGR 101 | 2 | MATH 156 | 4 |
| ENGR 191 | 1 | PHYS 111<br>& 111L | 4 |
| MATH 155 | 4 | | |
| GEF 5, 6, or 7 | 3 | | |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221<br>& 221L | 4 | CPE 271<br>& 271L | 4 |
| MAE 202 | 1 | ENGL 102 | 3 |
| MAE 241 | 3 | MAE 212L | 1 |
| MATH 251 | 4 | MAE 242 | 3 |
| PHYS 112<br>& 112L | 4 | MATH 261 | 4 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 310 & 310L | 4 | CS 350 | 3 |
| MAE 211 & 211L | 3 | EE 223 & 223L | 4 |
| MAE 243 | 3 | EE 251 & 251L | 4 |
| ROBE 313 | 3 | MAE 316 | 3 |
| STAT 215 | 3 | | |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 355 & 355L | 4 | CS 330 & 330L | 4 |
| MAE 342 | 3 | ECON 201 (GEF 4) | 3 |
| MATH 375 | 3 | EE 327 | 3 |
| ROBE 412* | 3 | ROBE 413* | 3 |
| GEF 5, 6, or 7 | 3 | GEF 5, 6, or 7 | 3 |
| | 16 | | 16 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 453 | 3 | CPE 410S, 442, or 484 | 3 |
| CS 450 | 4 | MAE 460 | 3 |
| MAE 411 & 411L | 3 | ROBE 472S or CSEE 481S* | 3 |
| ROBE 414* | 3 | Technical Elective | 3 |
| ROBE 471S or CSEE 480S* | 3 | | |
| | 16 | | 12 |

Total credit hours: 153

*

Courses only taught in given semester.

**Student Outcomes**

Upon graduation, all Bachelor of Science in Computer Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Computer Science, B.S.C.S.

## Degree Offered

- Bachelor of Science in Computer Science (B.S.C.S.)

## Nature of the Program

Computer science is a discipline that involves the understanding and design of computational processes. The discipline ranges from a theoretical study of algorithms and information processing in general, to a practical design of efficient and reliable software that meets given specifications. This differs from most physical sciences, engineering included, that separate theoretical underpinnings of the science from applications within it. The computer science major prepares students for careers in fields such as software development, cybersecurity, machine learning, data analytics, virtual reality, and human computer interfaces. The Bachelor of Science degree in Computer Science is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Computer Science.

## Program Educational Objectives

The Program Educational Objectives (PEO) of the Bachelor of Science in Computer Science (B.S.C.S.) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduate will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

Click here to view the Suggested Plan of Study (p. 694)

## Curriculum in Computer Science

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Computer Science degree:

- Complete a minimum of 122 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 28 |
| Computer Science Program Requirements | | 73 |
| Total Hours | | 122 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses except CS 220, MATH 303, and MATH 378. | | |
| **Core Requirements** | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics (GEF 8) | 3 |
| Lab Science Electives I (GEF 2B) & II (GEF 8): Select two GEF 2B courses and accompanying labs | | 8 |
| Math and Statistics Elective: Select one MATH course numbered 251 or higher or STAT course numbered 300 or higher | | 3 |
| **Discrete Mathematics Requirement: Select one option from below:** | | **6** |
| Option A | | |
| CS 220 | Discrete Mathematics | |
| Elective: Select one additional MATH course numbered 251 or higher or STAT course numbered 300 or higher | | |
| Option B | | |
| MATH 303 | Introduction to the Concepts of Mathematics | |
| MATH 378 | Discrete Mathematics | |
| Total Hours | | 28 |

## Computer Science Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in CS 110, CS 110L, CS 111, and CS 111L. | | |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 210 | File and Data Structures | 4 |
| CS 310 | Principles of Programming Languages | 3 |

| | | |
|---|---|---|
| CS 320 | Analysis of Algorithms | 3 |
| CS 330<br>& 330L | Introduction to Software Engineering<br>and Introduction to Software Engineering Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| CS 410 | Compiler Construction | 3 |
| or CS 422 | Automata Theory | |
| CS 450 | Operating Systems Structure | 4 |
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310 | Microprocessor Systems | 3 |
| CPE 453 | Data and Computer Communications | 3 |
| CSEE 380 | Engineering for Societal Impact | 2 |
| CSEE 480S | Capstone Project - Design | 2 |
| or CSEE 480 | Capstone Project - Design | |
| CSEE 481S | Capstone Project - Implementation | 3 |
| or CSEE 481 | Capstone Project - Implementation | |
| WRIT 304 | Business and Professional Writing | 3 |
| or WRIT 305 | Technical Writing | |
| or WRIT 403 | Grant Proposal Writing for Community & Industry | |
| Free Elective *, **, *** | | 3 |
| CS Elective **, *** | | 3 |
| 400-level or higher course in CS subject code | | |
| Interdisciplinary Technical Electives *, **, *** | | 12 |
| 300-level or higher courses in BIOM, CPE, CS, CSEE, CYBE, EE, or ROBE subject codes | | |
| ART 386S | Gaming Design and Digital Narrative | |
| PHYS 351 | Introduction to Quantum Computing | |
| Statler College Elective **, *** | | 3 |
| Course offered by Statler College | | |
| Total Hours | | 73 |

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Students choosing an AOE in Cybersecurity are not required to fulfill the Free Elective requirement and must choose only a total of 3 credits from Interdisciplinary Technical Electives.

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A maximum of 3 credits from any applicable 490 course may be used toward elective requirements.

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A maximum of 3 credits from any applicable 491 course may be used toward elective requirements.

## Suggested Plan of Study

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical B.S. degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110<br>& 110L | 4 | CS 111<br>& 111L | 4 |
| ENGR 101 | 2 | ENGL 101 (GEF 1) | 3 |
| ENGR 191 | 1 | MATH 156 (GEF 8) | 4 |
| MATH 155 (GEF 3) | 4 | Lab Science Elective II (GEF 8) | 4 |
| Lab Science Elective I (GEF 2B) | 4 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 210 | 4 | CPE 271 & 271L | 4 |
| CS 330 & 330L | 4 | STAT 215 (GEF 8) | 3 |
| ENGL 102 (GEF 1) | 3 | GEF 5 | 3 |
| GEF 4 | 3 | GEF 6 | 3 |
| Discrete Mathematics Requirement Course | 3 | Discrete Mathematics Requirement Course | 3 |
| | 17 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 310 | 3 | CPE 310 | 3 |
| CS 320 | 3 | CSEE 380 | 2 |
| CS 350 | 3 | Interdisciplinary Technical Elective | 3 |
| WRIT 304, 305, or 403 | 3 | Interdisciplinary Technical Elective | 3 |
| Interdisciplinary Technical Elective | 3 | Math and Statistics Elective | 3 |
| | 15 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 410 or 422 | 3 | CSEE 481S | 3 |
| CS 450 | 4 | Interdisciplinary Technical Elective | 3 |
| CPE 453 | 3 | CS Elective | 3 |
| CSEE 480S | 2 | Free Elective | 3 |
| GEF 7 | 3 | Statler College Elective | 3 |
| | 15 | | 15 |

Total credit hours: 122

## Areas of Emphasis

- Artificial Intelligence
- Cybersecurity

## AREA OF EMPHASIS IN ARTIFICIAL INTELLIGENCE

| Code | Title | Hours |
|---|---|---|
| CS 472 | Artificial Intelligence | 3 |
| CS 474 | Introduction to Responsible and Safe AI | 3 |
| Select two of the following: | | 6 |
| CPE 420 | Introduction to Neural Networks | |
| CS 460 | Introduction to Big Data Engineering | |
| CS 473 | Introduction to Data Mining | |
| CS 476S | Applied Artificial Intelligence Studio | |
| EE 465 | Introduction to Digital Image Processing | |
| Total Hours | | 12 |

## AREA OF EMPHASIS IN CYBERSECURITY

| Code | Title | Hours |
|---|---|---|
| CPE 453 | Data and Computer Communications | 3 |
| CYBE 366 | Secure Software Development | 3 |
| CYBE 465 | Cybersecurity Principles and Practice | 3 |
| CYBE 467 | Ethical Hacking & Penetration Testing | 3 |
| Select one of the following: | | 3 |
| CYBE 435 | Computer Incident Response | |

| | | |
|---|---|---|
| CYBE 466 | Host Based Cyber Defense | |
| Total Hours | | 15 |

## Dual Degree Programs

- Lane Department Programs (p. 696)
- B.S.C.S. Computer Science and B.S. Robotics Engineering (p. 696)

## Lane Department Programs

Students can simultaneously pursue two bachelor's degrees in the Lane Department. To successfully complete both degrees, students must meet all requirements of both programs and complete a minimum of 150 credit hours. As part of those 150 credit hours, 30 credit hours must be unique from the primary degree course requirements. Exact credit hours and classes will vary per student based on their choice of technical electives and emphasis courses.

The most common Lane Department major combinations are:

- Computer Engineering and Electrical Engineering
- Computer Engineering and Computer Science

Please refer to the catalog descriptions of each individual program for course and academic requirements which can include minimum grades and GPA, and elective choices.

## B.S.C.S. Computer Science and B.S. Robotics Engineering

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Computer Science and a Bachelor of Science in Robotics Engineering degree:

- Complete a minimum of 152 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 30 |
| Computer Science and Robotics Engineering Program Requirements | | 104-105 |
| Total Hours | | 152-153 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |

| | | |
|---|---|---|
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses except CS 220. | | |
| CS 220 | Discrete Mathematics | 3 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 2B) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics (GEF 8) | 3 |
| Total Hours | | 30 |

## Computer Science and Robotics Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |
| CPE 453 | Data and Computer Communications | 3 |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 210 | File and Data Structures | 4 |
| CS 310 | Principles of Programming Languages | 3 |
| CS 320 | Analysis of Algorithms | 3 |
| CS 330<br>& 330L | Introduction to Software Engineering<br>and Introduction to Software Engineering Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| CS 410 | Compiler Construction | 3 |
| or CS 422 | Automata Theory | |
| CS 450 | Operating Systems Structure | 4 |
| ECON 201 | Principles of Microeconomics | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |

| | | |
|---|---|---|
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 460 | Automatic Controls | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| ROBE 413 | Robotic Manipulators | 3 |
| ROBE 414 | Robot Autonomy | 3 |
| WRIT 304 | Business and Professional Writing | 3 |
| or WRIT 305 | Technical Writing | |
| or WRIT 403 | Grant Proposal Writing for Community & Industry | |
| Capstone Design Sequence | | 6-7 |
| CSEE 380<br>& CSEE 480S<br>& CSEE 481S | Engineering for Societal Impact<br>and Capstone Project - Design<br>and Capstone Project - Implementation | |
| ROBE 471S<br>& ROBE 472S | Principles of Engineering Design<br>and Engineering Systems Design | |
| CS 4xx Technical Elective * | | 3 |
| Total Hours | | 104-105 |

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See BSCS (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/lanedepartmentofcomputerscienceand/computer_science/#majortext) degree for list of electives with the CS subject code in 400-level or higher.

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.C.S. / B.S. Robotics degree program that completes degree requirements in four and a half years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110<br>& 110L | 4 | CS 111<br>& 111L | 4 |
| ENGL 101 | 3 | ENGL 102 | 3 |
| ENGR 101 | 2 | MATH 156 | 4 |
| ENGR 191 | 1 | PHYS 111<br>& 111L | 4 |
| MATH 155 | 4 | | |
| GEF 5, 6, or 7 | 3 | | |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 210 | 4 | CPE 271<br>& 271L | 4 |
| MAE 202 | 1 | MAE 211<br>& 211L | 3 |
| MAE 241 | 3 | MAE 212L | 1 |
| MATH 251 | 4 | MAE 242 | 3 |
| PHYS 112<br>& 112L | 4 | MATH 261 | 4 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 220 | 3 | CPE 310 & 310L | 4 |
| CS 330 & 330L | 4 | CS 310 | 3 |
| EE 221 & 221L | 4 | CS 320 | 3 |
| ROBE 313 | 3 | EE 251 & 251L | 4 |
| MAE 243 | 3 | | |
| | 17 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 316 | 3 | CS 350 | 3 |
| MAE 342 | 3 | ECON 201 (GEF 4) | 3 |
| ROBE 412* | 3 | ROBE 413* | 3 |
| STAT 215 | 3 | WRIT 304, 305, or 403 | 3 |
| GEF 5, 6, or 7 | 3 | GEF 5, 6, or 7 | 3 |
| | 15 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 453 | 3 | CS 450 | 4 |
| CS 410 or 422* | 3 | MAE 460 | 3 |
| MAE 411 & 411L | 3 | ROBE 472S or CSEE 481S* | 3 |
| ROBE 414* | 3 | CS 400-level Technical Elective | 3 |
| ROBE 471S or CSEE 480S* | 3 | | |
| | 15 | | 13 |

Total credit hours: 152

*****

Courses only taught in given semester

## Program Educational Objectives

The Program Educational Objectives (PEO) of the Bachelor of Science in Computer Science (B.S.C.S.) program at West Virginia University are to produce graduates who will apply their knowledge of programming languages and paradigms, software development processes, hardware, services, the theory of computation, and other computing topics to achieve success in their careers in industry, research, government service, or academia. It is expected that early career graduates will demonstrate their adaptability to new technologies as they achieve success and proficiency in their profession, become recognized as leaders, and contribute to the betterment of society.

## Student Outcomes

Upon graduation, all Bachelor of Science students in Computer Science will have an ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.The Program Educational Objectives (PEO) of the computer science program at West Virginia University are to produce graduates who will apply their knowledge of programming languages and paradigms, software development processes, hardware, services, the theory of computation, and other computing topics to achieve success in their careers in industry, research, government service, or academia. It is expected that early career graduates will demonstrate their

adaptability to new technologies as they achieve success and proficiency in their profession, become recognized as leaders, and contribute to the betterment of society.

# Cybersecurity, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Students will be able to recognize the relevant issues in cybersecurity and have knowledge in the areas: data security, software security, system security, human security, organizational security and societal security. Students will be able to apply the ethical aspects and cyber laws in each cybersecurity area.  The Bachelor of Science degree in cybersecurity is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Cybersecurity

## Program Educational Objectives

The objective of the bachelor's degree program in Cybersecurity (CYBE) at West Virginia University is to produce graduates who have the attitudes that will ensure success in professional positions in business, industry, research, governmental service, or graduate study or professional school.

## Curriculum in Cybersecurity

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science with a major in Cybersecurity degree:

- Complete a minimum of 122 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade D+, D-, or D may apply towards a Statler College degree.

- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 22 |
| Cybersecurity Program Requirements | | 79 |
| Total Hours | | 122 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 373 | Introduction to Cryptography | 3 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| Lab Science Electives I (GEF 2B) & II (GEF 8): Select two GEF 2B courses and accompanying labs | | 8 |
| Total Hours | | 22 |

## Cybersecurity Program Requirements

| Code | Title | Hours |
|---|---|---|
| CYBE 266 | Foundations of Cybersecurity | 3 |
| CYBE 366 | Secure Software Development | 3 |
| CYBE 435 | Computer Incident Response | 3 |
| CYBE 460 | Foundation of Cybersecurity 2 | 3 |
| CYBE 466 | Host Based Cyber Defense | 3 |
| CYBE 467 | Ethical Hacking & Penetration Testing | 3 |
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310 | Microprocessor Systems | 3 |
| CPE 453 | Data and Computer Communications | 3 |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |

| | | |
|---|---|---|
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 210 | File and Data Structures | 4 |
| CS 220 | Discrete Mathematics | 3 |
| CS 330<br>& 330L | Introduction to Software Engineering<br>and Introduction to Software Engineering Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| CS 450 | Operating Systems Structure | 4 |
| CSEE 380 | Engineering for Societal Impact | 2 |
| CSEE 480S | Capstone Project - Design | 2 |
| or CSEE 480 | Capstone Project - Design | |
| CSEE 481S | Capstone Project - Implementation | 3 |
| or CSEE 481 | Capstone Project - Implementation | |
| BETH 357 | The Ethics of Information Technology | 3 |
| CRIM 431 | Cybercrime | 3 |
| SOC 101 | Introduction to Sociology (GEF 8) | 3 |
| CS/CYBE Electives (400-level or higher courses in CS or CYBE subject codes) * | | 6 |
| Lane Department Elective (400-level or higher course in BIOM, CPE, CS, CSEE, CYBE, EE, or ROBE subject codes) * | | 3 |
| Total Hours | | 79 |

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Excludes CYBE 465

## Suggested Plan of Study

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical B.S. degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110<br>& 110L | 4 | CS 111<br>& 111L | 4 |
| ENGR 101 | 2 | ENGL 101 (GEF 1) | 3 |
| ENGR 191 | 1 | MATH 156 (GEF 8) | 4 |
| MATH 155 (GEF 3) | 4 | Lab Science II | 4 |
| Lab Science I (GEF 2) | 4 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CYBE 266 | 3 | CPE 271<br>& 271L | 4 |
| CS 210 | 4 | CS 350 | 3 |
| CS 220 | 3 | MATH 373 | 3 |
| ENGL 102 (GEF 1) | 3 | SOC 101 (GEF 8) | 3 |
| GEF 4 | 3 | STAT 215 | 3 |
| | 16 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 310 | 3 | CYBE 366 | 3 |
| CPE 453 | 3 | CYBE 460 | 3 |
| CS 330<br>& 330L | 4 | CS 450 | 4 |
| CRIM 431 | 3 | BETH 357 | 3 |
| CSEE 380 | 2 | GEF 6 | 3 |
| | 15 | | 16 |

| Fourth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| CYBE 435 | 3 | CYBE 467 | 3 |
| CYBE 466 | 3 | CSEE 481S | 3 |
| CSEE 480S | 2 | CS/CYBE Elective | 3 |
| CS/CYBE Elective | 3 | Lane Department Elective | 3 |
| GEF 7 | 3 | GEF 5 | 3 |
| | 14 | | 15 |

Total credit hours: 122

## Area of Emphasis

- Artificial Intelligence

## AREA OF EMPHASIS IN ARTIFICIAL INTELLIGENCE

| Code | Title | Hours |
|---|---|---|
| CS 472 | Artificial Intelligence | 3 |
| CS 474 | Introduction to Responsible and Safe AI | 3 |
| Select two of the following: | | 6 |
| CPE 420 | Introduction to Neural Networks | |
| CS 460 | Introduction to Big Data Engineering | |
| CS 473 | Introduction to Data Mining | |
| CS 476S | Applied Artificial Intelligence Studio | |
| EE 465 | Introduction to Digital Image Processing | |
| Total Hours | | 12 |

## Lane Department Dual Degree Programs

Students can simultaneously pursue two bachelor's degrees in the Lane Department. To successfully complete both degrees, students must meet all requirements of both programs and complete a minimum of 150 credit hours. As part of those 150 credit hours, 30 credit hours must be unique from the primary degree course requirements. Exact credit hours and classes will vary per student based on their choice of technical electives and emphasis courses.

The most common Lane Department major combinations are:

- Computer Engineering and Electrical Engineering
- Computer Engineering and Computer Science

Please refer to the catalog descriptions of each individual program for course and academic requirements which can include minimum grades and GPA, and elective choices.

## Program Educational Objectives

The objective of the bachelor's degree program in Cybersecurity (CYBE) at West Virginia University is to produce graduates who have the attitudes that will ensure success in professional positions in business, industry, research, governmental service, or graduate study or professional school

## Major Learning Outcomes

### CYBERSECURITY

Students will be able to recognize the relevant issues in cybersecurity and have knowledge in the areas: data security, software security, system security, human security, organizational security and societal security. Students will be able to apply the ethical aspects and cyber laws in each cybersecurity area.

Upon graduation, all students obtaining a major in cybersecurity will be able to:

1. Identify a range of current problems and threats in cybersecurity.
2. Detect and analyze cybersecurity attack and practice defense strategies against them.
3. Write secure software.

4. Analyze networks and network security.
5. Plan, implement, and assess security protection mechanisms in computer systems and networks.

# Electrical Engineering, B.S.E.E.

## Degree Offered

- Bachelor of Science in Electrical Engineering (B.S.E.E.)

## Nature of the Program

Electrical engineers design, develop, test, and oversee the manufacture and maintenance of equipment that uses electricity, including subsystems for power generation and transmission, sensors, electronics, instrumentation, controls, communications and signal processing. The Bachelor of Science degree in Electrical Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Electrical Engineering.

In the first two years of electrical engineering, coursework is limited to those subjects that are essential as preparatory courses for more technical courses in the third and fourth years. Fundamental courses in electrical engineering are introduced in the second year. In the third and fourth years, the curriculum provides advanced instruction through required courses and electives. These electives are included in the curriculum to allow the student to acquire additional depth in the student's selected field of electrical engineering.

## Program Educational Objectives

The Program Educational Objectives (PEO) of the Electrical Engineering (EE) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduates will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

Click here to view the Suggested Plan of Study (p. 707)

## Curriculum in Electrical Engineering

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Electrical Engineering degree:

- Complete a minimum of 120 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 30 |
| Electrical Engineering Program Requirements | | 66 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |

| | | |
|---|---|---|
| STAT 215 | Introduction to Probability and Statistics | 3 |
| Math/Science Elective (Select one of the following): | | 3 |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| MATH 343 | Introduction to Linear Algebra | |
| MATH 375 | Applied Modern Algebra | |
| MATH 420 | Numerical Analysis 1 | |
| MATH 441 | Applied Linear Algebra | |
| MATH 456 | Complex Variables | |
| MATH 465 | Partial Differential Equations | |
| PHYS 211 | Introduction to Mathematical Physics | |
| PHYS 314 | Introductory Modern Physics | |
| PHYS 321 | Optics | |
| PHYS 331 | Theoretical Mechanics 1 | |
| PSIO 241 | Elementary Physiology | |
| PSIO 441 | Mechanisms of Body Function | |
| STAT 312 | Intermediate Statistical Methods | |
| STAT 331 | Sampling Methods | |
| STAT 461 | Introduction to Probability Theory | |
| Total Hours | | 30 |

## Electrical Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271 | Introduction to Digital Logic Design | 3 |
| CPE 271L | Digital Logic Laboratory | 1 |
| CPE 310 | Microprocessor Systems | 3 |
| CPE 310L | Microprocessor Systems Laboratory | 1 |
| CS 110 | Introduction to Computer Science | 3 |
| CS 110L | Introduction to Computer Science Laboratory | 1 |
| EE 221 | Introduction to Electrical Engineering | 3 |
| EE 221L | Introduction to Electrical Engineering Laboratory | 1 |
| EE 223 | Electrical Circuits | 3 |
| EE 223L | Electrical Circuits Laboratory | 1 |
| EE 327 | Signals and Systems 1 | 3 |
| EE 329 | Signals and Systems 2 | 3 |
| EE 335 | Electromechanical Energy Conversion and Systems | 3 |
| EE 335L | Electromechanical Energy Conversion and Systems Laboratory | 1 |
| EE 345 | Engineering Electromagnetics | 3 |
| EE 251 | Digital Electronics | 3 |
| EE 251L | Digital Electronics Laboratory | 1 |
| EE 355 | Analog Electronics | 3 |
| EE 355L | Analog Electronics Laboratory | 1 |
| CSEE 380 | Engineering for Societal Impact | 2 |
| CSEE 480S | Capstone Project - Design | 2 |
| or CSEE 480 | Capstone Project - Design | |
| CSEE 481S | Capstone Project - Implementation | 3 |
| or CSEE 481 | Capstone Project - Implementation | |
| Engineering Science Elective (Select one of the following): | | 3 |

| | | |
|---|---|---|
| CE 443 | Environmental Science and Technology | |
| CHE 221 | Material and Energy Balance | |
| IENG 316 | Industrial Quality Control | |
| IENG 377 | Engineering Economy | |
| MAE 241 | Statics | |
| MAE 320 | Thermodynamics | |
| MSEN 350 | Materials Science | |
| EE Technical Elective (400-level or higher course in EE subject code) * | | 3 |
| Lane Department Electives (400-level or higher courses in BIOM, CPE, CS, CSEE, CYBE, EE, or ROBE subject codes) * | | 6 |
| Technical Electives (300-level or higher courses in BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENVE, ETEC, IENG, MAE, MINE, PNGE, ROBE, BIOL, CHEM, PHYS, STAT, or MATH subject codes) * | | 6 |
| Total Hours | | 66 |

*

A maximum of 3 credit hours of any 490 or 491 may be used toward elective requirements.

## Suggested Plan of Study

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.E.E. degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGR 102 | 3 |
| ENGR 101 | 2 | MATH 156 (GEF 8) | 4 |
| ENGR 191 | 1 | PHYS 111 & 111L (GEF 8) | 4 |
| MATH 155 (GEF 3) | 4 | GEF 6 | 3 |
| GEF 4 | 3 | | |
| GEF 5 | 3 | | |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 271 | 3 | CS 110 | 3 |
| CPE 271L | 1 | CS 110L | 1 |
| EE 221 | 3 | EE 223 | 3 |
| EE 221L | 1 | EE 223L | 1 |
| MATH 251 | 4 | EE 251 | 3 |
| PHYS 112 & 112L (GEF 8) | 4 | EE 251L | 1 |
| | | MATH 261 | 4 |
| | 16 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 327 | 3 | CPE 310 | 3 |
| EE 335 | 3 | CPE 310L | 1 |
| EE 335L | 1 | EE 329 | 3 |
| EE 355 | 3 | EE 345 | 3 |
| EE 355L | 1 | Math/Science Elective | 3 |
| STAT 215 | 3 | CSEE 380 | 2 |
| ENGL 102 (GEF 1) | 3 | | |
| | 17 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CSEE 480S | 2 | CSEE 481S | 3 |

| | | |
|---|---|---|
| EE Technical Elective | 3 Lane Department Elective | 3 |
| Engineering Science Elective | 3 Technical Elective | 3 |
| Lane Department Elective | 3 Technical Elective | 3 |
| GEF 7 | 3 | |
| | 14 | 12 |

Total credit hours: 120

## Area of Emphasis

- Artificial Intelligence

### AREA OF EMPHASIS IN ARTIFICIAL INTELLIGENCE

| Code | Title | Hours |
|---|---|---|
| CS 472 | Artificial Intelligence | 3 |
| CS 474 | Introduction to Responsible and Safe AI | 3 |
| Select two of the following: | | 6 |
| CPE 420 | Introduction to Neural Networks | |
| CS 460 | Introduction to Big Data Engineering | |
| CS 473 | Introduction to Data Mining | |
| CS 476S | Applied Artificial Intelligence Studio | |
| EE 465 | Introduction to Digital Image Processing | |
| Total Hours | | 12 |

## Accelerated Program

- BSEE Electrical Engineering and MSEE Electrical Engineering (p. 708)

## Accelerated Bachelor's/Master's in Electrical Engineering

Students must fulfill all degree requirements for the B.S.EE in Electrical Engineering and all the requirements of the M.S.EE in Electrical Engineering. Students must also meet all the requirements of the ABM.

### ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 108 |
| Shared Bachelor's/Master's Coursework | | 12 |
| Graduate Coursework | | 19 |
| Total Hours | | 139 |

### SHARED COURSEWORK CURRICULUM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Courses completed must be at the 400 or 500 level. At least one course must be at the 500 level. | | |
| See BSEE and MSEE for list of elective course options | | |
| **Courses:** | | |
| EE Technical Elective | | 3 |
| Lane Department Elective | | 3 |
| Lane Department Elective | | 3 |
| Technical Elective | | 3 |
| Total Hours | | 12 |

### SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as closely as possible; all prerequisites and concurrent requirements must be observed. A typical accelerated ABM program in electrical engineering with coursework option that completes degree requirements in five years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGR 102 | 3 |
| ENGR 101 | 2 | MATH 156 (GEF 8) | 4 |
| ENGR 191 | 1 | PHYS 111 & PHYS 112L (GEF 8) | 4 |
| MATH 155 (GEF 3) | 4 | GEF 6 | 3 |
| GEF 4 | 3 | | |
| GEF 5 | 3 | | |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 271 & 271L | 4 | CS 110 & 110L | 4 |
| EE 221 & 221L | 4 | EE 223 & 223L* | 4 |
| MATH 251 | 4 | EE 251 & 251L | 4 |
| PHYS 112 & 112L (GEF 8) | 4 | MATH 261 | 4 |
| | 16 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 327* | 3 | CPE 310 & 310L | 4 |
| EE 335 & 335L* | 4 | CSEE 380 | 2 |
| EE 355 & 355L | 4 | EE 329* | 3 |
| ENGL 102 (GEF 1) | 3 | EE 345 | 3 |
| STAT 215 | 3 | Math/Science Elective | 3 |
| | 17 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CSEE 480 | 2 | CSEE 481 | 3 |
| Engineering Science Elective** | 3 | EE Technical Elective (MSEE CW Elective, 400 level +)** | 3 |
| Lane Department Elective (400 level +)** | 3 | Technical Elective (MSEE CW Elective, 500 level +)** | 3 |
| Lane Department Elective (400 level +)** | 3 | Technical Elective | 3 |
| GEF 7 | 3 | | |
| | 14 | | 12 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 796 | 1 | MSEE Core Course | 3 |
| MSEE Core Course | 3 | MSEE AOE or Additional Elective | 3 |
| MSEE Core Course | 3 | MSEE AOE or Additional Elective | 3 |
| MSEE AOE or Additional Elective | 3 | | |
| | 10 | | 9 |

Total credit hours: 139

*****

Offered once per year in semester shown.

******

Indicates shared course between BS and MS programs

## Lane Department Dual Degree Programs

Students can simultaneously pursue two bachelor's degrees in the Lane Department. To successfully complete both degrees, students must meet all requirements of both programs and complete a minimum of 150 credit hours. As part of those 150 credit hours, 30 credit hours must be unique from the primary degree course requirements. Exact credit hours and classes will vary per student based on their choice of technical electives and emphasis courses.

The most common Lane Department major combinations are:

- Computer Engineering and Electrical Engineering
- Computer Engineering and Computer Science

Please refer to the catalog descriptions of each individual program for course and academic requirements which can include minimum grades and GPA, and elective choices.

## Program Educational Objectives

The Program Educational Objectives (PEO) of the Bachelor of Science in Electrical Engineering (B.S.E.E.) program at West Virginia University is to produce graduates who will apply their knowledge and skills to achieve success in their careers in industry, research, government service or graduate study. It is expected that in the first five years after graduation our graduate will achieve success and proficiency in their profession, be recognized as leaders, and contribute to the well-being of society.

## Student Outcomes

Upon graduation, all Bachelor of Science in Electrical Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Department of Industrial & Management Systems Engineering

## Degree Offered

- Bachelor of Science in Industrial Engineering (B.S.I.E.)
- Accelerated Bachelor's/Master's Program in Industrial Engineering

## Nature of the Program

Industrial engineering is the discipline of engineering concerned with the design, improvement, and installation of integrated systems of people, material, information, equipment, and energy to assure performance, reliability, maintainability, schedule adherence, and cost control. Industrial engineers look at the "big picture" of an operation or system and bridge the gap between management and operations. They deal with and motivate people as well as determine what tools should be used and how they should be used. Industrial engineers use computers and sophisticated software as tools to solve complicated problems to design, quantify, predict, and evaluate the performance of all types of complex technologies and systems.

The mission of the B.S.I.E. program at WVU is to advance the industrial engineering profession through innovative and high-quality academic programs, relevant research, and professional services that address the needs of West Virginia, the nation, and the world. The industrial engineering students at WVU are taught to draw upon specialized knowledge and skills in the mathematical, physical, and social sciences, together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems. They are introduced to state-of-the-art software in their coursework for data analysis, information management, scheduling, quality control, optimization, and other practices and procedures used by the industrial engineering profession in highly evolving industries of the 21st century.

The discipline of industrial engineering has a rich, ever-increasing diversity of applications. Traditionally, industrial engineers have been employed by manufacturing companies to do facilities and plant design, plant management, quality control, ergonomics, and production engineering. Today, however, industrial engineers are employed in almost any type of industry, business, or institution. Because of their skills, industrial engineers are more widely distributed and in greater demand among more industries than any other engineering discipline.

As an industrial engineer educated at WVU, you can expect to have employment opportunities in manufacturing companies, insurance companies, banks, hospitals, technical sales, pharmaceutical companies, retail organizations including e-business, airlines, government agencies, consulting firms, construction, transportation, public utilities, social service, electronics, digital and wireless communications, etc. The diverse orientation of industrial engineering, coupled with the skills and training you receive at WVU, make you a prime source of management talent that offers unique professional advancement opportunities.

The B.S.I.E. program at WVU devotes considerable attention to the individual needs of the student. It is committed to develop student strengths in technical abilities, personal development, problem solving, and practical experience, preparing them for careers in industry, business, government, or advanced professional degrees. One of the defining attributes in the success of the department is the dedication and talent of its faculty and staff. The aggregate careers of our faculty and staff represent over 300 years of service to students at WVU. In these 300 years of service are embodied the wisdom and experience to successfully prepare industrial engineers for the 21st century.

The faculty works extensively with nearly 300 sophomore, junior, and senior students in such areas as communication skills, personal growth and development, creation of summer internship opportunities, senior capstone project experience, and permanent job opportunities. As faculty and staff, we are committed to provide for our students:

- A friendly, open-door, collegial environment
- Personable faculty mentoring students
- Teaching concepts and techniques for today's demands
- Quality courses that are innovative and challenging
- Placement in the jobs they want
- Notable life-long successes

The Bachelor of Science degree in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Industrial Engineering

## Program Educational Objectives

Drawing from the University's mission, the departmental mission, the needs of our constituents, and ABET Engineering Criteria, the following educational objectives were developed. Within a few years of graduation, an IE graduate...

- Creates value by applying the appropriate industrial engineering methods and tools to organizations through critical and creative thinking, structured problem solving, analysis, evaluation, and improvement of systems and processes.
- Communicates effectively across disciplines and cultures to influence decisions and lead activities in support of organizational goals and objectives.
- On a continual basis, pursues professional development and inquiry via graduate study, continuing education and/or training and development through employer-based or industry/sector groups.
- Works collaboratively as both a member and leader of cross-functional teams comprised of members with varying experience levels, organizational backgrounds, positions, and geographic locations.
- Demonstrates ethical standards in designing and implementing innovative systems or processes taking into account social responsibility, global responsibility, and overall benefit to organizational constituents.

## FACULTY

### CHAIR

- Ashish Nimbarte - Ph.D., P.E., C.P.E., C.E.M., C.ErgHF (Louisiana State University)
  Occupational biomechanics, Human factors engineering, Industrial ergonomics, Industrial hygiene, Occupational safety and health, Energy efficiency and sustainability

### PROFESSORS

- B. Gopalakrishnan - Ph.D., P.E., CEM (Virginia Polytechnic Institute and State University)
  Manufacturing processes and systems engineering, Information systems, Artificial intelligence applications, Expert systems development, Mechatronics, Facilities planning and materials handling, Databases, Industrial energy/waste productivity management
- Ashish Nimbarte - Ph.D., P.E., C.P.E., C.E.M., C.ErgHF (Louisiana State University)
  Occupational biomechanics, Human factors engineering, Industrial ergonomics, Industrial hygiene, Occupational safety and health, Energy efficiency and sustainability
- David Wyrick - Ph.D., P.E., C.P.E.M. (University of Missouri-Rolla)
  Associate Dean for Academic Affairs, Engineering management, Engineering education, Effective management of technology in SMEs

## ASSOCIATE PROFESSOR

- Alan McKendall Jr. - Ph.D. (University of Missouri - Columbia)
  Operations research, Meta-heuristics, Facilities layout and materials handling, Project scheduling, Integrated production systems

## ASSISTANT PROFESSORS

- JuHyeong Ruy - Ph.D. (University of Waterloo, Canada)
  Occupational Safety & Health, Immersive safety training, AI-driven wearable risk assessment, Industrial ergonomics
- Avishek Choudhury - Ph.D. (Stevens Institute of Technology)
  Human Factors, Artificial Intelligence, Occupational Safety & Health, Medical Informatics, Digital Health, Patient Safety
- Imtiaz Ahmed - Ph.D. (Texas A&M University)
  Data science, Machine learning, Quality control and inventory management
- Zhichao Liu - Ph.D. (Texas Tech University)
  Manufacturing processes, Metal additive manufacturing, Sustainable manufacturing
- Zeyu Liu - Ph.D. (The University of Tennessee, Knoxville)
  Optimization, Markov models learning, and agent-based simulation

## ADJUNCT AND VISITING PROFESSORS

- Lorenzo G. Cena - Ph.D. (University of Iowa)
  Occupational health and safety, Aerosol generation and characterization, Exposure assessment
- Christopher Coffey - Ph.D. (West Virginia University)
  Occupational safety and health, Assessment, Evaluation of respiratory protective equipment
- Ren Dong - Ph.D. (Concordia University)
  Human factors engineering, Ergonomics, Safety engineering
- John R. Etherton - Ph.D. (West Virginia University)
  Safety engineering
- Martin Harper - Ph.D. (London School of Hygiene and Tropical Medicine)
  Industrial hygiene, Exposure assessment
- James Harris - Ph.D., P.E. (West Virginia University)
  Safety, Human factors
- Hongwei Hsiao - Ph.D. (University of Michigan)
  Safety, Human factors
- Kevin Michael - Ph.D. (The Pennsylvania State University)
  Acoustics, Hearing protection, Industrial hygiene
- Christopher Pan - Ph.D. (University of Cincinnati)
  Human factors engineering, Safety engineering, Ergonomics
- Ju-Hyeong Park - Sc.D., M.P.H., C.I.H. (Harvard)
  Industrial hygiene, Exposure assessment
- M. Abbas Virgi - Sc.D., C.I.H. (University of Massachusetts)
  Exposure assessment, Epidemiology, Biostatistics
- Ziqing Zhuang - Ph.D. (West Virginia University)
  Exposure assessment, Assessment and evaluation of respiratory protective equipment

## LECTURERS

- Alvin Guthrie - B.S.I.E. (West Virginia University)
  Operations management, Manufacturing systems, Production planning and control
- Daniel Kniska - M.S.I.E. (West Virginia University)
  Engineering economy, Statistics, Production planning and control
- Ozan Ozbeker - B.S.I.E. (West Virginia University)
  Data science and analytics, Data engineering

## TEACHING ASSISTANT PROFESSOR

- Makenzie Keepers - Ph.D. (West Virginia University)
  Capstone project design, Engineering education, Statistical analysis
- Omar Al-Shebeeb - Ph.D. (West Virginia University)
  Manufacturing processes, Project management, Quality control, Facility layout

- Jeremy Gouzd - Ph.D., (West Virginia University)
  Occupational safety and health, Risk assessment, Engineering safety

### ADJUNCT INSTRUCTOR

- Jannette Perez Barbosa - M.S.I.E., P.E. (University of Puerto Rico-Mayaguez)
  Project management, Lean six sigma
- Ronald Edward Giachetti - Ph.D. (North Carolina State University
  Engineering management, Systems engineering, Digital engineering
- Nelson F. Rekos - B.S.M.E. (University of Maryland), MBA (West Virginia University)
  Project management, Materials science, Advanced energy systems, Government Contracting

### PROFESSORS EMERITI

- Jack Byrd Jr. - Ph.D., P.E. (West Virginia University)
  Operations research, Workforce development, Work design, Integrated product development
- Rashpal S. Ahluwalia - Ph.D., P.E. (Western Ontario University)
  Manufacturing systems, Quality and reliability engineering, Robotics and automation
- Robert C. Creese - Ph.D., P.E. (Pennsylvania State University)
  Manufacturing processes/systems, Foundry engineering, Cost engineering, Engineering economics
- Daniel E. Della-Giustina - Ph.D. (Michigan State University)
  Playground and recreation safety, Sport safety, Highway and traffic management, Safety, fire, and emergency response
- Steven Guffey - Ph.D., C.I.H. (North Carolina State University)
  Ventilation systems theory and design, Noise measurement and control, Exposure assessment
- Wafik Iskander - Ph.D., P.E. (Texas Tech University)
  Operations research and optimization, Simulation modeling and analysis, Production planning and control, Applied statistics, Energy efficiency, Transportation planning
- Majid Jaridi - Ph.D. (University of Michigan)
  Statistics, Quality control, Forecasting and transportation research
- Warren Myers - Ph.D., C.I.H. (West Virginia University)
  Industrial hygiene and safety, Worker exposure assessment and modeling, Aerosol filtration, Occupational respiratory protection design and testing
- Ralph W. Plummer - Ph.D. (West Virginia University)
  Systems safety engineering, Energy conservation, Human factors, Ergonomics

### ASSOCIATE PROFESSOR EMERITUS

- Andrew Sorine - Ph.D. (West Virginia University)
  Benchmarking, Safety and health programs, Safety management information systems

### CAREER & PROFESSIONAL MENTOR

- Philomena Krosmico - M.S.I.E. (West Virginia University)

### RESEARCH ASSOCIATE

- Christopher Moore - Ph.D. (West Virginia University)
  Energy efficiency and sustainability, Occupational safety and health

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Industrial Engineering degree:

- Complete a minimum of 129 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree

- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 28 |
| Industrial Engineering Program Requirements | | 80 |
| Total Hours | | 129 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| Calculus I (GEF 3): | | 4 |
| MATH 155 | Calculus 1 | |
| MATH 156 | Calculus 2 (GEF 8 ) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| Required Science Elective (Select one of the following) (GEF 8): | | 4 |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |

| | |
|---|---|
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory |
| Total Hours | 28 |

## Industrial Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics | 3 |
| EE 221 | Introduction to Electrical Engineering | 3 |
| EE 221L | Introduction to Electrical Engineering Laboratory | 1 |
| MAE 241 | Statics | 3 |
| MAE Elective (Select one of the following): | | 3 |
| MAE 242 | Dynamics | |
| MAE 243 | Mechanics of Materials | |
| MAE 320 | Thermodynamics | |
| MAE 331 | Fluid Mechanics | |
| IENG 200 | Fundamentals of Industrial Engineering | 1 |
| IENG 213 | Engineering Statistics | 3 |
| IENG 220<br>& 220L | Re-Engineering Management Systems<br>and Re-Engineering Management Systems Laboratory | 3 |
| IENG 301 | Materials and Costing | 3 |
| IENG 302 | Manufacturing Processes | 2 |
| IENG 302L | Manufacturing Processes Laboratory | 1 |
| IENG 305 | Introduction to Systems Engineering | 3 |
| IENG 314 | Advanced Analysis of Engineering Data | 3 |
| IENG 316 | Industrial Quality Control | 3 |
| IENG 331 | Computer Applications in Industrial Engineering | 3 |
| IENG 343 | Production Planning and Control | 3 |
| IENG 350 | Introduction to Operations Research | 3 |
| IENG 360 | Human Factors Engineering | 3 |
| IENG 377 | Engineering Economy | 3 |
| IENG 445 | Project Management for Engineers | 3 |
| IENG 446 | Plant Layout/Material Handling | 3 |
| IENG 455 | Simulation by Digital Methods | 3 |
| IENG 471 | Design of Productive Systems 1 (Fulfills Writing and Communications Skills Requirement) | 3 |
| IENG 472 | Design of Productive Systems 2 | 3 |
| IENG Technical Electives (Any 400 and 500 level IENG courses) | | 6 |
| Additional Technical Electives (Select two of the following): | | 6 |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | |
| CE 414 | Construction Engineering | |
| CS 430 | Advanced Software Engineering | |
| CS 440 | Database Design and Theory | |
| BIOM 425 | Bioengineering | |
| GEOG 350<br>& 350L | Geospatial Problem Solving<br>and Geospatial Problem Solving Laboratory | |
| IENG 400 level courses | | |
| IENG 500 level courses | | |
| MAE 242 | Dynamics | |
| MAE 320 | Thermodynamics | |
| MAE 331 | Fluid Mechanics | |
| MAE 427 | Heating, Ventilating, and Air Conditioning | |

| | |
|---|---|
| MATH 343 | Introduction to Linear Algebra |
| MATH 420 | Numerical Analysis 1 |
| MATH 441 | Applied Linear Algebra |
| SAFM 470 | Managing Construction Safety |
| STAT 421 | Statistical Analysis System (SAS) |
| STAT 541 | Applied Multivariate Analysis |
| Total Hours | 80 |

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.I.E. degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 2B) | 4 | ENGR 102 | 3 |
| ENGL 101 (GEF 1) | 3 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 101 | 2 | MATH 156 (GEF 8) | 4 |
| ENGR 191 | 1 | GEF 6 | 3 |
| MATH 155 (GEF 3) | 4 | GEF 7 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IENG 200 | 1 | IENG 331 | 3 |
| IENG 213 | 3 | IENG 377 | 3 |
| IENG 220 & 220L | 3 | MATH 261 | 4 |
| ENGL 102 (GEF 1) | 3 | MAE Elective | 3 |
| MATH 251 | 4 | Science Elective and Laboratory | 4 |
| MAE 241 | 3 | | |
| | 17 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221 & 221L | 4 | ECON 201 | 3 |
| IENG 301 | 3 | IENG 302 & 302L | 3 |
| IENG 305 | 3 | IENG 314 | 3 |
| IENG 343 | 3 | IENG 316 | 3 |
| IENG 360 | 3 | IENG 350 | 3 |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IENG 445 | 3 | ECON 202 | 3 |
| IENG 455 | 3 | IENG 446 | 3 |
| IENG 471 | 3 | IENG 472 | 3 |
| IENG Technical Elective | 3 | IENG Technical Elective | 3 |
| Technical Elective | 3 | Technical Elective | 3 |
| | 15 | | 15 |

Total credit hours: 129

## Accelerated Program

- B.S.I.E. Industrial Engineering and M.S.I.E. Industrial Engineering (p. 717)

## Accelerated Bachelor's/Master's in Industrial Engineering

Students must fulfill all degree requirements for the B.S.I.E. in Industrial Engineering and all the requirements of the M.S.I.E. in Industrial Engineering. Students must also meet all the requirements of the ABM.

### ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 117 |
| Shared Bachelor's/Master's Coursework | | 12 |
| Graduate Coursework | | 19 |
| Total Hours | | 148 |

### SHARED COURSEWORK CURRICULUM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Courses completed must be at the 400 or 500 level. At least one course must be at the 500 level. | | |
| See BSIE and MSIE for list of elective course options | | |
| **Courses:** | | |
| IENG 455 | Simulation by Digital Methods | 3 |
| Elective Course | | 3 |
| Elective Course | | 3 |
| Elective Course | | 3 |
| Total Hours | | 12 |

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical ABM B.S.I.E. & M.S.I.E degree program that completes degree requirements in five years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (GEF 3) | 4 | MATH 156 | 4 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | PHYS 111 & 111L | 4 |
| CHEM 115 & 115L (GEF 2B) | 4 | GEF 6 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 7 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 251 | 4 | MATH 261 | 4 |
| MAE 241 | 3 | IENG 213 | 3 |
| ENGL 102 (GEF 1) | 3 | IENG 377 | 3 |
| IENG 200 | 1 | EE 221 | 3 |
| IENG 220 & 220L | 3 | EE 221L | 1 |
| Required Science Elective | 4 | ECON 201 | 3 |
| BIOL 115 & 115L | | | |

| | | | |
|---|---|---|---|
| CHEM 116<br>& 116L | | | |
| PHYS 112<br>& 112L | | | |
| | 18 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IENG 301 | 3 | ECON 202 | 3 |
| IENG 305 | 3 | IENG 302 | 2 |
| IENG 314 | 3 | IENG 302L | 1 |
| IENG 350 | 3 | IENG 316 | 3 |
| IENG 360 | 3 | IENG 331 | 3 |
| | | IENG 343 | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IENG 445 | 3 | IENG 446 | 3 |
| IENG 455* | 3 | IENG 472 | 3 |
| IENG 471 | 3 | Elective Course* | 3 |
| Technical Elective | 3 | Elective Course* | 3 |
| Elective Course* | 3 | MAE Elective | 3 |
| | 15 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Foundation Course | 3 | Foundation Course | 3 |
| Foundation Course | 3 | MS Elective Course | 3 |
| MS Elective Course | 3 | MS Elective Course | 3 |
| | | IENG 796 | 1 |
| | 9 | | 10 |

Total credit hours: 148

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Indicates that this course will be shared with the MS requirements

# Major Learning Outcomes

## INDUSTRIAL ENGINEERING

Upon graduation, all Bachelor of Science students in Industrial Engineering will have acquired the:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Department of Mechanical, Materials & Aerospace Engineering

## Degrees Offered

- Bachelor of Science in Aerospace Engineering (B.S.A.E.)
- Bachelor of Science in Mechanical Engineering (B.S.M.E.)
- Dual Degree in Aerospace and Mechanical Engineering
- Bachelor of Science in Robotics Engineering (B.S.)
- Accelerated Bachelor's/Master's Program in Aerospace Engineering
- Accelerated Bachelor's/Master's Program in Mechanical Engineering

## Nature of the Programs

The Mechanical, Materials and Aerospace Department (MMAE) offers undergraduate degrees in aerospace engineering, mechanical engineering and robotics engineering. Our degree programs provide a strong theoretical background as well as practical experience gained through projects and hands-on research. Our undergraduate programs provide students with the skills required for a broad range of jobs in industry, government, academia, business, and research. We begin with a strong foundation in mathematics and add a wide spectrum of courses on the fundamentals of engineering mechanics, thermodynamics, fluid mechanics, and engineering design. Each of the degree programs provides a broad spectrum of knowledge in the field and allows for specialization through electives, independent research projects, and learning abroad opportunities. Both undergraduate degrees include several options for capstone design experience in the final year of study. The program also provides a broad general education necessary to put technical knowledge into perspective.

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## FACULTY

### CHAIR

- Jason N. Gross - Ph.D. (West Virginia University)
  Unmanned Aerial Vehicles, Avionic Systems, Flight Testing

### PROFESSORS

- V'yacheslav Akkerman - Ph.D. (Umeå University, Sweden)
  Turbulent Combustion, Flame Turbulization
- Ever J. Barbero - Ph.D. (Virginia Polytechnic Institute & State University)
  Materials, Experimental and Computational Mechanics
- Wade W. Huebsch - Ph.D. (Iowa State University)
  Fluid Mechanics, CFD, Numerical Methods
- Bruce S. Kang - Ph.D. (University of Washington)
  Experimental Mechanics, Advanced Materials
- Hailin Li - Ph.D. (University of Calgary, Canada)
  Combustion, Emissions, Fuel Efficiency of Vehicles and IC Engines
- Xingbo Liu - Ph.D. (University of Science and Technology of China, Beijing)
  Materials Science
- Pedro J. Mago - Ph.D. (University of Florida)
  Heat and power systems, building energy simulation, and waste heat recovery technologies
- Victor H. Mucino - Dr.Eng., P.E. (University of Wisconsin-Milwaukee)
  Mechanical Engineering Design, CAD, Finite Element Analysis
- Marcello R. Napolitano - Ph.D. (Oklahoma State University)
  Aircraft Stability and Control, Feedback Control, Unmanned Airborne Vehicles (UAVs)
- Mario Perhinschi - Ph. D. (University of Bucharest, Romania)
  Flight Modeling and Simulation
- Songgang Qiu - Ph. D.(University of Minnesota)
  Thermodynamics, Heat Transfer
- Edward M. Sabolsky - Ph.D. (The Pennsylvania State University)
  Materials, Ceramic Science
- Nithi T. Sivaneri - Ph.D. (Stanford University)
  Structural Mechanics, Composite Materials, FEM, Numerical Methods
- Xueyan Song - Ph.D. (Zhejiang University, China)
  Materials Science, Electron Microscopy

## ASSOCIATE PROFESSORS

- Omid Askari - Ph.D. (Northeastern University)
  Engines, GasTurbines, Alternate Fuels
- Cosmin E. Dumitrescu - Ph.D. (University of Alabama)
  Combustion, Alternate Fuels, IC Engines
- Jason N. Gross - Ph.D. (West Virginia University)
  Unmanned Aerial Vehicles, Avionic Systems, Flight Testing
- Yu Gu - Ph.D. (West Virginia University)
  Robotic Systems, Sensor Fusion
- Derek Johnson - Ph.D. P. E. (West Virginia University)
  Alternative Fuels, Engines and Emissions
- David S. Mebane - Ph.D. (Georgia Institute of Technology)
  Fuel Cells, Mutli Scale Simulation of Chemical and Electrochemical Systems
- Osama Mukdadi - Ph.D. (University of Colorado)
  Bioengineering, Acoustics, Solid Mecanics and Materials
- Terence D. Musho - Ph.D. P.E. (Vanderbilt University)
  Nanoscale Thermal and Electrical Transport, Direct Energy Conversion
- Andrew C. Nix - Ph.D. (Virginia Polytechnic Institute and State University)
  Turbines, Engines and Emissions
- Guilherme Augusto Silva Pereira - Ph.D. (Federal University of Minas Gerais)
  Field Robotics, Autonomous Vehicles
- Loren Rieth - Ph.D. (University of Florida)
  Microelectrode Implants, Electrical & Neural Prosthesis
- Konstantinos Sierros - Ph.D. (University of Birmingham, U. K.)
  Flexible Optoelectronic Devices, Tribology, Materials for Renewable Energy
- Arvind Thiruvengadam - Ph.D. (West Virginia University)
  Emissions of Heavy-Duty Internal Combustion Engines
- Gregory J. Thompson - Ph.D. (West Virginia University)
  Thermodynamics, Machine Design
- W. Scott Wayne - Ph.D. (West Virginia University)
  Machine Design, Alternative Fuels

## ASSISTANT PROFESSORS

- Piyush M. Mehta - Ph.D. (University of Kansas)
  Astrodynamics, Space Situational Awareness
- Nicholas Szczecinski - Ph.D. (Case Western Reserve University)
  Robotics
- Xi Yu - Ph.D. (Boston University)
  Robotics

## TEACHING ASSOCIATE PROFESSOR

- Patrick H. Browning - Ph.D. (West Virginia University)
  Aerodynamics, Aircraft Design

## TEACHING ASSISTANT PROFESSORS

- Christopher Griffin - Ph.D. (West Virginia University)
  Aerodynamics, Fluid Mechanics
- Andrew P. Rhodes - Ph.D. (West Virginia University)
  Aerospace Dynamics and Propulsion
- Emily Spayde - Ph.D. (Mississippi State University)
  Engineering education, energy sustainability and organic Rankine cycles

## RESEARCH ASSOCIATE PROFESSOR

- Yun Chen - Ph.D. (Universidade Tecnica de Lisboa)
  Material Science, Metal Hydrides, Cathode Material Development

- Eduardo Sosa - Ph. D. (University of Puerto Rico)
  Thin Wall Structures

## RESEARCH ASSISTANT PROFESSORS

- Ali Baheri - Ph.D. (University of North Carolina at Charlotte)
  Machine Learning, Autonomous Driving
- Shanshan Hu - Ph.D. (West Virginia University)
  high temperature corrosion, molten salt, anti-corrosion coating and electrophoretic deposition
- Wei Li - Ph.D. (Graduate University of Chinese Academy of Sciences)

## VISITING PROFESSORS AND ADJUNCT PROFESSORS

- Alberto Ayala - Ph.D. (University of California, Davis)
  Engine Emissions
- David Booker - Ph. D. (University of Exeter)
  Exhaust Flow
- Darran R. Cairns - Ph.D. (University of Birmingham, U.K.)
  Materials Science
- John A. Christian - Ph.D. (University of Texas)
  Spacecraft Design, Navigation, Estimation Theory
- Weigiang Ding - Ph.D. (Northwestern University)
  Nanostructures
- Donald H. Ferguson - Ph.D. (West Virginia University)
  Thermal Sciences
- Mridul Gautam - Ph.D. (West Virginia University)
  Alternate Fuels, Engine and Emissions, VP for Research UNR
- Luis A. Godoy - Ph.D. (University of London, U.K.)
  Structural Stability
- Frank E. Goodwin - Sc.D. (Massachusetts Institute of Technology )
  Materials Engineering, ILZRO
- Valeriya Gritsenko - Ph.D. (University of Alberta, Canada)
  Neuroscience
- Yiqun Huang - Ph.D. (University of Texas, Austin)
  Engine and Emissions Control
- Stephen Kukureka - Ph.D. (University of Birmingham, U.K.)
  Materials Science
- Andrew D. Lowery - Ph.D. (West Virginia University)
  Control Systems
- Alejandro Lozano-Guzman - Ph.D. (University of New Castle Upon Tyne, U.K.)
  Structural Analysis, Power and Control Systems (CICATA-IPN)
- Eugene A. McKenzie - Ph.D. (West Virginia University)
  Mechanical Engineering Design, NIOSH
- Chris Menchini - Ph.D. (West Virginia University)
  Computational Fluid Dynamics, Fire Modeling
- Vincenzo Mulone - Ph.D. (University of Rome Tor Vergata)
  Internal Combustion Engines, Emissions
- John Nuzkowski - Ph.D. (West Virginia University)
  Alternative Fuels and Engine Emissions, UNF
- Dale Olson - MBA (Western Governors University)
  Strategic Leadership
- Ming Pei - M.D., Ph.D. (Beijing Medical University, China)
  Tissue Engineering HSC-WVU
- Matthew Robinson - Ph. D. (West Virginia University)
  Analysis and Optimization of Engines
- Brad Seanor - Ph.D. (West Virginia University)
  Controls Systems
- Benjamin Shade - Ph.D. (West Virginia University)
  Engine Emissions, IAV Automotive

- Matthew S. Smith - M.D. (West Virginia University)
- Alberto Traverso - Ph.D. (University of Genoa, Italy)
  Energy Systems and Control, DIMSET - Italy
- Nathan Weiland - Ph.D. (Georgia Institute of Technology)
  Energy Systems, Experimental,Computational,Theoretical Methods
- Jay Wilhelm - Ph.D. (West Virginia University)
  Unmanned Aerial Systems, Wind Turbine Modeling and Design
- Gergis William - Ph.D. (West Virginia University)
  Structural Engineering
- David A. Wyrick - Ph.D (University of Missouri-Rolla)
  Engineering Management, Engineering Education
- Sergiy Yakovenko - Ph.D. (University of Alberta, Canada)
  Neuroscience

### PROFESSORS EMERITI

- Richard A. Bajura - Ph.D. (University of Notre Dame)
- Larry Banta - Ph.D. (Georgia Institute of Technology)
- Ismail Celik - Ph.D. (University of Iowa)
- Nigel N. Clark - Ph.D. (University of Natal, South Africa)
- John M. Kuhlman - Ph.D. (Case Western Reserve University)
- John Loth - Ph.D. (University of Toronto, Canada)
- Ken Means - Ph.D (West Virginia University)
- Gary Morris - Ph.D. (West Virginia University)
- Michael G. Palmer - Ph.D. (West Virginia University)
- Samir N. Shoukry - Ph.D. (Aston University, Birmingham, U.K.)
- John E. Sneckenberger - Ph.D. (West Virginia University)
- Wallace S. Venable - Ed.D. (West Virginia University)
- Richard E. Walters - Ph.D. (West Virginia University)

# Aerospace Engineering, B.S.A.E.

## Degrees Offered

- Bachelor of Science in Aerospace Engineering (B.S.A.E.)
- Dual Degree in Aerospace and Mechanical Engineering

## Nature of the Program

Aerospace travel, space exploration, and flight of manned or unmanned vehicles continue to gain significance. Aerospace engineering is involved with the science and technology of advanced vehicles, including aircraft, rockets, missiles, and spacecraft. Although a specialized branch of engineering, it is also diverse. Aerospace technology has expanded to include design and development of earthbound vehicles such as ground-effect machines, hydrofoil ships, and high-speed rail-type systems.

The curriculum consists of a judicious combination of fundamentals, including mathematics and sciences, and practical laboratory experience which provides access to modern engineering tools. Aeronautical engineering subjects are to be the focus of the discipline along with significant exposure to space-related topics. Graduates will be able to critically analyze aerospace engineering problems and execute practical solutions. In addition to being able to function independently, it is expected that graduates will be able to function with effective written and oral communication within multidisciplinary teams and be prepared to address several issues such as environmental, social, and economic considerations, due to a thorough education in the humanities, social sciences, ethics, safety, and professionalism.

The aerospace engineering curriculum includes studies in the disciplines encountered in the design of aerospace vehicles, missiles, rockets, and spacecraft. Undergraduate students extensively study the basic principles of aerodynamics, solid mechanics and structures, stability and control, thermal sciences, and propulsion. The senior year includes a capstone flight vehicle design course providing an experiential learning opportunity.

Students are involved in both theoretical and experimental studies and trained to integrate knowledge with practical engineering design. With the breadth and depth of education in aerospace engineering, students become versatile engineers, competent to work in many areas. The curriculum may serve as a terminal degree program by incorporating design-oriented courses for technical electives or it may be used as a preparatory program for advanced study by the selection of science-oriented courses.

While the undergraduate curriculum is sufficiently broad to permit graduates to select from a wide variety of employment opportunities, it contains sufficient depth to prepare students to enter graduate school to pursue advanced degrees. As modern science and engineering become more complex, the desirability of graduate-level preparation is being recognized by most advanced industries and government agencies.

Students can simultaneously pursue B.S. degrees in both aerospace engineering and mechanical engineering by completing additional courses.

Students who plan a career in medicine, dentistry, or related areas, but who desire an aerospace engineering degree before entering the appropriate professional school, may substitute eight hours (from a combination of biology and organic chemistry courses) for the required six hours of technical electives. This selection will help students satisfy admission requirements to the professional schools in the health sciences.

The aerospace engineering program at WVU is administered by the faculty of the Department of Mechanical, Materials and Aerospace Engineering. The Bachelor of Science in Aerospace Engineering program is accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org (https://www.abet.org/), under the General Criteria and the Program Criteria for Aerospace Engineering.

## Program Educational Objectives

It is expected that, within a few years of graduation (3 to 5 years), graduates will attain the following Program Educational Objectives (PEO's):

**PEO-1. Proficiency in practicing one or more areas of aerospace engineering.**

It is expected that after a few years of graduating (3 to 5 years), graduates will have consolidated professional proficiency as practitioners in at least one technical area of aerospace engineering, as reflected by the responsibilities and accomplishments of their professional practice.

**PEO-2. Success in adapting to the demands of the workforce in the dynamic technological arena.**

It is expected that, within a few years of graduation (3 to 5 years), graduates will have successfully adapted to the demands of the workforce in a dynamic technological arena through a professional practice that reflects high credentials or development of new technical skills and acumen for administrative functions.

**PEO-3. Progress in their personal career development through professional service, continuing education and/or graduate studies.**

It is expected that, within a few years of graduation (3 to 5 years), graduates will have made meaningful progress in their professional career, either by promotions to positions of higher responsibility with their employers, by participation in professional service activities, or by technical self-improvement through continuing education, graduate studies, and/or professional licensure.

**PEO-4. Meaningful involvement in a team that tangibly contributes to industry and/or society through the engineering discipline.**

It is expected that, within a few years of graduation (3 to 5 years), graduates will have the experience of being or having been members in a team of professionals successfully making tangible technical contributions to industry or society through an engineering discipline.

## Study Abroad Opportunities

### ROME, ITALY (PRIMARILY FOR JUNIOR YEAR ME AND AE UNDERGRADUATE STUDENTS)

All MMAE undergraduates are invited to consider spending the spring semester of their junior year studying abroad at the University of Rome Tor Vergata ("UTV", for short). This very successful program is taught fully in English at UTV to both Italian undergraduate engineering students and students from other countries all over the world. Through this program WVU students have the opportunity to earn credits towards their WVU BSME or dual BSME/BSAE degrees for a full semester of equivalent WVU engineering courses towards their degrees.

### MEXICO (PRIMARILY FOR SENIOR YEAR ME AND AE UNDERGRADUATE STUDENTS)

Senior students in good standing in the MMAE Department have the opportunity to participate in the Industrial Outreach Program in Mexico (IOPM) during the summer of each year (June and July) to earn credits toward their BS degree requirements in the BSAE or BSME Degree; this program is also available for other engineering majors. In this program, students are teamed up with Mexican students from local universities and conduct meaningful engineering projects in industrial sites, working full time under the guidance and supervision of practicing industrial engineers and faculty members.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |

| | | |
|---|---|---|
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Aerospace Engineering:

- Complete a minimum of 126 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at West Virginia University. The Overall GPA is computed based on all work taken at West Virginia University and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 28 |
| Aerospace Engineering Program Requirements | | 77 |
| Total Hours | | 126 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |

| | | |
|---|---|---|
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| Total Hours | | 28 |

## Aerospace Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221 | Introduction to Electrical Engineering | 3 |
| EE 221L | Introduction to Electrical Engineering Laboratory | 1 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 215 | Introduction to Aerospace Engineering | 3 |
| MAE 216L | Intermediate Engineering Computation | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 244L | Dynamics and Strength Laboratory | 1 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 320 | Thermodynamics | 3 |
| MAE 335 | Incompressible Aerodynamics | 3 |
| MAE 336 | Compressible Aerodynamics | 3 |
| MAE 345 | Aerospace Structures | 3 |
| MAE 353 | Intermediate Mechanics of Materials | 3 |
| MAE 423 | Heat Transfer | 3 |
| MAE 434<br>& 434L | Experimental Aerodynamics<br>and Experimental Aerodynamics Laboratory | 3 |
| MAE 456<br>& 456L | Computer-Aided Design and Finite Element Analysis<br>and Computer-Aided Design and Finite Element Analysis Laboratory | 3 |
| or MAE 433 | Computational Fluid Dynamics | |
| MAE 460 | Automatic Controls | 3 |
| MAE 476 | Space Flight and Systems | 3 |
| Area of Emphasis | | 12 |
| Aeronautical Engineering | | |
| Astronautical Engineering | | |

| | |
|---|---|
| Technical Electives (see course list below) or Area of Emphasis in Unmanned Aerial Systems | 9 |
| Total Hours | 77 |

## Aerospace Engineering Technical Electives

| Code | Title | Hours |
|---|---|---|
| Students are limited to a total of 3 hours under MAE 491, MAE 495 and/or MAE 496 | | |
| Students may substitute one technical elective from the substitute technical electives | | |
| Students may substitute two technical electives from the pre medical technical electives | | |
| BMEG 340 | Biomechanics | 4 |
| MAE 275S | Aerospace Design 1 | 1 |
| MAE 312 | Introduction to Mechanical Design | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| MAE 361 | Introduction to Unmanned Aerial Systems | 3 |
| MAE 365 | Flight Dynamics | 3 |
| MAE 375S | Aerospace Design 2 | 2 |
| MAE 415S<br>& MAE 417S | Balloon Satellite Project 1<br>and Balloon Satellite Project 2 | 3 |
| MAE 426 | Flight Vehicle Propulsion | 3 |
| MAE 430S | Microgravity Research 1 | 3 |
| or MAE 431S | Microgravity Research 2 | |
| MAE 432 | Engineering Acoustics | 3 |
| MAE 433 | Computational Fluid Dynamics | 3 |
| MAE 437 | Vertical/Short Takeoff and Landing Aerodynamics | 3 |
| MAE 446 | Mechanics of Composite Materials | 3 |
| MAE 447 | Aeroelasticity | 3 |
| MAE 456<br>& 456L | Computer-Aided Design and Finite Element Analysis<br>and Computer-Aided Design and Finite Element Analysis Laboratory | 3 |
| MAE 457 | UAV Path Planning and Trajectory Tracking | 3 |
| MAE 465 | Flight Mechanics 2 | 3 |
| MAE 466 | Spacecraft Dynamics | 3 |
| MAE 467 | Introduction to Flight Simulation | 3 |
| MAE 469 | UAV Guidance, Navigation & Control | 3 |
| MAE 474S | UAV Design/Build/Fly Comp | 3 |
| MAE 475S | Aircraft Design 1 | 3 |
| MAE 478 | Guided Missile Systems | 3 |
| MAE 482 | Flight Simulation for Aircraft Safety | 3 |
| MAE 484 | Spacecraft Propulsion | 3 |
| MAE 485S | Aircraft Design 2 | 3 |
| MAE 486S | Spacecraft Design 1 | 3 |
| MAE 487S | Spacecraft Design 2 | 3 |
| Any MAE 493 Except Technical Entrepreneurship and Additive Manufacturing | | |
| MAE 491 | Professional Field Experience | 3 |
| MAE 495 | Independent Study | 3 |
| MAE 496 | Senior Thesis | 3 |
| MSEN 350 | Materials Science | 3 |
| Any MAE 500 Level Course | | |

## Substitute Technical Electives

Aerospace Engineering students may take one of the following courses with prior approval from the AE curriculum chair. Students may only count one of the substitute courses toward their degree, and must complete other elective requirements from the Technical Electives list.

| Code | Title | Hours |
|---|---|---|
| CHE 463 | Polymer Composites Processing | 3 |
| CS 430 | Advanced Software Engineering | 3 |
| CPE 453 | Data and Computer Communications | 3 |
| EE 327 | Signals and Systems 1 | 3 |
| EE 335<br>& 335L | Electromechanical Energy Conversion and Systems<br>and Electromechanical Energy Conversion and Systems Laboratory | 4 |
| EE 345 | Engineering Electromagnetics | 3 |
| EE 463 | Digital Signal Processing Fundamentals | 3 |
| MATH 441 | Applied Linear Algebra | 3 |
| MATH 456 | Complex Variables | 3 |
| MATH 465 | Partial Differential Equations | 3 |
| PHYS 314 | Introductory Modern Physics | 4 |
| PHYS 332 | Theoretical Mechanics 2 | 3 |
| PHYS 451 | Introductory Quantum Mechanics | 3 |

## Pre-Medical Technical Electives

Students who plan a career in medicine, dentistry, or related areas may substitute eight hours from the list of courses below for six hours of technical electives.

| Code | Title | Hours |
|---|---|---|
| Choose two of the following: | | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | 4 |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | 4 |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | 4 |

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.A.E. degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115<br>& 115L | 4 | MAE 102 | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | PHYS 111<br>& 111L (GEF 8) | 4 |
| ENGR 191 | 1 | GEF Elective 6 | 3 |
| MATH 155 (GEF 3) | 4 | GEF Elective 7 | 3 |
| GEF Elective 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202* | 1 | ENGL 102 (GEF 1) | 3 |
| MAE 212L | 1 | MAE 242 | 3 |
| MAE 215 | 3 | MAE 243 | 3 |
| MAE 216L | 1 | MAE 244L | 1 |
| MAE 241 | 3 | MATH 261 | 4 |
| MATH 251 (GEF 8) | 4 | | |

| | | | |
|---|---|---|---|
| PHYS 112 & 112L | | 4 | |
| | | 17 | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 201 | | 3 EE 221 & 221L | 4 |
| MAE 316 | | 3 MAE 336* | 3 |
| MAE 320 | | 3 MAE 345* | 3 |
| MAE 335* | | 3 MAE 476 | 3 |
| MAE 353 | | 3 AOE Course | 3 |
| | | 15 | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 434 & 434L* | | 3 MAE 423 | 3 |
| MAE 433 or 456 ***and*** 456L | | 3 MAE 460 | 3 |
| Technical Electives | | 3 AOE Course | 3 |
| AOE Courses | | 6 Technical Electives | 6 |
| | | 15 | 15 |

Total credit hours: 126

*****
Courses taught in given semester.

## Areas of Emphasis Offered:

- Astronautical Engineering (p. 728)
- Aeronautical Engineering (p. 728)
- Unmanned Aerial Systems (p. 729)

## AREA OF EMPHASIS IN ASTRONAUTICAL ENGINEERING

| Code | Title | Hours |
|---|---|---|
| MAE 466 | Spacecraft Dynamics | 3 |
| MAE 484 | Spacecraft Propulsion | 3 |
| MAE 486S | Spacecraft Design 1 | 3 |
| MAE 487S | Spacecraft Design 2 | 3 |
| Total Hours | | 12 |

## AREA OF EMPHASIS IN AERONAUTICAL ENGINEERING

| Code | Title | Hours |
|---|---|---|
| MAE 365 | Flight Dynamics | 3 |
| MAE 426 | Flight Vehicle Propulsion | 3 |
| MAE 475S | Aircraft Design 1 | 3 |
| MAE 485S | Aircraft Design 2 | 3 |
| Total Hours | | 12 |

## AREA OF EMPHASIS IN UNMANNED AERIAL SYSTEMS

| Code | Title | Hours |
|---|---|---|
| Select three of the following: | | 9 |
| MAE 361 | Introduction to Unmanned Aerial Systems | |
| MAE 457 | UAV Path Planning and Trajectory Tracking | |
| MAE 469 | UAV Guidance, Navigation & Control | |
| MAE 474S | UAV Design/Build/Fly Comp * | |
| Select one of the following: | | 3 |
| CPE 453 | Data and Computer Communications | |
| EE 327 | Signals and Systems 1 | |
| EE 463 | Digital Signal Processing Fundamentals | |
| MAE 361 | Introduction to Unmanned Aerial Systems | |
| MAE 446 | Mechanics of Composite Materials | |
| MAE 457 | UAV Path Planning and Trajectory Tracking | |
| MAE 469 | UAV Guidance, Navigation & Control | |
| MAE 478 | Guided Missile Systems | |
| MATH 441 | Applied Linear Algebra | |
| Total Hours | | 12 |

*

Maximum of 3 credit hours of MAE 474 or MAE 474S can count toward AOE

# Accelerated Program

- BSAE Aerospace Engineering and MSAE Aerospace Engineering (p. 729)

# Accelerated Bachelor's/Masters in Aerospace Engineering

Students must fulfill all degree requirements for the B.S.A.E. in Aerospace Engineering and all the requirements of the M.S.A.E. in Aerospace Engineering. Students must also meet all the requirements of the ABM.

## ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 117 |
| Shared Bachelor's/Master's Coursework | | 9 |
| Graduate Coursework | | 21 |
| Total Hours | | 147 |

## SHARED COURSEWORK CURRICULUM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Courses completed must be at the 400 or 500 level. | | |
| See BSAE and MSAE for list of elective course options. | | |
| **Courses:** | | |
| Technical Elective | | 3 |
| Technical Elective | | 3 |
| Technical Elective | | 3 |
| Total Hours | | 9 |

## SUGGESTED PLAN OF STUDY

Its is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical ABM B.S.A.E. & M.S.A.E. degree program completes degree requirements in five year is as shown.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L | 4 | MAE 102 | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 191 | 1 | GEF Elective 6 | 3 |
| MATH 155 (GEF 3) | 4 | GEF Elective 7 | 3 |
| GEF Elective 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202 | 1 | ENGL 102 | 3 |
| MAE 212L | 1 | MAE 242 | 3 |
| MAE 215 | 3 | MAE 243 | 3 |
| MAE 216L | 1 | MAE 244L | 1 |
| MAE 241 | 3 | MATH 261 | 4 |
| MATH 251 (GEF 8) | 4 | | |
| PHYS 112 & 112L | 4 | | |
| | 17 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221 & 221L | 4 | ECON 201 | 3 |
| MAE 316 | 3 | MAE 336 | 3 |
| MAE 320 | 3 | MAE 345 | 3 |
| MAE 335 | 3 | MAE 476 | 3 |
| MAE 353 | 3 | AOE Course | 3 |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 434 & 434L | 3 | MAE 423 | 3 |
| MAE 456 & 456L | 3 | MAE 460 | 3 |
| Technical Electives* | 3 | AOE Course | 3 |
| AOE Courses | 6 | Technical Electives* | 6 |
| | 15 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 697 | 3 | MAE 697 | 3 |
| Core Area Course | 3 | Core Area Course | 3 |
| Mathematics Requirement Course | 3 | Mathematics Requirement Course | 3 |
| Additional Courses | 3 | | |
| | 12 | | 9 |

Total credit hours: 147

*****

Indicates that this course will be shared with the MS requirements

**+**

See BSAE for list of area of emphasis courses.

**++**
See MSAE for list of core area courses and mathematics requirement courses.

## Dual Degree Programs

- B.S.A.E. Aerospace Engineering and B.S.M.E. Mechanical Engineering (p. 731)
- B.S.A.E. Aerospace Engineering and B.S. Robotics Engineering (p. 734)

# B.S.A.E. Aerospace Engineering and B.S.M.E. Mechanical Engineering

In the modern technical marketplace, college graduates must attain every competitive edge possible to enhance their career opportunities. One way to do this is with a master's degree following the bachelor's degree; however, this often results in more specialization than may be desired and may take an additional two years. Another option is to broaden the undergraduate experience, thus opening more opportunities for the graduate. The dual B.S.A.E./B.S.M.E. program awards both the aerospace engineering and mechanical engineering degrees at the completion of a planned curriculum.

Students under this option pursue the B.S.A.E. and B.S.M.E. degrees simultaneously. This can be accomplished by declaring intentions as a freshman requesting admission to the programs. Maximum scheduling flexibility will result when this decision is made as early as possible in the student's academic career. Dual-degree students must take all courses listed in the 150-hour dual curriculum under the Major tab and satisfy the other requirements of the two individual programs.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Aerospace Engineering and Bachelor of Science in Mechanical Engineering degree:

- Complete a minimum of 150 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at West Virginia University. The Overall GPA is computed based on all work taken at West Virginia University and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 28 |
| Aerospace Engineering and Mechanical Engineering Program Requirements | | 101 |
| Total Hours | | 150 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| Calculus I: (GEF 3, minimum grade of C-) | | 4 |
| MATH 155 | Calculus 1 | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 156 | Calculus 2 (GEF 8, minimum grade of C-) | 4 |
| MATH 251 | Multivariable Calculus (minimum grade of C-) | 4 |
| MATH 261 | Elementary Differential Equations (minimum grade of C-) | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (minimum grade of C-) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| Total Hours | | 28 |

## Aerospace Engineering and Mechanical Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| IENG 302 | Manufacturing Processes | 2 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 215 | Introduction to Aerospace Engineering | 3 |
| MAE 216L | Intermediate Engineering Computation | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 320 | Thermodynamics | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| MAE 335 | Incompressible Aerodynamics | 3 |
| MAE 336 | Compressible Aerodynamics | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 345 | Aerospace Structures | 3 |
| MAE 353 | Intermediate Mechanics of Materials | 3 |

| | | |
|---|---|---|
| MAE 423 | Heat Transfer | 3 |
| MAE 434 & 434L | Experimental Aerodynamics and Experimental Aerodynamics Laboratory | 3 |
| MAE 456 & 456L | Computer-Aided Design and Finite Element Analysis and Computer-Aided Design and Finite Element Analysis Laboratory | 3 |
| Choose course based on Mechanical AOE selection: | | 3 |
| MAE 460 | Automatic Controls (required if taking Materials Science and Engineering AOE) | |
| AE Technical Elective (required for | Energy Systems, Robotics, Dynamics and Control AOEs) [+] | |
| MAE 471S | Principles of Engineering Design | 3 |
| MAE 472S | Engineering Systems Design | 3 |
| MAE 476 | Space Flight and Systems | 3 |
| MSEN 350 | Materials Science | 3 |
| Aerospace Engineering Area of Emphasis | | 12 |
| Aeronautical Engineering (12 Total Hours) | | |
| Astronautical Engineering (12 Total Hours) | | |
| Mechanical Engineering Area of Emphasis | | 14-16 |
| Dynamics and Controls (15 Total Hours) | | |
| Energy Systems (15 Total Hours) | | |
| Materials Science (14 Total Hours) | | |
| Robotics (16 Total Hours) | | |
| Total Hours | | 101 |

**+**
See BSAE degree (p. 723) for list of electives

**++**
See BSME degree (p. 736) for list of electives

## Suggested Plan of Study

It is important for students to take courses in the order specified as close as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.A.E./B.S.M.E. degree program that completes degree requirements in four and a half years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L | 4 | MAE 102 | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 191 | 1 | GEF Elective 6 | 3 |
| MATH 155 (GEF 3) | 4 | GEF Elective 7 | 3 |
| GEF Elective 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202* | 1 | ENGL 102 | 3 |
| MAE 212L | 1 | MAE 211 & 211L | 3 |
| MAE 215 | 3 | MAE 242 | 3 |
| MAE 216L | 1 | MAE 243 | 3 |
| MAE 241 | 3 | MATH 261 | 4 |
| MATH 251 (GEF 8) | 4 | | |

| | | | |
|---|---|---|---|
| PHYS 112 & 112L | 4 | | |
| | 17 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 316 | 3 | ECON 201 | 3 |
| MAE 320 | 3 | EE 221 & 221L | 4 |
| MAE 331 | 3 | MAE 336 | 3 |
| MAE 335* | 3 | MAE 342 | 3 |
| MAE 353 | 3 | MAE 476 | 3 |
| MSEN 350 | 3 | AE AOE Course | 3 |
| | 18 | | 19 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 434 & 434L* | 3 | IENG 302 | 2 |
| AE AOE Courses | 6 | MAE 345* | 3 |
| ME AOE Course | 5 | AE AOE Course | 3 |
| MAE 471S | 3 | ME AOE Courses | 3 |
| | | MAE 472S | 3 |
| | 17 | | 14 |

**Fifth Year**

| Fall | Hours |
|---|---|
| MAE 423 | 3 |
| MAE 456 & 456L | 3 |
| MAE 460 (or AE Technical Elective) | 3 |
| ME AOE Courses | 6 |
| | 15 |

Total credit hours: 150

*****
Courses taught in given semester.

## B.S.A.E. Aerospace Engineering and B.S. Robotics Engineering

Students can simultaneously pursue two bachelor's degrees in Aerospace Engineering and Robotics Engineering. To successfully complete both degrees, students must meet all requirements of both programs. Exact credit hours and classes will vary per student based on their choice of technical electives and Area of Emphasis courses.

## Student Outcomes

Upon graduation, all Bachelor of Science in Aerospace Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The primary learning goal of the BSAE program is to implement state-of-the-art instructional materials, methods and technologies in order to prepare engineers who are highly proficient in their field of specialty and ready to contribute to the well-being of society through competent practice of the engineering profession, leading to economic development and innovative technological advancements.

The graduates of the BSAE program are well prepared to engage in the long-life pursuit of successful engineering careers by quickly adapting to the changing demands of the workforce in a dynamic global environment, by enhancing continuously their professional abilities or skills, and by contributing effectively in multidisciplinary teams to the advancement of existing or anticipated industrial, economical and societal needs.

# Mechanical Engineering, B.S.M.E.

## Degrees Offered

- Bachelor of Science in Mechanical Engineering (B.S.M.E.)
- Dual Degree in Aerospace and Mechanical Engineering
- Dual Degree in Mechanical and Robotics Engineering

## Nature of the Program

Mechanical engineering is a broad technical discipline. It integrates knowledge of the physical sciences and mathematics for the design, construction, and manufacture, testing, analysis, use, and operation of a device, structure, a machine, a process, or a system in service to humanity. Its development parallels the growth of industry. Modern society needs mechanical engineers who have broad and deep training in the fundamentals of engineering and related sciences and who have developed versatility in analyzing and solving complex problems. The mechanical engineer must not only possess a high level of professional expertise but also have an appreciation for the impact of engineering solutions in a societal context, including ethical and economic considerations.

Mechanical engineers are problem-solvers who are scientifically informed and mathematically minded. The mechanical engineering curriculum prepares students to deal effectively with a broad range of engineering problems rather than with narrow specialties. Graduates find employment in a wide range of industries, government agencies, and educational institutions where they are concerned with many functions:

- The use and economic conversion of energy from natural sources into useful energy for power, light, heating, cooling, and transportation;
- The design and production of machines to lighten the burden of human work;
- The planning and development of systems for using energy machines and resources;
- The processing of materials into products useful to mankind; and
- The education and training of specialists who deal with mechanical systems.

The curriculum consists of a judicious combination of fundamentals, including mathematics and sciences, and practical laboratory experience which provides access to modern engineering tools. Mechatronics, which is a study of the interdependence between mechanical engineering and electrical/electronics engineering, is a key part of the mechanical engineering curriculum. Graduates will be able to critically analyze mechanical engineering problems and execute practical solutions. In addition to being able to function independently, it is expected that graduates will be able to function with effective written and oral communication within multidisciplinary teams and be prepared to address several issues such as environmental, social, and economic considerations due to a thorough education in the humanities, social sciences, ethics, safety, and professionalism.

While the undergraduate curriculum is sufficiently broad to permit graduates to select from a wide variety of employment opportunities, it contains sufficient depth to prepare students to enter graduate school to pursue advanced degrees. As modern science and engineering become more complex, the desirability of graduate-level preparation is being recognized by most advanced industries and government agencies.

Students can simultaneously pursue B.S. degrees in both aerospace engineering and mechanical engineering by completing additional courses.

Students who plan a career in medicine, dentistry, or related areas, but who desire a mechanical engineering degree before entering the appropriate professional school, may substitute eight hours (from a combination of biology and organic chemistry courses) for the required six hours of technical electives. This selection will help the student satisfy admission requirements to the professional schools in the health sciences.

The mechanical engineering program at WVU is administered by the faculty of the Department of Mechanical, Materials and Aerospace Engineering. The Bachelor of Science degree in mechanical engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Mechanical Engineering.

## Program Educational Objectives

It is expected that, within a few years of graduation (3 to 5 years), graduates will attain the following Program Educational Objectives (PEO's):

**PEO-1. Proficiency in practicing one or more areas of mechanical engineering.**

It is expected that after a few years of graduating (3 to 5 years), graduates will have consolidated professional proficiency as practitioners in at least one technical area of mechanical engineering, as reflected by the responsibilities and accomplishments of their professional practice.

**PEO-2. Success in adapting to the demands of the workforce in the dynamic technological arena.**

It is expected that, within a few years of graduation (3 to 5 years), graduates will have successfully adapted to the demands of the workforce in a dynamic technological arena through a professional practice that reflects high credentials or development of new technical skills and acumen for administrative functions.

**PEO-3. Progress in their personal career development through professional service, continuing education and/or graduate studies.**

It is expected that, within a few years of graduation (3 to 5 years), graduates will have made meaningful progress in their professional career, either by promotions to positions of higher responsibility with their employers, by participation in professional service activities, or by technical self-improvement through continuing education, graduate studies, and/or professional licensure.

**PEO-4. Meaningful involvement in a team that tangibly contributes to industry and/or society through the engineering discipline.**

It is expected that, within a few years of graduation (3 to 5 years), graduates will have the experience of being or having been members in a team of professionals successfully making tangible technical contributions to industry or society through an engineering discipline.

# Study Abroad Opportunity

## ROME, ITALY (PRIMARILY FOR JUNIOR YEAR ME AND AE UNDERGRADUATE STUDENTS)

All MMAE undergraduates are invited to consider spending the spring semester of their junior year studying abroad at the University of Rome Tor Vergata (“UTV”, for short). This very successful program is taught fully in English at UTV to both Italian undergraduate engineering students and students from other countries all over the world.  Through this program WVU students have the opportunity to earn credits towards their WVU BSME or dual BSME/BSAE degrees for a full semester of equivalent WVU engineering courses towards their degrees.

## MEXICO (PRIMARILY FOR SENIOR YEAR ME AND AE UNDERGRADUATE STUDENTS)

Senior students in good standing in the MMAE Department have the opportunity to participate in the Industrial Outreach Program in Mexico (IOPM) during the summer of each year (June and July) to earn credits toward their BS degree requirements in the BSAE or BSME Degree; this program is also available for other engineering majors. In this program, students are teamed up with Mexican students from local universities and conduct meaningful engineering projects in industrial sites, working full time under the guidance and supervision of practicing industrial engineers and faculty members.

Click here to view the Suggested Plan of Study (p. 741)

# General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

# Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Mechanical Engineering degree:

- Complete a minimum of 126 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 28 |
| Mechanical Engineering Program Requirements | | 77 |
| Total Hours | | 126 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| Calculus I (GEF 3): | | 4 |
| MATH 155 | Calculus 1 | |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |

| | | |
|---|---|---|
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| Total Hours | | 28 |

## Mechanical Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| IENG 302 | Manufacturing Processes | 2 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 216L | Intermediate Engineering Computation | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 320 | Thermodynamics | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MSEN 350 | Materials Science | 3 |
| MAE 353 | Intermediate Mechanics of Materials | 3 |
| MAE 423 | Heat Transfer | 3 |
| MAE 456<br>& 456L | Computer-Aided Design and Finite Element Analysis<br>and Computer-Aided Design and Finite Element Analysis Laboratory | 3 |
| MAE 471S | Principles of Engineering Design | 3 |
| MAE 472S | Engineering Systems Design | 3 |
| Technical Electives * | | 9 |
| Area of Emphasis * | | 14-16 |
| Dynamics & Controls (15 Total Hours) | | |
| Energy Systems (15 Total Hours) | | |
| Materials Science (14 Total Hours) | | |
| Robotics (16 Total Hours) | | |
| Total Hours | | 77 |

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Technical Elective courses must be unique from those required for the selected Area of Emphasis.

## Mechanical Engineering Technical Electives

| Code | Title | Hours |
|---|---|---|
| **Mechanical Engineering Technical Electives** | | |
| Student must select technical elective courses that are different from courses required for their selected Area of Emphasis | | |
| Students are limited to a total of 3 hours under MAE 491, MAE 495, and/or MAE 496 | | |
| Students may substitute one technical elective from the substitute technical electives | | |
| Students may substitute two technical electives from the pre medical technical electives | | |
| BMEG 340 | Biomechanics | 4 |
| IENG 302L | Manufacturing Processes Laboratory | 1 |
| IENG 445 | Project Management for Engineers | 3 |
| MAE 244L | Dynamics and Strength Laboratory | 1 |

| | | |
|---|---|---|
| MSEN 351L | Materials Engineering Laboratory | 1 |
| MAE 271S | Mechanical and Aerospace Engineering Design 1 | 1 |
| MAE 312 | Introduction to Mechanical Design | 3 |
| MAE 321 | Applied Thermodynamics | 3 |
| MAE 322L | Thermal and Fluids Laboratory | 1 |
| MAE 335 | Incompressible Aerodynamics | 3 |
| MAE 336 | Compressible Aerodynamics | 3 |
| MAE 345 | Aerospace Structures | 3 |
| MSEN 354 | Materials Processing and Manufacturing | 3 |
| MSEN 355 | Mechanical and Physical Properties of Materials | 3 |
| MAE 371S | Mechanical and Aerospace Engineering Design 2 | 2 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 415S<br>& MAE 417S | Balloon Satellite Project 1<br>and Balloon Satellite Project 2 | 3 |
| MAE 422L | Energy Conversion Laboratory | 1 |
| MAE 425 | Internal Combustion Engines | 3 |
| MAE 426 | Flight Vehicle Propulsion | 3 |
| or MAE 478 | Guided Missile Systems | |
| or MAE 484 | Spacecraft Propulsion | |
| MAE 427 | Heating, Ventilating, and Air Conditioning | 3 |
| MAE 430S | Microgravity Research 1 | 3 |
| or MAE 431S | Microgravity Research 2 | |
| MAE 432 | Engineering Acoustics | 3 |
| MAE 433 | Computational Fluid Dynamics | 3 |
| MAE 441 | Gas Turbine Design and Durability | 3 |
| MAE 442 | Mechanical Vibrations | 3 |
| MAE 446 | Mechanics of Composite Materials | 3 |
| MAE 454 | Machine Design and Manufacturing | 3 |
| MAE 459 | Hybrid Electric Vehicle Propulsion and Control | 3 |
| MAE 460 | Automatic Controls | 3 |
| MAE 473 | Bioengineering | 3 |
| MAE 474S | UAV Design/Build/Fly Comp | 1 to 3 |
| MAE 491 | Professional Field Experience | 3 |
| MAE 466 | Spacecraft Dynamics | 3 |
| or MAE 476 | Space Flight and Systems | |
| MAE 493 | Special Topics | 3 |
| MAE 495 | Independent Study | 3 |
| MAE 496 | Senior Thesis | 3 |
| MSEN 449 | Microscopy of Materials | 3 |
| MSEN 480 | Crystallography and Crystals | 3 |
| MSEN 483 | Thermodynamics and Kinetics of Materials | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| or MAE 412 | Mobile Robotics | |
| ROBE 413 | Robotic Manipulators | 3 |
| or MAE 413 | Robotic Manipulators | |
| ROBE 414 | Robot Autonomy | 3 |
| Any MAE 500 Level Course except MSEN 580 and MSEN 583 | | |
| Approved ENGR 493 Courses | | |

## Substitute Technical Electives

Mechanical Engineering students may take one of the following courses with prior approval from the ME curriculum chair. Students may only take one of the substitute courses and must take the other technical elective from the list above.

| Code | Title | Hours |
|---|---|---|
| MSEN 350 | Materials Science | 3 |
| CHE 463 | Polymer Composites Processing | 3 |
| CE 322 | Hydrotechnical Engineering | 3 |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | 4 |
| CE 443 | Environmental Science and Technology | 3 |
| CE 463 | Steel Design | 3 |
| CE 464 | Timber Design | 3 |
| CPE 453 | Data and Computer Communications | 3 |
| CS 430 | Advanced Software Engineering | 3 |
| CS 440 | Database Design and Theory | 3 |
| CS 455 | Computer Architecture | 3 |
| EE 223<br>& 223L | Electrical Circuits<br>and Electrical Circuits Laboratory | 4 |
| EE 327 | Signals and Systems 1 | 3 |
| EE 335<br>& 335L | Electromechanical Energy Conversion and Systems<br>and Electromechanical Energy Conversion and Systems Laboratory | 4 |
| EE 345 | Engineering Electromagnetics | 3 |
| EE 463 | Digital Signal Processing Fundamentals | 3 |
| ENGR 310 | Energy Engineering | 3 |
| IENG 377 | Engineering Economy | 3 |
| IENG 405 | Design for Manufacturability | 3 |
| MATH 441 | Applied Linear Algebra | 3 |
| MATH 456 | Complex Variables | 3 |
| MATH 465 | Partial Differential Equations | 3 |
| PHYS 314 | Introductory Modern Physics | 4 |
| PHYS 321 | Optics | 3 |
| PHYS 332 | Theoretical Mechanics 2 | 3 |
| PHYS 333 | Electricity and Magnetism 1 | 3 |
| PHYS 451 | Introductory Quantum Mechanics | 3 |
| PHYS 463 | Nuclear Physics | 3 |
| PHYS 471 | Solid State Physics | 3 |

## Pre-Medical Technical Electives

Students who plan a career in medicine, dentistry, or related area may substitute the following courses to count as the technical elective requirement.

| Code | Title | Hours |
|---|---|---|
| Choose two of the following: | | |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 2B) | 4 | ENGR 102 | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 191 | 1 | GEF 6 | 3 |
| MATH 155 (GEF 3) | 4 | GEF 7 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202 | 1 | ECON 201 (GEF 4) | 3 |
| MAE 211 & 211L | 3 | ENGL 102 (GEF 1) | 3 |
| MAE 212L | 1 | MAE 242 | 3 |
| MAE 216L | 1 | MAE 243 | 3 |
| MAE 241 | 3 | MATH 261 | 4 |
| MATH 251 | 4 | | |
| PHYS 112 & 112L (GEF 8) | 4 | | |
| | 17 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221 & 221L | 4 | IENG 302 | 2 |
| MAE 320 | 3 | MAE 316 | 3 |
| MAE 331 | 3 | MAE 342 | 3 |
| MAE 353 | 3 | Technical Elective | 3 |
| MSEN 350 | 3 | AOE Course | 5 |
| | 16 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 456 & 456L | 3 | MAE 423 | 3 |
| MAE 471S | 3 | MAE 472S | 3 |
| Technical Elective | 3 | Technical Elective | 3 |
| AOE Course | 3 | AOE Course | 3 |
| AOE Course | 3 | | |
| | 15 | | 12 |

Total credit hours: 126

## Areas of Emphasis

- Dynamics & Controls (p. 742)
- Energy Systems (p. 742)
- Materials Science (p. 742)
- Robotics (p. 743)

## DYNAMICS AND CONTROLS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| IENG 302L | Manufacturing Processes Laboratory | 1 |
| MAE 244L | Dynamics and Strength Laboratory | 1 |
| MAE 322L | Thermal and Fluids Laboratory | 1 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 442 | Mechanical Vibrations | 3 |
| MAE 454 | Machine Design and Manufacturing | 3 |
| MAE 460 | Automatic Controls | 3 |
| Total Hours | | 15 |

## ENERGY SYSTEMS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| MAE 244L | Dynamics and Strength Laboratory | 1 |
| or MSEN 351L | Materials Engineering Laboratory | |
| MAE 321 | Applied Thermodynamics | 3 |
| MAE 322L | Thermal and Fluids Laboratory | 1 |
| MAE 422L | Energy Conversion Laboratory | 1 |
| MAE 460 | Automatic Controls | 3 |
| Select two of the following: | | 6 |
| ARE 382 | Agricultural and Natural Resources Law | |
| ARE 445 | Energy Economics | |
| ARE 485 | Economics of Water Resources and Energy | |
| EE 335 | Electromechanical Energy Conversion and Systems | |
| EE 345 | Engineering Electromagnetics | |
| FNRS 320 | Sustainable Construction | |
| FNRS 421 | Renewable Resources Policy and Governance | |
| GEOL 388 | Introduction to Geochemistry | |
| IENG 433 | Energy Efficiency and Sustainability | |
| MAE 425 | Internal Combustion Engines | |
| MAE 426 | Flight Vehicle Propulsion | |
| or MAE 478 | Guided Missile Systems | |
| or MAE 484 | Spacecraft Propulsion | |
| MAE 427 | Heating, Ventilating, and Air Conditioning | |
| MAE 459 | Hybrid Electric Vehicle Propulsion and Control | |
| PHYS 312 | Oscillations and Thermal Physics | |
| PHYS 321 | Optics | |
| PHYS 333 | Electricity and Magnetism 1 | |
| PHYS 334 | Electricity and Magnetism | |
| PHYS 461 | Thermodynamics and Statistical Mechanics | |
| POLS 338 | Environmental Policy | |
| Total Hours | | 15 |

## MATERIALS SCIENCE AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| IENG 302L | Manufacturing Processes Laboratory | 1 |
| MSEN 351L | Materials Engineering Laboratory | 1 |
| MSEN 354 | Materials Processing and Manufacturing | 3 |
| MSEN 355 | Mechanical and Physical Properties of Materials | 3 |
| Select two of the following: * | | 6-7 |

| | |
|---|---|
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory |
| CE 310 | Civil Engineering Materials |
| IENG 403 | Additive Manufacturing Technology & Materials |
| MSEN 449 | Microscopy of Materials |
| MSEN 480 | Crystallography and Crystals |
| MSEN 483 | Thermodynamics and Kinetics of Materials |
| MSEN 493 | Special Topics |
| Total Hours | 14 |

*

One course must be at the upper-division (300- or 400-level).

## ROBOTICS AREA OF EMPHASIS

| Code | Title | Hours |
|---|---|---|
| MAE 244L | Dynamics and Strength Laboratory | 1 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 442 | Mechanical Vibrations | 3 |
| MAE 460 | Automatic Controls | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| Select one of the following: | | 3 |
| ROBE 412 | Mobile Robotics | |
| ROBE 413 | Robotic Manipulators | |
| ROBE 414 | Robot Autonomy | |
| Total Hours | | 16 |

# Accelerated Program

- BSME Mechanical Engineering and MSME Mechanical Engineering (p. 743)

# Accelerated Bachelor's/Master's in Mechanical Engineering

Students must fulfill all degree requirements for the B.S.M.E. in Mechanical Engineering and all the requirements of the M.S.M.E. in Mechanical Engineering. Students must also meet all the requirements of the ABM.

## ABM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Undergraduate Coursework | | 117 |
| Shared Bachelor's/Master's Coursework | | 9 |
| Graduate Coursework | | 21 |
| Total Hours | | 147 |

## SHARED COURSEWORK CURRICULUM REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Courses completed must be at the 400 or 500 level. | | |
| See BSME and MSME for list of elective course options. | | |
| **Courses:** | | |
| Technical Elective | | 3 |
| Technical Elective | | 3 |
| Technical Elective | | 3 |
| Total Hours | | 9 |

## SUGGESTED PLAN OF STUDY

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical ABM B.S.M.E. & M.S.M.E. degree program completes degree requirements in five year is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 2B) | 4 | ENGR 102 | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 191 | 1 | GEF 6 | 3 |
| MATH 155 (GEF 3) | 4 | GEF 7 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202 | 1 | MAE 242 | 3 |
| MAE 211 & 211L | 3 | MAE 243 | 3 |
| MAE 212L | 1 | MAE 320 | 3 |
| MAE 216L | 1 | MATH 261 | 4 |
| MAE 241 | 3 | ENGL 102 | 3 |
| MATH 251 | 4 | AOE Course | 2 |
| PHYS 112 & 112L (GEF 8) | 4 | | |
| | 17 | | 18 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221 & 221L | 4 | ECON 201 | 3 |
| MAE 316 | 3 | IENG 302 | 2 |
| MAE 331 | 3 | MAE 342 | 3 |
| MAE 353 | 3 | AOE Course | 3 |
| MSEN 350 | 3 | AOE Course | 3 |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 456 & 456L | 3 | MAE 423 | 3 |
| MAE 471S | 3 | MAE 472S | 3 |
| Technical Electives* | 3 | Technical Electives* | 6 |
| AOE Course | 3 | | |
| AOE Course | 3 | | |
| | 15 | | 12 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 697 | 3 | MAE 697 | 3 |
| Core Area Course | 3 | Core Area Course | 3 |
| Mathematics Requirement Course | 3 | Additional Courses | 3 |

| | | |
|---|---|---|
| | Mathematics Requirement Course | 3 |
| | 9 | 12 |

Total credit hours: 147

*****
Indicates that this course will be shared with the MS requirements.

**+**
See BSME degree for list of area of emphasis courses.

**++**
See MSME for list of core area and mathematics requirement courses.

## Dual Degree Programs

- B.S.A.E. Aerospace Engineering and B.S.M.E. Mechanical Engineering (p. 745)
- B.S.M.E. Mechanical Engineering and B.S. Robotics Engineering (p. 748)

# B.S.A.E. Aerospace Engineering and B.S.M.E. Mechanical Engineering

In the modern technical marketplace, college graduates must attain every competitive edge possible to enhance their career opportunities. One way to do this is with a master's degree following the bachelor's degree; however, this often results in more specialization than may be desired and may take an additional two years. Another option is to broaden the undergraduate experience, thus opening more opportunities for the graduate. The dual B.S.A.E./B.S.M.E. program awards both the aerospace engineering and mechanical engineering degrees at the completion of a planned curriculum.

Students under this option pursue the B.S.A.E. and B.S.M.E. degrees simultaneously. This can be accomplished by declaring intentions as a freshman requesting admission to the programs. Maximum scheduling flexibility will result when this decision is made as early as possible in the student's academic career. Dual-degree students must take all courses listed in the 150-hour dual curriculum under the Major tab and satisfy the other requirements of the two individual programs.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Aerospace Engineering and Bachelor of Science in Mechanical Engineering degree:

- Complete a minimum of 150 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at West Virginia University. The Overall GPA is computed based on all work taken at West Virginia University and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 28 |
| Aerospace Engineering and Mechanical Engineering Program Requirements | | 101 |
| Total Hours | | 150 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| Calculus I: (GEF 3, minimum grade of C-) | | 4 |
| MATH 155 | Calculus 1 | |
| MATH 153<br>& MATH 154 | Calculus 1a with Precalculus<br>and Calculus 1b with Precalculus | |
| MATH 156 | Calculus 2 (GEF 8, minimum grade of C-) | 4 |
| MATH 251 | Multivariable Calculus (minimum grade of C-) | 4 |
| MATH 261 | Elementary Differential Equations (minimum grade of C-) | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (minimum grade of C-) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| Total Hours | | 28 |

## Aerospace Engineering and Mechanical Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| IENG 302 | Manufacturing Processes | 2 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 215 | Introduction to Aerospace Engineering | 3 |
| MAE 216L | Intermediate Engineering Computation | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |

| | | |
|---|---|---|
| MAE 320 | Thermodynamics | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| MAE 335 | Incompressible Aerodynamics | 3 |
| MAE 336 | Compressible Aerodynamics | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 345 | Aerospace Structures | 3 |
| MAE 353 | Intermediate Mechanics of Materials | 3 |
| MAE 423 | Heat Transfer | 3 |
| MAE 434 & 434L | Experimental Aerodynamics and Experimental Aerodynamics Laboratory | 3 |
| MAE 456 & 456L | Computer-Aided Design and Finite Element Analysis and Computer-Aided Design and Finite Element Analysis Laboratory | 3 |
| Choose course based on Mechanical AOE selection: | | 3 |
| MAE 460 | Automatic Controls (required if taking Materials Science and Engineering AOE) | |
| AE Technical Elective (required for | Energy Systems, Robotics, Dynamics and Control AOEs) [+] | |
| MAE 471S | Principles of Engineering Design | 3 |
| MAE 472S | Engineering Systems Design | 3 |
| MAE 476 | Space Flight and Systems | 3 |
| MSEN 350 | Materials Science | 3 |
| Aerospace Engineering Area of Emphasis | | 12 |
| Aeronautical Engineering (12 Total Hours) | | |
| Astronautical Engineering (12 Total Hours) | | |
| Mechanical Engineering Area of Emphasis | | 14-16 |
| Dynamics and Controls (15 Total Hours) | | |
| Energy Systems (15 Total Hours) | | |
| Materials Science (14 Total Hours) | | |
| Robotics (16 Total Hours) | | |
| Total Hours | | 101 |

**+**
See BSAE degree (p. 723) for list of electives

**++**
See BSME degree (p. 736) for list of electives

## Suggested Plan of Study

It is important for students to take courses in the order specified as close as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.A.E./B.S.M.E. degree program that completes degree requirements in four and a half years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L | 4 | MAE 102 | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 191 | 1 | GEF Elective 6 | 3 |
| MATH 155 (GEF 3) | 4 | GEF Elective 7 | 3 |
| GEF Elective 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202* | 1 | ENGL 102 | 3 |

| | | | |
|---|---|---|---|
| MAE 212L | 1 | MAE 211 & 211L | 3 |
| MAE 215 | 3 | MAE 242 | 3 |
| MAE 216L | 1 | MAE 243 | 3 |
| MAE 241 | 3 | MATH 261 | 4 |
| MATH 251 (GEF 8) | 4 | | |
| PHYS 112 & 112L | 4 | | |
| | 17 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 316 | 3 | ECON 201 | 3 |
| MAE 320 | 3 | EE 221 & 221L | 4 |
| MAE 331 | 3 | MAE 336 | 3 |
| MAE 335* | 3 | MAE 342 | 3 |
| MAE 353 | 3 | MAE 476 | 3 |
| MSEN 350 | 3 | AE AOE Course | 3 |
| | 18 | | 19 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 434 & 434L* | 3 | IENG 302 | 2 |
| AE AOE Courses | 6 | MAE 345* | 3 |
| ME AOE Course | 5 | AE AOE Course | 3 |
| MAE 471S | 3 | ME AOE Courses | 3 |
| | | MAE 472S | 3 |
| | 17 | | 14 |

**Fifth Year**

| Fall | Hours |
|---|---|
| MAE 423 | 3 |
| MAE 456 & 456L | 3 |
| MAE 460 (or AE Technical Elective) | 3 |
| ME AOE Courses | 6 |
| | 15 |

Total credit hours: 150

*****
Courses taught in given semester.

# B.S.M.E. Mechanical Engineering and B.S. Robotics Engineering

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Mechanical Engineering and a Bachelor of Science in Robotics Engineering degree:

- Complete a minimum of 150 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better

- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 28 |
| Mechanical Engineering and Robotics Engineering Program Requirements | | 104-109 |
| Total Hours | | 150-155 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8 ) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| Total Hours | | 28 |

## Mechanical Engineering and Robotics Enginering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |

| | | |
|---|---|---|
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| IENG 302 | Manufacturing Processes | 2 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 320 | Thermodynamics | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 353 | Intermediate Mechanics of Materials | 3 |
| MAE 423 | Heat Transfer | 3 |
| MAE 456<br>& 456L | Computer-Aided Design and Finite Element Analysis<br>and Computer-Aided Design and Finite Element Analysis Laboratory | 3 |
| MSEN 350 | Materials Science | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| ROBE 413 | Robotic Manipulators | 3 |
| ROBE 414 | Robot Autonomy | 3 |
| ROBE 471S | Principles of Engineering Design | 3 |
| ROBE 472S | Engineering Systems Design | 3 |
| **Focus Areas** | | **16-21** |
| Option A (16 Credits) | | |
| MAE 244L | Dynamics and Strength Laboratory | |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | |
| MAE 442 | Mechanical Vibrations | |
| MAE 460 | Automatic Controls | |
| Technical Electives (6 credits) | | |
| Option B (21 Credits) | | |
| ME Dynamics and Controls AoE (15 Credits) [+] | | |
| Technical Electives (6 Credits) [*] | | |
| Option C (21 Credits) | | |
| Energy Systems AoE (15 Credits) [+] | | |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | |
| Technical Electives (3 credits) [*] | | |
| Option D (20-21 Credits) | | |
| Materials Science AoE (14-15 Credits) [+] | | |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | |

| | | |
|---|---|---|
| MAE 460 | Automatic Controls | |
| Total Hours | | 104-109 |

*****

See BSME degree (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/mechanical/#majortext) for list of electives
See BS Robotics (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/robe/#majortext) degree for list of electives

**+**

See BSME degree (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/mechanical/#areasofemphasistext) for Area of Emphasis (AoE) options

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.M.E / B.S. Robotics degree program that completes degree requirements in four and a half years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 2) | 4 | CS 111 & 111L | 4 |
| CS 110 & 110L | 4 | MATH 156 (GEF 8) | 4 |
| ENGL 101 (GEF 1) | 3 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 101 | 2 | GEF 5, 6, or 7 | 3 |
| ENGR 191 | 1 | GEF 5, 6, or 7 | 3 |
| MATH 155 (GEF 3) | 4 | | |
| | 18 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202 | 1 | EE 221 & 221L | 4 |
| MAE 212L | 1 | ENGL 102 (GEF 1) | 3 |
| MAE 241 | 3 | MAE 211 & 211L | 3 |
| MATH 251 (GEF 8) | 4 | MAE 242 | 3 |
| PHYS 112 & 112L | 4 | MATH 261 | 4 |
| GEF 5, 6, or 7 | 3 | | |
| | 16 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 271 & 271L | 4 | ECON 201 (GEF 4) | 3 |
| MAE 243 | 3 | MAE 316 | 3 |
| MAE 244L | 1 | MAE 342 | 3 |
| MAE 320 | 3 | MAE 353 | 3 |
| MAE 331 | 3 | MSEN 350 | 3 |
| ROBE 313 | 3 | | |
| | 17 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 251 & 251L | 4 | CPE 310 & 310L | 4 |
| CS 350 | 3 | MAE 442* | 3 |

| | | | |
|---|---|---|---|
| IENG 302 | 2 | MAE 456 & 456L | 3 |
| MAE 411 & 411L | 3 | ROBE 413* | 3 |
| ROBE 412* | 3 | ROBE 472S* | 3 |
| | 15 | | 16 |

**Fifth Year**

| **Fall** | **Hours** |
|---|---|
| MAE 423 | 3 |
| MAE 460 | 3 |
| ROBE 414* | 3 |
| ROBE 471S* | 3 |
| Technical Elective | 3 |
| Technical Elective | 3 |
| | 18 |

Total credit hours: 150

## Major Learning Outcomes

### MECHANICAL ENGINEERING

Upon graduation, all Bachelor of Science students in Mechanical Engineering will have acquired the:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The primary learning goal of the BSME program is to implement state-of-the-art instructional materials, methods and technologies in order to prepare engineers who are highly proficient in their field of specialty and ready to contribute to the well-being of society through competent practice of the engineering profession, leading to economic development and innovative technological advancements.

The graduates of the BSME program are well prepared to engage in the long-life pursuit of successful engineering careers by quickly adapting to the changing demands of the workforce in a dynamic global environment, by enhancing continuously their professional abilities or skills, and by contributing effectively in multidisciplinary teams to the advancement of existing or anticipated industrial, economical and societal needs.

# Robotics Engineering, B.S.

## Degree Offered

- Bachelor of Science in Robotics Engineering (B.S.)

## Nature of the Program

Robotics engineering ranks amongst the fastest-growing profession globally according to a recent World Economic Forum Future of Jobs Report. This four-year degree program explores mechanical systems, computer science and engineering systems to provide students with a strong interdisciplinary foundation. Through the fundamentals of robotics systems, mobile robotics, robotic manipulators and autonomy students gain the knowledge and skills to develop their own robotics solutions. The culmination of this program is through the development of a yearlong capstone project giving students the experience to be prepared for a career in robotics engineering within the growing industry, government position or academia.

The robotics engineering program is designed to equip students with the knowledge and skills to excel in the engineering design and production of robotics and autonomous systems solutions. The program will prepare next-generation robotics engineers who are:

- Effective in the engineering design and production of robotics and autonomous systems solutions to alleviate the burden of human workload or create safer work environments.
- Versed to apply a theoretical foundation of mechanical, electrical and computer engineering systems to integrate and devise robotics solutions.
- Educated and trained to apply robotics solutions in collaboration with specialists in the field, ensuring a comprehensive and interdisciplinary approach to addressing challenges in robotic systems.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Robotics Engineering degree:

- Complete a minimum of 124 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may be applied toward degree completion
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 28 |

| | |
|---|---|
| Robotics Engineering Program Requirements | 78 |
| Total Hours | 124 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| Lab Science (select one of the following): | | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | 4 |
| Total Hours | | 28 |

## Robotics Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ECON 201 | Principles of Microeconomics | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |
| MAE 202 | Sophomore Seminar | 1 |

| | | |
|---|---|---|
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 460 | Automatic Controls | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| ROBE 413 | Robotic Manipulators | 3 |
| ROBE 414 | Robot Autonomy | 3 |
| ROBE 471S | Principles of Engineering Design | 3 |
| ROBE 472S | Engineering Systems Design | 3 |
| Choose from the following (for a total of at least 4 credit hours): | | 4 |
| CPE 410S | Microcomputer Structures and Interfacing | |
| CPE 442 | Introduction to Digital Computer Architecture | |
| CPE 453 | Data and Computer Communications | |
| CS 455 | Computer Architecture | |
| CS 472 | Artificial Intelligence | |
| CYBE 435 | Computer Incident Response | |
| CYBE 465 | Cybersecurity Principles and Practice | |
| EE 327 | Signals and Systems 1 | |
| EE 355<br>& 355L | Analog Electronics<br>and Analog Electronics Laboratory | |
| EE 463 | Digital Signal Processing Fundamentals | |
| IENG 405 | Design for Manufacturability | |
| IENG 445 | Project Management for Engineers | |
| MAE 312 | Introduction to Mechanical Design | |
| MAE 353 | Intermediate Mechanics of Materials | |
| MAE 442 | Mechanical Vibrations | |
| MAE 457 | UAV Path Planning and Trajectory Tracking | |
| MAE 466 | Spacecraft Dynamics | |
| MAE 469 | UAV Guidance, Navigation & Control | |
| MAE 473 | Bioengineering | |
| or BMEG 340 | Biomechanics | |
| or BIOM 425 | Bioengineering | |
| MATH 441 | Applied Linear Algebra | |
| PHYS 314 | Introductory Modern Physics | |
| PHYS 321 | Optics | |
| PHYS 332 | Theoretical Mechanics 2 | |
| ROBE 271S | Robotic Engineering Design 1 | |
| ROBE 371S | Robotic Engineering Design 2 | |
| ROBE 491 | Professional Field Experience | |
| or ROBE 495 | Independent Study | |
| or ROBE 496 | Senior Thesis | |
| Total Hours | | 78 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110 & 110L | 4 | CS 111 & 111L | 4 |
| ENGL 101 | 3 | MATH 156 | 4 |
| ENGR 101 | 2 | PHYS 111 & 111L | 4 |
| ENGR 191 | 1 | GEF 5 | 3 |
| MATH 155 | 4 | | |
| Lab Science | 4 | | |
| | 18 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221 & 221L | 4 | MAE 211 & 211L | 3 |
| MAE 202* | 1 | MAE 212L | 1 |
| MAE 241 | 3 | MAE 242 | 3 |
| MATH 251 | 4 | MATH 261 | 4 |
| PHYS 112 & 112L | 4 | ENGL 102 | 3 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 243 | 3 | ECON 201 | 3 |
| MAE 316 | 3 | EE 251 & 251L | 4 |
| GEF 6 | 3 | MAE 342 | 3 |
| CS 350 | 3 | ROBE 313 | 3 |
| CPE 271 & 271L | 4 | CPE 310 & 310L | 4 |
| | 16 | | 17 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 411 & 411L* | 3 | MAE 460 | 3 |
| ROBE 412* | 3 | GEF 7 | 3 |
| ROBE 414* | 3 | ROBE 413* | 3 |
| ROBE 471S* | 3 | ROBE 472S* | 3 |
| Technical Elective | 1 | Technical Elective | 3 |
| | 13 | | 15 |

Total credit hours: 124

*

Offered once per year in the semester shown.

## Area of Emphasis

- Artificial Intelligence

## AREA OF EMPHASIS IN ARTIFICIAL INTELLIGENCE

| Code | Title | Hours |
|---|---|---|
| CS 472 | Artificial Intelligence | 3 |
| CS 474 | Introduction to Responsible and Safe AI | 3 |

| | | |
|---|---|---|
| Select two of the following: | | 6 |
| CPE 420 | Introduction to Neural Networks | |
| CS 460 | Introduction to Big Data Engineering | |
| CS 473 | Introduction to Data Mining | |
| CS 476S | Applied Artificial Intelligence Studio | |
| EE 465 | Introduction to Digital Image Processing | |
| Total Hours | | 12 |

# Major Learning Outcomes

## ROBOTICS ENGINEERING

Upon graduation, all Bachelor of Science students in Robotics Engineering will have acquired the:

- Students will be effective in the engineering design and production of robotics and autonomous systems solutions to lighten the burden of human work;
- Students will be able to apply a theoretical foundation of mechanical systems, electrical systems and computer engineering systems to integrate and devise robotics solutions;
- Student will be effective and planning the use of and participating in the development of robotics and autonomous systems; and
- Students will have the education and training to apply robotics solutions in concert with specialists who deal with robotic systems.

# Dual Degree Programs

- B.S.A.E. Aerospace Engineering and B.S. Robotics Engineering (p. 757)
- B.S.Cp.E. Computer Engineering and B.S. Robotics Engineering (p. 757)
- B.S.C.S. Computer Science and B.S. Robotics Engineering (p. 760)
- B.S.M.E. Mechanical Engineering and B.S. Robotics Engineering (p. 764)

# B.S.A.E. Aerospace Engineering and B.S. Robotics Engineering

Students can simultaneously pursue two bachelor's degrees in Aerospace Engineering and Robotics Engineering. To successfully complete both degrees, students must meet all requirements of both programs. Exact credit hours and classes will vary per student based on their choice of technical electives and Area of Emphasis courses.

# B.S.Cp.E. Computer Engineering and B.S. Robotics Engineering

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Computer Engineering and a Bachelor of Science in Robotics Engineering degree:

- Complete a minimum of 153 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 30 |
| Computer Engineering and Robotics Engineering Program Requirments | | 105-106 |
| Total Hours | | 153-154 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| MATH 375 | Applied Modern Algebra | 3 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 2B) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics (GEF 8) | 3 |
| Total Hours | | 30 |

## Computer Engineering and Robotics Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |
| CPE 453 | Data and Computer Communications | 3 |
| CPE 410S | Microcomputer Structures and Interfacing | 3 |
| or CPE 442 | Introduction to Digital Computer Architecture | |
| or CPE 484 | Real-Time Systems Development | |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 330<br>& 330L | Introduction to Software Engineering<br>and Introduction to Software Engineering Laboratory | 4 |

| | | |
|---|---|---|
| CS 350 | Computer System Concepts | 3 |
| CS 450 | Operating Systems Structure | 4 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 223<br>& 223L | Electrical Circuits<br>and Electrical Circuits Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| EE 327 | Signals and Systems 1 | 3 |
| EE 355<br>& 355L | Analog Electronics<br>and Analog Electronics Laboratory | 4 |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | 3 |
| or ENGR 102 | Engineering Problem Solving 2 | |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 460 | Automatic Controls | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| ROBE 413 | Robotic Manipulators | 3 |
| ROBE 414 | Robot Autonomy | 3 |
| Capstone Sequence (Select One Pathway) | | 6-7 |
| CSEE 380<br>& CSEE 480S<br>& CSEE 481S | Engineering for Societal Impact<br>and Capstone Project - Design<br>and Capstone Project - Implementation (7 Total Hours) | |
| ROBE 471S<br>& ROBE 472S | Principles of Engineering Design<br>and Engineering Systems Design (6 Total Hours) | |
| Technical Elective * | | 3 |
| Total Hours | | 105-106 |

*

See BS CpE (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/lanedepartmentofcomputerscienceand/computer_engineering/#majortext) and BS Robotics (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/robe/#majortext) degrees for list of technical electives. Except CPE 412 Mobile Robotics.

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.Cp.E. / B.S. Robotics degree program that completes degree requirements in five years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110<br>& 110L | 4 | CS 111<br>& 111L | 4 |
| ENGL 101 | 3 | MAE 102 | 3 |
| ENGR 101 | 2 | MATH 156 | 4 |

| | | | |
|---|---|---|---|
| ENGR 191 | 1 | PHYS 111 & 111L | 4 |
| MATH 155 | 4 | | |
| GEF 5, 6, or 7 | 3 | | |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 221 & 221L | 4 | CPE 271 & 271L | 4 |
| MAE 202 | 1 | ENGL 102 | 3 |
| MAE 241 | 3 | MAE 212L | 1 |
| MATH 251 | 4 | MAE 242 | 3 |
| PHYS 112 & 112L | 4 | MATH 261 | 4 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 310 & 310L | 4 | CS 350 | 3 |
| MAE 211 & 211L | 3 | EE 223 & 223L | 4 |
| MAE 243 | 3 | EE 251 & 251L | 4 |
| ROBE 313 | 3 | MAE 316 | 3 |
| STAT 215 | 3 | | |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 355 & 355L | 4 | CS 330 & 330L | 4 |
| MAE 342 | 3 | ECON 201 (GEF 4) | 3 |
| MATH 375 | 3 | EE 327 | 3 |
| ROBE 412* | 3 | ROBE 413* | 3 |
| GEF 5, 6, or 7 | 3 | GEF 5, 6, or 7 | 3 |
| | 16 | | 16 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 453 | 3 | CPE 410S, 442, or 484 | 3 |
| CS 450 | 4 | MAE 460 | 3 |
| MAE 411 & 411L | 3 | ROBE 472S or CSEE 481S* | 3 |
| ROBE 414* | 3 | Technical Elective | 3 |
| ROBE 471S or CSEE 480S* | 3 | | |
| | 16 | | 12 |

Total credit hours: 153

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Courses only taught in given semester.

## B.S.C.S. Computer Science and B.S. Robotics Engineering

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Computer Science and a Bachelor of Science in Robotics Engineering degree:

- Complete a minimum of 152 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 30 |
| Computer Science and Robotics Engineering Program Requirements | | 104-105 |
| Total Hours | | 152-153 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses except CS 220. | | |
| CS 220 | Discrete Mathematics | 3 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 2B) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics (GEF 8) | 3 |
| Total Hours | | 30 |

## Computer Science and Robotics Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |
| CPE 453 | Data and Computer Communications | 3 |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 210 | File and Data Structures | 4 |
| CS 310 | Principles of Programming Languages | 3 |
| CS 320 | Analysis of Algorithms | 3 |
| CS 330<br>& 330L | Introduction to Software Engineering<br>and Introduction to Software Engineering Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| CS 410 | Compiler Construction | 3 |
| or CS 422 | Automata Theory | |
| CS 450 | Operating Systems Structure | 4 |
| ECON 201 | Principles of Microeconomics | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 411<br>& 411L | Advanced Mechatronics<br>and Advanced Mechatronics Laboratory | 3 |
| MAE 460 | Automatic Controls | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| ROBE 413 | Robotic Manipulators | 3 |
| ROBE 414 | Robot Autonomy | 3 |
| WRIT 304 | Business and Professional Writing | 3 |
| or WRIT 305 | Technical Writing | |
| or WRIT 403 | Grant Proposal Writing for Community & Industry | |
| Capstone Design Sequence | | 6-7 |
| CSEE 380<br>& CSEE 480S<br>& CSEE 481S | Engineering for Societal Impact<br>and Capstone Project - Design<br>and Capstone Project - Implementation | |
| ROBE 471S<br>& ROBE 472S | Principles of Engineering Design<br>and Engineering Systems Design | |
| CS 4xx Technical Elective * | | 3 |
| Total Hours | | 104-105 |

*

See BSCS (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/lanedepartmentofcomputerscienceand/computer_science/#majortext) degree for list of electives with the CS subject code in 400-level or higher.

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.C.S. / B.S. Robotics degree program that completes degree requirements in four and a half years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 110 & 110L | 4 | CS 111 & 111L | 4 |
| ENGL 101 | 3 | ENGL 102 | 3 |
| ENGR 101 | 2 | MATH 156 | 4 |
| ENGR 191 | 1 | PHYS 111 & 111L | 4 |
| MATH 155 | 4 | | |
| GEF 5, 6, or 7 | 3 | | |
| | 17 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 210 | 4 | CPE 271 & 271L | 4 |
| MAE 202 | 1 | MAE 211 & 211L | 3 |
| MAE 241 | 3 | MAE 212L | 1 |
| MATH 251 | 4 | MAE 242 | 3 |
| PHYS 112 & 112L | 4 | MATH 261 | 4 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 220 | 3 | CPE 310 & 310L | 4 |
| CS 330 & 330L | 4 | CS 310 | 3 |
| EE 221 & 221L | 4 | CS 320 | 3 |
| ROBE 313 | 3 | EE 251 & 251L | 4 |
| MAE 243 | 3 | | |
| | 17 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 316 | 3 | CS 350 | 3 |
| MAE 342 | 3 | ECON 201 (GEF 4) | 3 |
| ROBE 412* | 3 | ROBE 413* | 3 |
| STAT 215 | 3 | WRIT 304, 305, or 403 | 3 |
| GEF 5, 6, or 7 | 3 | GEF 5, 6, or 7 | 3 |
| | 15 | | 15 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 453 | 3 | CS 450 | 4 |
| CS 410 or 422* | 3 | MAE 460 | 3 |

| | | |
|---|---|---|
| MAE 411 & 411L | 3 ROBE 472S or CSEE 481S* | 3 |
| ROBE 414* | 3 CS 400-level Technical Elective | 3 |
| ROBE 471S or CSEE 480S* | 3 | |
| | 15 | 13 |

Total credit hours: 152

*

Courses only taught in given semester

# B.S.M.E. Mechanical Engineering and B.S. Robotics Engineering

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Mechanical Engineering and a Bachelor of Science in Robotics Engineering degree:

- Complete a minimum of 150 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, EMGT, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, MPGE, MSEN, PDA, PNGE, ROBE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 2 |
| Math and Science Requirements | | 28 |
| Mechanical Engineering and Robotics Engineering Program Requirements | | 104-109 |
| Total Hours | | 150-155 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Total Hours | | 2 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8 ) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| Total Hours | | 28 |

## Mechanical Engineering and Robotics Enginering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CPE 271<br>& 271L | Introduction to Digital Logic Design<br>and Digital Logic Laboratory | 4 |
| CPE 310<br>& 310L | Microprocessor Systems<br>and Microprocessor Systems Laboratory | 4 |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | 4 |
| CS 111<br>& 111L | Introduction to Data Structures<br>and Introduction to Data Structures Laboratory | 4 |
| CS 350 | Computer System Concepts | 3 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | 4 |
| EE 251<br>& 251L | Digital Electronics<br>and Digital Electronics Laboratory | 4 |
| IENG 302 | Manufacturing Processes | 2 |
| MAE 202 | Sophomore Seminar | 1 |
| MAE 211<br>& 211L | Mechatronics<br>and Mechatronics Laboratory | 3 |
| MAE 212L | Introduction to Computer Aided Design | 1 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 316 | Analysis of Engineering Systems | 3 |
| MAE 320 | Thermodynamics | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| MAE 342 | Dynamics of Machines | 3 |
| MAE 353 | Intermediate Mechanics of Materials | 3 |
| MAE 423 | Heat Transfer | 3 |
| MAE 456<br>& 456L | Computer-Aided Design and Finite Element Analysis<br>and Computer-Aided Design and Finite Element Analysis Laboratory | 3 |
| MSEN 350 | Materials Science | 3 |
| ROBE 313 | Fundamentals of Robotic Systems | 3 |
| ROBE 412 | Mobile Robotics | 3 |
| ROBE 413 | Robotic Manipulators | 3 |
| ROBE 414 | Robot Autonomy | 3 |
| ROBE 471S | Principles of Engineering Design | 3 |

| | | |
|---|---|---|
| ROBE 472S | Engineering Systems Design | 3 |
| **Focus Areas** | | **16-21** |
| Option A (16 Credits) | | |
| MAE 244L | Dynamics and Strength Laboratory | |
| MAE 411 & 411L | Advanced Mechatronics and Advanced Mechatronics Laboratory | |
| MAE 442 | Mechanical Vibrations | |
| MAE 460 | Automatic Controls | |
| Technical Electives (6 credits) | | |
| Option B (21 Credits) | | |
| ME Dynamics and Controls AoE (15 Credits) [+] | | |
| Technical Electives (6 Credits) [*] | | |
| Option C (21 Credits) | | |
| Energy Systems AoE (15 Credits) [+] | | |
| MAE 411 & 411L | Advanced Mechatronics and Advanced Mechatronics Laboratory | |
| Technical Electives (3 credits) [*] | | |
| Option D (20-21 Credits) | | |
| Materials Science AoE (14-15 Credits) [+] | | |
| MAE 411 & 411L | Advanced Mechatronics and Advanced Mechatronics Laboratory | |
| MAE 460 | Automatic Controls | |
| Total Hours | | 104-109 |

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See BSME degree (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/mechanical/#majortext) for list of electives
See BS Robotics (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/robe/#majortext) degree for list of electives

**+**

See BSME degree (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/departmentofmechanicalandaerospace/mechanical/#areasofemphasistext) for Area of Emphasis (AoE) options

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.M.E / B.S. Robotics degree program that completes degree requirements in four and a half years is listed below.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 2) | 4 | CS 111 & 111L | 4 |
| CS 110 & 110L | 4 | MATH 156 (GEF 8) | 4 |
| ENGL 101 (GEF 1) | 3 | PHYS 111 & 111L (GEF 8) | 4 |
| ENGR 101 | 2 | GEF 5, 6, or 7 | 3 |
| ENGR 191 | 1 | GEF 5, 6, or 7 | 3 |
| MATH 155 (GEF 3) | 4 | | |
| | 18 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MAE 202 | 1 | EE 221 & 221L | 4 |
| MAE 212L | 1 | ENGL 102 (GEF 1) | 3 |

| | | | |
|---|---|---|---|
| MAE 241 | 3 | MAE 211 & 211L | 3 |
| MATH 251 (GEF 8) | 4 | MAE 242 | 3 |
| PHYS 112 & 112L | 4 | MATH 261 | 4 |
| GEF 5, 6, or 7 | 3 | | |
| | 16 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CPE 271 & 271L | 4 | ECON 201 (GEF 4) | 3 |
| MAE 243 | 3 | MAE 316 | 3 |
| MAE 244L | 1 | MAE 342 | 3 |
| MAE 320 | 3 | MAE 353 | 3 |
| MAE 331 | 3 | MSEN 350 | 3 |
| ROBE 313 | 3 | | |
| | 17 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EE 251 & 251L | 4 | CPE 310 & 310L | 4 |
| CS 350 | 3 | MAE 442* | 3 |
| IENG 302 | 2 | MAE 456 & 456L | 3 |
| MAE 411 & 411L | 3 | ROBE 413* | 3 |
| ROBE 412* | 3 | ROBE 472S* | 3 |
| | 15 | | 16 |

**Fifth Year**

| Fall | Hours |
|---|---|
| MAE 423 | 3 |
| MAE 460 | 3 |
| ROBE 414* | 3 |
| ROBE 471S* | 3 |
| Technical Elective | 3 |
| Technical Elective | 3 |
| | 18 |

Total credit hours: 150

# Department of Mining Engineering

## Degree Offered

- Bachelor of Science in Mining Engineering (B.S.Min.E.)
- Dual Major in Mining and Civil Engineering

**Nature of the Program**

Mining engineering deals with discovering, extracting, processing, marketing, and utilizing mineral deposits from the earth's crust. The role of the mining engineer may be quite diversified, and the field offers opportunities for specialization in a large number of technical areas. The trained professional in this field is well versed in mining and geology and also in the principles of civil, electrical, and mechanical engineering as applied to the mining industry. With the present trend toward the use of engineers in industrial management and administrative positions, the mining engineer's training also includes economics, business, personnel management, and the humanities.

The mission of the Bachelor of Science in Mining Engineering (B.S.Min.E.) program at West Virginia University has been established to produce graduates who are thoroughly prepared to meet the operational and engineering challenges of the mining industry and to continue their studies in

graduate programs. The Bachelor of Science degree in Mining Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Mining Engineering.

Professional technical courses include surface and underground mining systems, engineering principles of blasting, materials handling, ventilation, roof control, rock mechanics, mining equipment, coal and mineral preparation, plant and mine design, geology, and water control. In addition, students receive a foundation in the managerial, financial, environmental, and social aspects of the operation of a mining enterprise. Local coal fields, mines, and preparation plants provide extensive opportunity for research, instruction, and field work in a real-world situation.

In the fourth year, the student may specialize in such career areas as coal mining, ore mining, or other phases of mining engineering through the proper selection of design problems and electives. The student will be assigned an advisor who will assist in this phase of the program.

## Program Educational Objectives

The four program educational objectives of the WVU BSMinE have been established:

1. Our graduates will be successful in their professional careers and will continue to develop professionally and serve in leadership roles in industry, research, public service, and/or post-graduate education.
2. Our graduates will achieve their professional objectives by coordinating and leveraging key aspects of Mining Engineering: geology, exploration, valuation, development, exploitation, reclamation, and beneficiation.
3. Our graduates will successfully utilize engineering principles and technology to solve engineering problems in their career.
4. Throughout their careers, our graduates will successfully demonstrate their awareness and appreciation for professional registration, ethics, and lifelong learning while recognizing their obligations to society, the environment, the profession, and miner health and safety.

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## FACULTY

### CHAIR

- Qingqing Huang - Ph.D. (University of Kentucky)
  Mineral processing, Coal preparation, Explosion mitigation, Extractive metallurgy

### ASSISTANT PROFESSOR

- Qingqing Huang - Ph.D. (University of Kentucky)
  Mineral processing, Coal preparation, Explosion mitigation, Extractive metallurgy
- Deniz Talan - Ph.D. (West Virginia University)
  Critical mineral recovery from secondary sources, environmental assessment, and general mineral processing topics
- I. Berk Tulu - Ph.D. (West Virginia University)
  Coal/stone/hard rock pillar stability, Coal bump/burst, Rock drilling and fragmentation
- Deniz Tuncay - Ph.D. (West Virginia University)
  Ground control, rock mechanics, and geomechanics

### LECTURER

- Dan Alexander - Ph.D. (West Virginia University)
  Mineral economics evaluation

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Mining Engineering degree:

- Complete a minimum of 134 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 38 |
| Mining Engineering Program Requirements | | 72 |
| Total Hours | | 134 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory (GEF 8) | 4 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| GEOL 342 | Structural Geology for Engineers | 3 |
| Total Hours | | 38 |

## Mining Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| ESWS 455 | Reclamation of Disturbed Soils | 3 |
| MAE 241 | Statics | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 320 | Thermodynamics | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| MINE 201<br>& 201L | Mine Surveying<br>and Mine Surveying Laboratory | 3 |
| MINE 205 | Underground Mining Systems | 3 |
| MINE 206 | Surface Mining Systems | 4 |
| MINE 261 | Engineering CAD | 2 |
| MINE 306 | Mineral Property Evaluation | 3 |
| MINE 331 | Mine Ventilation | 3 |
| MINE 382 | Mine Power Systems | 3 |
| MINE 411<br>& 411L | Rock Mechanics/Ground Control<br>and Rock Mechanics/Ground Control Laboratory | 4 |
| MINE 427<br>& 427L | Coal Preparation<br>and Coal Preparation Laboratory | 4 |
| or MINE 425<br>& 425L | Mineral Processing<br>and Mineral Processing Laboratory | |
| MINE 461 | Applied Mineral Computer Methods | 3 |
| MINE 471 | Mine and Safety Management | 3 |
| MINE 483S | Mine Design-Exploration Mapping | 3 |
| MINE 484 | Mine Design-Report Capstone (Fulfills Writing and Communications Skills Requirement) | 4 |
| Mining Technical Electives (300 or 400 level MINE course) | | 6 |
| Engineering/Science Electives: 300 or 400 level science or engineering course in BIOM, BMEG, CE, CHE, CPE, CS, EE, ENVE, IENG, MAE, MINE, PNGE, BIOL, CHEM, PHYS, GEOL, and MATH. | | 6 |
| Total Hours | | 72 |

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.Min.E. degree program that completes degree requirements in four years is as follows:

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (GEF 3) | 4 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | PHYS 111<br>& 111L (GEF 8) | 4 |
| CHEM 115<br>& 115L (GEF 2) | 4 | GEF 4 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 5 | 3 |
| GEOL 101 | 3 | | |
| GEOL 101L | 1 | | |
| | 18 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MINE 205 | 3 | MINE 206 | 4 |
| MINE 201<br>& 201L | 3 | MAE 243 | 3 |
| MINE 261 | 2 | MATH 261 | 4 |

| | | | |
|---|---|---|---|
| MAE 241 | 3 | PHYS 112<br>& 112L (GEF 8) | 4 |
| GEOL 342 | 3 | MAE 331 | 3 |
| MATH 251 | 4 | | |
| | 18 | | 18 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MINE 306 | 3 | MINE 331 | 3 |
| MINE 382 | 3 | ENGL 102 (GEF 1) | 3 |
| MINE 461 | 3 | MAE 242 | 3 |
| MAE 320 | 3 | GEF 6 | 3 |
| STAT 215 | 3 | Select one of the following:<br>MINE 425<br>& 425L<br>MINE 427<br>& 427L | 4 |
| | 15 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MINE 411<br>& 411L | 4 | MINE 484 | 4 |
| MINE 483S | 3 | ESWS 455 | 3 |
| MINE 471 | 3 | Two Engineering/Science Electives | 6 |
| Mining Technical Elective | 3 | Mining Technical Elective | 3 |
| GEF 7 | 3 | | |
| | 16 | | 16 |

Total credit hours: 134

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Mining Engineering and Bachelor of Science in Civil Engineering:

- Complete a minimum of 151 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements (http://catalog.wvu.edu/undergraduate/collegeofengineeringandmineralresources/#policiestext)
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science course with a grade of D+, D, or D- may apply toward a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at West Virginia University. The Overall GPA is computed based on all work taken at West Virginia University and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 38 |

| | |
|---|---|
| Mining Engineering and Civil Engineering Program Requirements | 92 |
| Total Hours | 151 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. * | | |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | 4 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| SUST 101<br>& 101L | Sustainable Earth<br>and Sustainable Earth Laboratory | 4 |
| GEOL 342 | Structural Geology for Engineers | 3 |
| Total Hours | | 38 |

## Mining Engineering and Civil Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| CE 201 | Introduction to Civil Engineering | 1 |
| CE 301 | Engineering Professional Development | 1 |
| CE 321 | Fluid Mechanics for Civil Engineers | 3 |
| CE 332 | Introduction to Transportation Engineering | 3 |
| CE 347<br>& 347L | Introduction to Environmental Engineering<br>and Introduction to Environmental Engineering Laboratory | 4 |
| CE 351<br>& 351L | Introductory Soil Mechanics<br>and Introductory Soil Mechanics Laboratory | 4 |
| CE 361<br>& 361L | Structural Analysis 1<br>and Structural Analysis 1 Laboratory | 4 |

| | | |
|---|---|---|
| CE 479 | Integrated Civil Engineering Design-Capstone | 3 |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| IENG 377 | Engineering Economy | 3 |
| MAE 241 | Statics (minimum grade of C-) | 3 |
| MAE 242 | Dynamics | 3 |
| MAE 243 | Mechanics of Materials (minimum grade of C-) | 3 |
| MAE 320 | Thermodynamics | 3 |
| MINE 201<br>& 201L | Mine Surveying<br>and Mine Surveying Laboratory | 3 |
| MINE 205 | Underground Mining Systems | 3 |
| MINE 206 | Surface Mining Systems | 4 |
| MINE 261 | Engineering CAD | 2 |
| MINE 306 | Mineral Property Evaluation | 3 |
| MINE 331 | Mine Ventilation | 3 |
| MINE 382 | Mine Power Systems | 3 |
| MINE 411<br>& MAE 411L | Rock Mechanics/Ground Control<br>and Advanced Mechatronics Laboratory | 4 |
| MINE 425<br>& 425L | Mineral Processing<br>and Mineral Processing Laboratory | 4 |
| or MINE 427<br>& 427L | Coal Preparation<br>and Coal Preparation Laboratory | |
| MINE 471 | Mine and Safety Management | 3 |
| MINE 483S | Mine Design-Exploration Mapping | 3 |
| MINE 484 | Mine Design-Report Capstone | 4 |
| CE Design Electives [+] | | 6 |
| CE Open Electives [+] | | 6 |
| Total Hours | | 92 |

**+**
See BSCE degree (p. 665) for list of electives

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical dual B.S.Min.E. and B.S.C.E. degree program that completes degree requirements in five years is as follows:

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (GEF 3) | 4 | MATH 156 (GEF 8) | 4 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 191 | 1 | PHYS 111<br>& 111L (GEF 8) | 4 |
| CHEM 115<br>& 115L (GEF 2) | 4 | SUST 101<br>& 101L | 4 |
| ENGL 101 (GEF 1) | 3 | GEF 6 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 18 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 201 | 1 | ENGL 102 | 3 |
| MAE 241 | 3 | MAE 242 | 3 |
| MATH 251 | 4 | MATH 261 | 4 |
| MINE 201<br>& 201L | 3 | MINE 206 | 4 |

| | | | |
|---|---|---|---|
| MINE 205 | 3 | PHYS 112 & 112L | 4 |
| MINE 261 | 2 | | |
| | 16 | | 18 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 321 | 3 | CE 332 | 3 |
| GEOL 342 | 3 | CE 351 & 351L | 4 |
| MAE 243 | 3 | MINE 331 | 3 |
| MAE 320 | 3 | MINE 427 & 427L | 4 |
| STAT 215 | 3 | | |
| | 15 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CE 347 & 347L | 4 | CE 301 | 1 |
| CE 361 & 361L | 4 | CE Design Elective | 3 |
| MINE 306 | 3 | CE Design Elective | 3 |
| MINE 382 | 3 | IENG 377 | 3 |
| | | CE Open Elective | 3 |
| | 14 | | 13 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ECON 201 | 3 | CE Open Elective | 3 |
| MINE 411 & 411L | 4 | CE 479 | 3 |
| MINE 471 | 3 | MINE 484 | 4 |
| MINE 483S | 3 | GEF 7 | 3 |
| | 13 | | 13 |

Total credit hours: 151

## Major Learning Outcomes

### MINING ENGINEERING

Upon graduation, all Bachelor of Science students in Mining Engineering will:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Department of Petroleum & Natural Gas Engineering, B.S.P.N.G.E.

## Degree Offered

- Bachelor of Science in Petroleum and Natural Gas Engineering (B.S.P.N.G.E.)

## Nature of the Program

Petroleum and Natural Gas Engineering is concerned with design and application aspects of the discovery, production, and transportation of oil and natural gas resources.

Professionals in this field must have a thorough understanding of the geological principles relating to the occurrence, discovery, and production of fluid hydrocarbons. The petroleum and natural gas engineer must know and be capable of applying both conventional engineering design principles as well as those pertaining specifically to the field of petroleum and natural gas engineering. These are developed in the petroleum and natural gas engineering courses in the curriculum. In addition, a strong foundation in mathematics and the sciences broadens the future engineer's professional capabilities. Because many engineers will be employed as supervisors or executives, managerial and social skills are also emphasized.

Students in PNGE enroll in rigorous individual courses in all basic areas of petroleum and natural gas engineering, basic science, mathematics, geology, and humanities and social sciences. The petroleum and natural gas engineering curriculum also contains significant laboratory components aimed at reinforcing the knowledge gained in the classroom. In the senior year, technical electives are offered in which the student may obtain additional depth of knowledge in specific areas of petroleum and natural gas engineering technology. Each student is individually mentored by a member of the petroleum and natural gas engineering faculty.

Students gain practical experience and first-hand knowledge of many aspects of petroleum and natural gas engineering through close proximity to the industry in West Virginia and surrounding states. Production sites, secondary and enhanced oil recovery projects, compressor stations, gas storage fields, and corporate offices all provide excellent opportunities for our students. Additional experience is provided through modern, well-equipped laboratories within the department and the University. Students are urged to gain field experience through summer employment in the industry.

Students are offered the opportunity to enter all phases of the petroleum and natural gas industry in meaningful and important jobs, continue their education towards advanced degrees, or in some cases pursue a combination of professional employment and continued education. The Bachelor of Science degree in Petroleum and Natural Gas Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, under the General Criteria and the Program Criteria for Petroleum Engineering.

## Program Educational Objectives

- The graduates will be successful in their professional careers as petroleum engineers in the energy industry, government agencies, and/or post-graduate education.
- The graduates will continue to develop professionally and serve in leadership roles.
- The graduates will be successful in demonstrating their obligations to the profession, to their employer, and to society.

The foundation for achieving program objectives is established through a rigorous curriculum that provides the students with:

- An understanding of scientific and engineering principles and the application of these principles in solving petroleum and natural gas engineering problems using modern tools
- An integrated design experience leading to a capstone design course
- A balanced and rounded education to recognize the need for developing technical communication and teamwork skills, as well as understanding the engineer's professional, ethical, and societal obligations

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## FACULTY

### CHAIR

- Samuel Ameri - M.S.Pet.E., P.E. (West Virginia University)
  Formation Evaluation

### PROFESSORS

- Kashy Aminian - Ph.D. (University of Michigan)
  Graduate Coordinator. Natural Gas Engineering, Unconventional Reservoirs
- Shahab Mohaghegh - Ph.D. (Pennsylvania State University)
  Intelligent Systems, Shale Analytics

### ASSOCIATE PROFESSOR

- H. Ilkin Bilgesu - Ph.D., P.E. (Pennsylvania State University)
  Drilling and Production Engineering
- Ebrahim Fathi - Ph.D. (University of Oklahoma)
  Phase Behavior

## ADJUNCT PROFESSORS

- Alan Brannon - Ph.D. (West Virginia University)
  Petroleum Engineering Fundamentals
- Josh Dalton - MSPNGE (West Virginia University)
  Drilling and Completion
- Pramod Thakur - Ph.D. (Pennsylvania State University)
  Coalbed Methane

Click here to view the Suggested Plan of Study (p. 778)

# Curriculum in Petroleum and Natural Gas Engineering

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Petroleum and Natural Gas Engineering degree:

- Complete a minimum of 128 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 37 |
| Petroleum & Natural Gas Engineering Program Requirements | | 70 |
| Total Hours | | 128 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 2B) | 4 |
| MATH 155 | Calculus 1 (GEF 3) | 4 |
| MATH 156 | Calculus 2 (GEF 8 ) | 4 |
| MATH 251 | Multivariable Calculus | 4 |
| MATH 261 | Elementary Differential Equations | 4 |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory (GEF 8) | 4 |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | 4 |
| STAT 215 | Introduction to Probability and Statistics | 3 |
| or IENG 213 | Engineering Statistics | |
| SUST 101 | Sustainable Earth | 3 |
| GEOL 373 | Introduction to Petroleum Geology | 3 |
| Total Hours | | 37 |

## Petroleum & Natural Gas Engineering Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all PNGE courses. | | |
| ECON 201 | Principles of Microeconomics (GEF 4) | 3 |
| ECON 202 | Principles of Macroeconomics | 3 |
| EE 221 | Introduction to Electrical Engineering | 3 |

| | | |
|---|---|---|
| MAE 241 | Statics | 3 |
| MAE 243 | Mechanics of Materials | 3 |
| MAE 320 | Thermodynamics | 3 |
| MAE 331 | Fluid Mechanics | 3 |
| PNGE 200 | Introduction to Petroleum Engineering | 3 |
| PNGE 310 | Drilling Engineering | 3 |
| PNGE 312L | Drilling Fluids Laboratory | 1 |
| PNGE 332 | Petroleum Properties and Phase Behavior (Fulfills Writing and Communications Skills Requirement) | 3 |
| PNGE 333 | Basic Reservoir Engineering | 3 |
| PNGE 400 | Petroleum Engineering Ethics | 1 |
| PNGE 420 | Production Engineering | 3 |
| PNGE 432L | Petroleum Reservoir Engineering Laboratory | 1 |
| PNGE 441 | Oil and Gas Property Evaluation | 3 |
| PNGE 447 | Introduction to Carbon Capture and Storage | 3 |
| PNGE 450 | Formation Evaluation | 3 |
| PNGE 460 | Well Stimulation Design | 3 |
| PNGE 470 & 470L | Natural Gas Engineering and Natural Gas Engineering Laboratory | 4 |
| PNGE 472 | Shale Analytics | 3 |
| PNGE 480 | Petroleum Engineering Design | 3 |
| Professional Elective (Select two of the following): | | 6 |
| PNGE 415 & 415L | Well Control and Well Control Laboratory | |
| PNGE 434 | Applied Reservoir Engineering | |
| PNGE 439 | Introduction to Reservoir Simulation | |
| PNGE 463 | Horizontal Drilling | |
| PNGE 471 | Natural Gas Production and Storage | |
| PNGE 493 | Special Topics | |
| Cultural/Sustainability Elective | | 3 |
| AGEE 220 | Group Organization and Leadership | |
| ARE 187 | Energy Resource Economics | |
| ARE 220 | Introductory Environmental and Resource Economics | |
| DSGN 140 | Sustainable Living | |
| ENGL 226 | World Literature | |
| ESWS 155 | Elements of Environmental Protection | |
| PHIL 170 | Introduction to Critical Reasoning | |
| PHIL 346 | History of Ethics | |
| PLSC 140 | Sustainable Living | |
| SOC 207 | Social Problems in Contemporary America | |
| SOC 235 | Race and Ethnic Relations | |
| SOWK 147 | Human Diversity | |
| WMAN 150 | Principles of Conservation Ecology | |
| Total Hours | | 70 |

## Suggested Plan of Study

It is important for students to take courses in the order specified as much as possible; all prerequisites and concurrent requirements must be observed. A typical B.S.P.N.G.E. degree program that completes degree requirements in four years is as follows.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 155 (GEF 3) | | 4 MATH 156 (GEF 8) | 4 |
| ENGR 101 | | 2 ENGR 102 | 3 |

| | | | |
|---|---|---|---|
| ENGR 191 | 1 | PHYS 111 & 111L (GEF 8) | 4 |
| CHEM 115 & 115L (GEF 2B) | 4 | SUST 101 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 6 | 3 |
| GEF 5 | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 112 & 112L | 4 | MATH 261 | 4 |
| MATH 251 | 4 | MAE 243 | 3 |
| MAE 241 | 3 | MAE 331 | 3 |
| ENGL 102 (GEF 1) | 3 | IENG 213 or STAT 215 | 3 |
| ECON 201 | 3 | PNGE 200 | 3 |
| | 17 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PNGE 332 | 3 | PNGE 310 | 3 |
| EE 221 | 3 | PNGE 312L | 1 |
| MAE 320 | 3 | PNGE 333 | 3 |
| ECON 202 | 3 | PNGE 432L | 1 |
| GEF 7 | 3 | GEOL 373 | 3 |
| | | Cultural/Sustainability Elective | 3 |
| | 15 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PNGE 420 | 3 | PNGE 400 | 1 |
| PNGE 441 | 3 | PNGE 447 | 3 |
| PNGE 450 | 3 | PNGE 460 | 3 |
| PNGE 470 & 470L | 4 | PNGE 472 | 3 |
| Professional Elective | 3 | PNGE 480 | 3 |
| | | Professional Elective | 3 |
| | 16 | | 16 |

Total credit hours: 128

## Student Outcomes

Upon graduation, all Bachelors of Science of Science in Petroleum and Natural Gas Engineering students will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Fundamentals of Engineering Program

## Nature of the Program

The Benjamin M. Statler College of Engineering and Mineral Resources' Fundamentals of Engineering Program (FEP) is designed to support students as they build foundational engineering skills and discern their career interests within engineering and computing fields. The mission of this student-oriented program is to mentor, prepare, and retain qualified students for degree programs in the Statler College. The FEP provides the academic and co-curricular support students need for their success in their: transition to college life; development of academic discipline and skills necessary for entering and succeeding in an academically challenging major; foundational courses (mathematics, chemistry, physics, and basic engineering); and selection of an engineering or computing discipline major. The FEP focuses on:

- communication between students, faculty, mentors, and others;
- academic support services to support students in the fundamental mathematics, science, and engineering courses;
- provision of a co-curricular environment that facilitates successful transition to the college environment, provides career exploration opportunities, and supports students' academic endeavors;
- quality and engaging fundamental engineering instruction.

The FEP provides a vibrant and supportive community for students centered in the Eugene V. Cilento Learning Center (ELC). Students have a "one-stop" place to get the answers they need as they navigate through the transition from high school to college. In the ELC, students receive free tutoring, find information about upcoming guest speakers and other College events, and spend a significant amount of time studying, doing homework, and working on team projects for their engineering courses. Academic support is provided to all FEP students in the following subjects: mathematics, chemistry, physics, and engineering.

To facilitate engagement with the engineering community and development as engineering and computing professionals, FEP students participate in and reflect upon "Out of Class Experiences" (OCEs). Typical OCE opportunities include: *EngineerFEST*, an engineering student organization fair held each year to encourage students to learn about and become involved in one or more of the College's many student chapters of professional engineering societies; Department Visits, in which each department hosts FEP students in an informational seminar describing their majors, relevant research opportunities, and the career paths of graduates; Panels of Practicing Engineers; and other seminars, presentations, panels, workshops and experiences in which students learn academic success skills and strategies, are introduced to important professional expectations and life skills, and explore a variety of engineering and computing-related careers.

All policies, procedures, events and activities, and academic resources are listed on the FEP website. These curricular and co-curricular activities create a coherent program designed to facilitate student success in engineering and computing fields.

Additionally, students successfully completing the WVU Statler College Fundamentals of Engineering Program will select and enter an engineering or computing discipline major within the Statler College.

## Program Objectives

The educational objective of the Fundamentals of Engineering Program (FEP) in the Statler College is to prepare students to be academically successful in the engineering or computing major of their choice. Students who complete the FEP successfully:

- Transition to college life;
- Develop the academic discipline and skills necessary for entering and succeeding in an academically challenging major;
- Complete foundational courses (mathematics, chemistry, physics, and basic engineering); and
- Select an engineering or computing discipline major.

## Student Outcomes

Recognizing that the Fundamentals of Engineering Program (FEP) is the first step toward completing an engineering or computing discipline degree, students completing the FEP are *introduced* to the engineering and computing program educational outcomes listed below. Each of these outcomes are developed in the program in which the student completes a degree. Students who successfully complete the requirements of the WVU Fundamentals of Engineering Program begin to:

1. identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. communicate effectively with a range of audiences
4. recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

6. develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. acquire and apply new knowledge as needed, using appropriate learning strategies

## FACULTY

### DIRECTOR

- Lizzie Y. Santiago - Ph.D. (The Pennsylvania State University)
  Bioengineering, Stem Cell Research, Engineering education, STEM education, Student Success and Retention

### TEACHING PROFESSOR

- Todd R. Hamrick - Ph.D. (West Virginia University)
  STEM education, Robotics, Industrial applications, Curriculum development
- Robin A. M. Hensel - Ed.D. (West Virginia University)
  STEM education K-16, Student success and retention, Diversity and inclusion in STEM fields, Curriculum Development

### TEACHING ASSISTANT PROFESSORS

- Atheer Almasri - Ph.D. (Virginia Commonwealth University)
  Materials Engineering, STEM Education
- Michael Brewster - M.A. (West Virginia University)
  STEM Education, Student Success and Retention
- Carter Hulcher - Ph.D. (West Virginia University)
  Civil Engineering, Geomechanics, Student retention
- Akua Oppong-Anane - Ph.D. (University of Florida)
  Environmental Engineering Sciences, Engineering Education, Student Success and Retention

## Matriculation into Engineering Majors

### ENGINEERING DEGREES

Students can matriculate into the engineering discipline of their choice once they have successfully completed the following classes with a C- or better, and have a cumulative 2.00 GPA.

- MATH 155
- ENGR 101
- ENGR 191

## Curriculum

Students in the Fundamentals of Engineering Program will complete a minimum of 7 credit hours while completing the requirements to matriculate into their choice of engineering discipline. The amount of credit hours and the time in the Fundamentals of Engineering Program is based on math readiness.

- Students who start in Calculus I (MATH 155) or higher can matriculate into their specific major in 1 semester
- Students who start in Pre-Calculus (MATH129) can matriculate into their specific major in 1 year
- Students who start in College Algebra (MATH 126) can matriculate into the specific major within 1.5 years

### SUGGESTED PLAN OF STUDY FOR ENGINEERING MAJORS

This curriculum is based on starting in Calculus I (MATH 155). Students who place into a different math class when they start at WVU should work with their academic advisor to determine their specific curriculum.

| **First Year** | |
|---|---|
| **Fall** | **Hours** |
| MATH 155* | 4 |
| ENGR 101 | 2 |
| ENGR 191 | 1 |
| | 7 |

Total credit hours: 7

*

Students who place into math courses other than MATH 155, Calculus 1, must work with their academic advisor to create an appropriate plan to graduation.

# College Wide Degrees

## Degrees Offered

- Bachelor of Science in Engineering Technology (B.S.)

# Engineering Technology, B.S.

## Degree Offered

- Bachelor of Science in Engineering Technology (B.S.)

## Nature of the Program

This general Engineering Technology program provides graduates with instruction in technical and leadership skills necessary for manufacturing and industrial competitiveness and to enter careers in manufacturing process and systems design, operations, quality, continuous improvement, lean manufacturing and sustainability. It prepares graduates with knowledge, problem-solving ability and hands-on skills and to enter careers related to preparation of engineering drawings, design, installation, manufacturing, testing, technical sales, maintenance, improvement of integrated processes, their resulting products (including mechanical components and complex systems) and services within an organization. It draws upon specialized knowledge and skill in the mathematical, natural, physical and social sciences together with the principles and methods of engineering analysis and design, to design and fabricate products and specify, predict and evaluate the results to be obtained from integrated processes and systems. The B.S. Engineering Technology degree curriculum provides a multi-disciplinary overview of engineering technology with a general focus on manufacturing and requires the completion of two Areas of Emphasis.

## Program Educational Objectives

It is expected that, within a few years of graduation, graduates will attain the following Program Educational Objectives (PEOs):

- PEO-1. Graduates will be engaged in their professional careers, have consolidated professional proficiency as practitioners in an area of engineering technology as reflected by their responsibilities and accomplishments of their professional practice, and engage in lifelong learning and service opportunities.
- PEO-2. Graduates will be able to work competitively and collaboratively in diverse professional environments as demonstrated by their abilities to work on teams and independently, to provide leadership, and to communicate effectively to a variety of audiences.
- PEO-3. Graduates will behave professionally and ethically, be committed to responsible safety practices, and be aware of the significance and the societal impact of their work.

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## FACULTY

### TEACHING ASSISTANT PROFESSOR

- Emily Spayde - Ph.D. (Mississippi State University)
- Sehtab Hossain - Ph.D. (University of Missouri Kansas City)

### ADJUNCT TEACHING PROFESSOR

- Todd Hamrick - Ph.D. (West Virginia University)
- Robin A. M. Hensel - Ed.D (West Virginia University)

### ADJUNCT TEACHING ASSOCIATE PROFESSOR

- Mohamed Hefeida - Ph.D. (University of Illinois-Chicago)

### LABORATORY COORDINATOR

- Kelsey Crawford - B.S. (West Virginia University)

## Degree Requirements

Students must meet the following criteria to qualify for a Bachelor of Science in Engineering Technology degree:

- Complete a minimum of 120 credit hours
- Satisfy WVU's undergraduate degree requirements
- Satisfy Statler College's undergraduate degree requirements
- Complete all courses listed in the curriculum requirements with the required minimum grades
- Attain an overall grade point average of 2.00 or better
- Attain a WVU grade point average of 2.00 or better
- Attain a Statler grade point average of 2.00 or better
- A maximum of one math or science courses with a grade of D+, D, or D- may apply towards a Statler College degree
- Complete a survey regarding their academic and professional experiences at WVU, as well as post-graduation job placement or continuing education plans.

The Statler GPA is computed based on all work taken at WVU with a subject code within Statler College (BIOM, BMEG, CE, CHE, CPE, CS, CSEE, CYBE, EE, ENGR, ENVE, ETEC, IENG, IH&S, MAE, MINE, PDA, PNGE, SAFM, SENG) excluding ENGR 140, ENGR 150, and CS 101. The WVU GPA is computed based on all work taken at WVU. The Overall GPA is computed based on all work taken at WVU and transfer work.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 25 |
| Fundamentals of Engineering Requirements | | 5 |
| Math and Science Requirements | | 21 |
| Engineering Technology Program Requirements | | 69 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 6, 7 | | 15 |
| ENGR 191 | First-Year Seminar | 1 |
| General Electives | | 9 |
| Total Hours | | 25 |

## Fundamentals of Engineering Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Fundamentals of Engineering courses. | | |
| ENGR 101 | Engineering Problem Solving 1 | 2 |
| Engineering Problem Solving (Select one of the following): | | 3 |
| CHE 102 | Introduction to Chemical Engineering | |
| CS 110<br>& 110L | Introduction to Computer Science<br>and Introduction to Computer Science Laboratory | |
| ENGR 102 | Engineering Problem Solving 2 | |
| ENGR 103 | Introduction to Nanotechnology Design | |
| MAE 102 | Introduction to Mechanical and Aerospace Engineering Design | |
| Total Hours | | 5 |

## Math and Science Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in all Math and Science courses. | | |
| Chemistry | | 4 |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| Calculus 1 (GEF 3): | | 3 |

| | | |
|---|---|---|
| MATH 150 | Applied Calculus | |
| MATH 155 | Calculus 1 | |
| Calculus 2 | | 3 |
| MATH 151 | Applied Calculus 2 | |
| MATH 156 | Calculus 2 | |
| Physics 1 | | 4 |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory | |
| Physics 2 | | 4 |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | |
| Statistics | | 3 |
| STAT 211 | Elementary Statistical Inference | |
| STAT 215 | Introduction to Probability and Statistics | |
| Total Hours | | 21 |

## Engineering Technology Program Requirements

| Code | Title | Hours |
|---|---|---|
| Computer Applications | | 2 |
| BCOR 121 | Introduction to Business Applications | |
| CS 101 | Intro to Computer Applications | |
| WRIT 305 | Technical Writing | 3 |
| ENGR 140 | Engineering in History (also meets GEF 5) | 3 |
| ETEC 199 | Introduction to Engineering Technology | 1 |
| ETEC 130<br>& 130L | Manufacturing Processes 1<br>and Manufacturing Processes 1 Laboratory | 3 |
| ETEC 210<br>& 210L | Engineering Graphics and Descriptive Geometry<br>and Engineering Graphics and Descriptive Geometry Laboratory | 3 |
| ETEC 220<br>& 220L | Applications of Technology<br>and Applications of Technology Laboratory | 3 |
| ETEC 310<br>& 310L | Material Science with Applications<br>and Material Science with Applications Laboratory | 3 |
| ETEC 330<br>& 330L | Manufacturing Processes 2<br>and Manufacturing Processes 2 Laboratory | 3 |
| ETEC 340<br>& 340L | Electronic Circuits<br>and Electronic Circuits Laboratory | 4 |
| or EE 221<br>& 221L | Introduction to Electrical Engineering<br>and Introduction to Electrical Engineering Laboratory | |
| ETEC 350 | Analysis for Engineering Technology | 3 |
| ETEC 401 | Science, Technology, & Society | 2 |
| ETEC 440<br>& 440L | Industrial Automation PLC 1<br>and Industrial Automation PLC 1 Laboratory | 3 |
| ETEC 475S | Engineering Technology Capstone Experience | 3 |
| IENG 377 | Engineering Economy | 3 |
| IENG 445 | Project Management for Engineers | 3 |
| Area of Emphasis 1 | | 12 |
| Area of Emphasis 2 * | | 12 |
| Total Hours | | 69 |

*

Three credits in one of the Areas of Emphasis must be replaced with either ETEC 370, ETEC 450, or ETEC 491.

## Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 101 (or GEF 4) | 3 | BCOR 121 | 2 |
| ENGR 191 | 1 | ENGL 101 (or GEF 4) | 3 |
| ETEC 199 | 1 | ETEC 210 & 210L | 3 |
| ETEC 130 & 130L | 3 | MATH 151 | 3 |
| MATH 150 | 3 | PHYS 102 & 102L | 4 |
| PHYS 101 & 101L | 4 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 111 & 111L | 4 | ENGL 102 | 3 |
| ENGR 101 | 2 | ENGR 102 | 3 |
| ENGR 140 | 3 | ETEC 310 & 310L | 3 |
| ETEC 220 & 220L | 3 | AoE 1 Elective (#1) | 3 |
| STAT 211 | 3 | AoE 2 Elective (#1) | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ETEC 330 & 330L | 3 | WRIT 305 | 3 |
| ETEC 340 & 340L | 4 | ETEC 370 (Applied Workshop (#2)) | 1 |
| ETEC 350 | 3 | ETEC 440 & 440L | 3 |
| ETEC 370 (Applied Workshop (#1)) | 1 | IENG 377 | 3 |
| AoE 1 Elective (#2) | 3 | AoE 2 Elective (#2) | 3 |
| | | GEF 6 | 3 |
| | 14 | | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ETEC 401 | 2 | ETEC 475S | 3 |
| ETEC 370 (Applied Workshop (#3)) | 1 | IENG 445 | 3 |
| AoE 1 Elective (#3) | 3 | AoE 1 Elective (#4) | 3 |
| AoE 2 Elective (#3) | 3 | General Elective | 3 |
| General Elective | 3 | GEF 7 | 3 |
| General Elective | 3 | | |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis

- Construction Management
- Energy Technology
- Engineering Management and Entrepreneurship
- Industrial Engineering Technology
- Mechanical Engineering Technology
- Multi-Disciplinary Engineering Technology

## Construction Management Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in each course. | | |
| Select twelve (12) credits from the following: | | 12 |
| CE 413 | Construction Scheduling | |
| CE 414 | Construction Engineering | |
| CE 417 | Infrastructure Asset Management 1 | |
| CE 418 | Construction Estimating | |
| Total Hours | | 12 |

## Energy Technology Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in each course. | | |
| Select 12 credit hours from the following: | | 12 |
| ARE 445 | Energy Economics | |
| DSGN 280 | Sustainable Design and Development * | |
| DSGN 340 | Design for Energy Efficiency | |
| DSGN 470 | Leadership in Energy and Environmental Design Green Building Systems | |
| ENGR 310 | Energy Engineering | |
| ENLM 200 | Principles of Environmental, Energy, and Land Management * | |
| ENLM 220 | Energy Production & Operations * | |
| ENLM 250 | Managing Non-Technical Risks * | |
| ENLM 300 | Ethics and Negotiations for Land Managers | |
| ENLM 415 | Midstream Energy Planning and Development | |
| ENLM 442 | GIS Skills for Energy Land Management | |
| IENG 433 | Energy Efficiency and Sustainability | |
| MAE 320 | Thermodynamics | |
| or ETEC 320 | Thermodynamics for Engineering Technology | |
| RESM 405L | Drones in Resource Management | |
| RESM 440 & 440L | Foundations of Applied Geographic Information Systems and Foundations of Applied Geographic Information Systems Laboratory | |
| RESM 460 | Energy Project and Program Management | |
| Any 200- or 300- or 400-level Chemical Engineering (CHE), Civil Engineering (CE), Mining Engineering (MINE), or Petroleum and Natural Gas Engineering (PNGE) courses | | |
| Total Hours | | 12 |

*****

A maximum of 3 credit hours may be selected at the 200-level.

******

If this is the second Area of Emphasis selected, three credits will be replaced with one of the following courses:

- ETEC 370
- ETEC 450
- ETEC 491

## Engineering Management and Entrepreneurship Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in each course. | | |
| Select 12 credit hours from the following: | | 12 |
| BCOR 320 | Legal Environment of Business | |
| BCOR 330 | Information Systems and Technology | |
| BCOR 340 | Principles of Finance | |
| BCOR 350 | Principles of Marketing | |
| BCOR 360 | Supply Chain Management | |
| BCOR 370 | Principles of Management | |
| BCOR 380 | Business Ethics | |
| COMM 404 | Persuasion | |
| or COMM 335 | Social Media in the Workplace | |
| ENGR 450 | Technology Entrepreneurship and Enterprise Development | |
| ENTR 400 | Advanced Concepts in Entrepreneurship | |
| ENTR 405 | Entrepreneurial Creativity & Innovation | |
| ENTR 420 | Entrepreneurial Finance | |
| ENTR 436 | Family Business | |
| ENTR 440 | Small Business Consulting | |
| ENTR 460 | Entrepreneurship Practicum | |
| HRMG 470 | Conflict Management | |
| IENG 474 | Technology Entrepreneurship | |
| Total Hours | | 12 |

*****

A maximum of 3 credit hours may be selected at the 200-level.

******

- ETEC 370
- ETEC 450
- ETEC 491

## Industrial Engineering Technology Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in each course. | | |
| Select 12 credit hours from the following: | | 12 |
| COMM 306 | Organizational Communication | |
| DSGN 270 | Product Design Foundations * | |
| GSCM 450 | Supply Chain Quality Management | |
| IENG 220 | Re-Engineering Management Systems * | |
| IENG 331 | Computer Applications in Industrial Engineering | |
| IENG 461 | System Safety Engineering | |
| IENG 473 | Team Facilitation | |
| SAFM 470 | Managing Construction Safety | |
| SAFM 471 | Motor Fleet Safety | |
| Any 200- or 300- or 400-level Industrial Engineering course (except for IENG 377 and IENG 445) | | |
| Total Hours | | 12 |

*****

A maximum of 3 credit hours may be selected at the 200-level.

**

- ETEC 370
- ETEC 450
- ETEC 491

## Mechanical Engineering Technology Area of Emphasis

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in each course. | | |
| Select 12 credit hours from the following: | | 12 |
| AGEE 303 | Small Engines and Hydraulics | |
| FNRS 333 | Wood Machining | |
| FNRS 337 & 337L | Wood Adhesion and Finishing and Wood Adhesion and Finishing Laboratory | |
| FNRS 341 & 341L | Wood Mechanics and Wood Mechanics Laboratory | |
| MAE 211 | Mechatronics * | |
| MAE 241 | Statics * | |
| MAE 459 | Hybrid Electric Vehicle Propulsion and Control | |
| Any 300- or 400-level MAE course (except for MAE 312) | | |
| Total Hours | | 12 |

*

A maximum of 3 credit hours may be selected at the 200-level.

**

- ETEC 370
- ETEC 450
- ETEC 491

## Multi-Disciplinary Engineering Technology Area of Emphasis

Students work with their assigned Academic Advisor to create a proposed AoE course plan designed to meet the student's stated career goals or interests.

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in each course. | | |
| **Select 12 credits from the following: *** | | **12** |
| Select any courses from Energy Technology Area of Emphasis | | |
| Select any courses from Industrial Engineering Technology Area of Emphasis | | |
| Select any courses from Mechanical Engineering Technology Area of Emphasis | | |
| Any 200- or 300- or 400- level Statler College Course (except IENG 377, IENG 445, and MAE 312) | | |
| Total Hours | | 12 |

*

Only 3 credits may be selected at the 200-level.

## Major Learning Outcomes

### ENGINEERING TECHNOLOGY

Upon graduation, all Bachelor of Science students in Engineering Technology will have an ability to:

1. apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;

4. conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
5. function effectively as a member as well as a leader on technical teams.

# Honors College

## Mission

The Honors College enhances the undergraduate experience for students at West Virginia University (WVU) by building a community of scholars who enrich their education in the classroom and beyond.

The Honors College features two academic programs: Honors Foundations Program and Honors in Action.

## ADMINISTRATION

### DEAN

- Kenneth Blemings - Ph.D.
  University of Wisconsin

### ASSOCIATE DEAN

- Damien Clement - Ph.D.
  West Virginia University

### PROGRAM DIRECTOR - HONORS COLLEGE FIRST YEAR EXPERIENCE

- Ashley Watts - Ph.D.
  West Virginia University

### DIRECTOR HONORS LIVE/LEARN COMMUNITY

- Kevin Gooding - Ph.D.
  Purdue University

# Honors in Action

## Honors In Action Program

### OVERVIEW

Honors in Action allows you to develop knowledge, skills and competencies through curricular, co-curricular and extracurricular experiential learning opportunities. You will earn badges through Suitable, a student engagement platform, that allows for easy sharing on social media, your resume and personal website.

### HONORS IN ACTION ADMISSIONS REQUIREMENTS

Current Honors College students may apply for the program during their second year in the Honors Foundations Program. Any students may apply for the program during their junior year regardless of previous enrollment in the Honors College. Prospective students must have a cumulative GPA 3.4 or higher.

### HONORS IN ACTION PROGRAM BENEFITS

- Opportunities to deeply pursue projects of academic and personal interest via experiential learning
- Career readiness preparation
- Badges and an ePortfolio sharable to online platforms
- Curricular and competitive financial support for student projects
- Priority registration for classes before non-Honors students (in their cohort) while actively enrolled in the Honors in Action program
- Recognition at graduation, on the transcript and on the diploma

### HONORS IN ACTION PROGRAM REQUIREMENTS

Through the Suitable software, students will be required to complete a total of five badges. You must complete the Career Ready Badge and four additional experiential learning badges. These multilevel experiential learning badges are available in Research, Global, Internship, Service, and Creative. Students in the program will upload evidence of their qualifying experiential learning activity to demonstrate completion of a badge. Students will also be required to complete a detailed reflection about each activity they complete. Additionally, students will:

- Take a pre-test before beginning the program
- Submit evidence of experiential learning activities through the Suitable platform
- Meet ongoing requirements for good standing:
- Each Fall and Spring semester, maintain an institutional GPA of at least 3.0 and complete the required out-of-class experiences.
- In the final semester, complete HONR 451 Honors Summative Experience
- Students with a verified violation of WVU's Policy on Student Academic Integrity may be removed from the program and will not be readmitted.
- Take the post-test when completing the program
- Have a minimum cum GPA of 3.0 when applying for graduation
- Participate in the Honors Exit interview
- Students who do not meet these requirements will be suspended from the program. Suspended students, do not receive priority registration, and will not receive experiential learning approval for Honors in Action via the Suitable software.

# Honors Foundations

## Honors Foundations Program

### ADMISSIONS REQUIREMENTS

Test Based Admission:

**For first-time freshmen,** students who meet the following criteria will be invited to apply through the **test-based admission process**:

- 3.7 High School GPA (weighted or unweighted), and
- 26 ACT or 1230 Redesigned SAT (M/EBRW)

Students invited through standard admissions will submit an application that consists of one short admissions essay. Applications submitted through standard admissions will be evaluated on a rolling basis.

Test Blind Admission:

Students may also apply to the Honors College through our **test-blind process**. Test blind invitations are based on meeting a qualifying GPA:

- 3.7+ on a 4.0 scale **OR**
- 4.0+ on a 5.0 scale.

Students who are invited through this process will complete an extended application. Extended applications will be considered for admission by the Honors Admissions Committee on a rolling basis.

### REQUESTING AN HONORS COLLEGE APPLICATION

Students who do not meet the minimum GPA or test score requirements to receive an Honors invitation through the standard or test-blind admissions processes may still apply for admission to the Honors College by requesting **an extended application** from the Honors College. Students who request an application through this process will have their applications and files fully reviewed and considered holistically by the Honors Admissions Committee.

Students may also join the Honors Foundations Program with a 3.7 cumulative GPA after the first semester of full-time course work with no withdrawals or incompletes, or if they transfer to WVU in good standing in an Honors program at their previous institution.

### HONORS FOUNDATIONS PROGRAM BENEFITS

- Smaller sections of General Education Foundation (GEF) and introductory major courses
- Access to innovative Honors topics courses (https://www.honors.wvu.edu/faculty-advisors/faculty-fellows/)
- Honors classes that focus on **enrichment instead of acceleration**
- Inclusion in an Honors community (https://www.honors.wvu.edu/) —including Honors housing, peer leadership opportunities and co-curricular programming—designed to make the large campus smaller
- **Organizations** where you can **connect with your fellow Honors students**, such as the Honors Student Association the Honors LGBTQ+ & Allies Affinity Group
- Priority registration for classes before non-Honors students (in their cohort) while actively enrolled in the Honors Foundations program
- Honors Advising in your major

- Peer tutoring (https://www.honors.wvu.edu/community/tutoring/) and mentoring (https://www.honors.wvu.edu/students/programs-organizations/honors-mentoring-program/)
- **Recognition** at **graduation** and on your transcript
- **Connections** with other Honors students—some of the best and brightest on a world-class research campus

## HONORS FOUNDATIONS PROGRAM REQUIREMENTS

Students will ideally complete the program in four semesters, typically taking one three credit Honors course per semester. In order to complete the program, students must:

- Complete a minimum of five Honors courses (including HONR 102 - Introduction to Honors) and a minimum of 13 Honors credits.
- Meet ongoing requirements for good standing:
  - After year one, students must have completed at least two Honors courses/four Honors credits (including HONR 102) and must maintain a 3.0 cumulative GPA and a 3.0 GPA in Honors courses.
    - Students who do not meet this requirement will be removed from the program.
  - Students may apply to extend enrollment in the program in order to complete the requirements after year two, students must have completed four Honors courses/ten Honors credits (including HONR 102) and must maintain a minimum 3.0 cumulative GPA and a minimum 3.5 GPA in Honors courses.
  - Students who have been found responsible for violating WVU's Policy on Student Academic Integrity may be dismissed from the Honors College at the end of the semester in which the violation occurred and will be permanently prohibited from being readmitted to the Honors College.
- Meet appropriate final requirements, including
  - Minimum 3.5 GPA in Honors credits at the time of program completion
    - Final Honors GPA will be calculated using the 5 Honors courses/ 13 Honors credits which will provide the highest Honors GPA
  - Minimum 3.0 cumulative GPA at the time of program completion
  - Participation in the Honors exit process

# Intercollegiate Programs

## Degree Offered

- Bachelor of Science

## College of Intercollegiate Programs Minors

- Aerospace Studies (http://catalog.wvu.edu/undergraduate/minors/aerospacestudies/)
- Military Science (http://catalog.wvu.edu/undergraduate/minors/military_science/)

## Accreditation

Biochemistry, an intercollegiate program shared between the Eberly College of Arts and Sciences and the Davis College of Agriculture, Natural Resources, and Design, has accreditation from both the American Chemical Society (ACS Track) and the American Society for Biochemistry and Molecular Biology (ASBMB Track).

# Biochemistry, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The biochemistry curriculum prepares students for careers requiring a strong background in fundamental principles of both the physical and life sciences. The program is a collaborative effort between the Department of Biology and the C. Eugene Bennett Department of Chemistry in the Eberly College of Arts and Sciences, and the School of Agriculture and Food Systems in the Davis College of Agriculture and Natural Resources.

The curriculum provides foundational knowledge in biochemistry, molecular biology, and chemistry. The variety of elective courses allows students to adapt the biochemistry major towards their specific interests, with applications in neuroscience, physiology, nutrition, microbiology, and pharmaceutical sciences. The capstone and experiential learning courses provide students with hands-on opportunities to develop scientific skills in the lab or with community partners. Students may choose electives that lead to certification by either the American Society of Biochemistry and Molecular Biology or the American Chemical Society.

Students completing the degree in biochemistry are prepared for professional employment in a variety of fields, including agricultural and environmental sciences, chemical and pharmaceutical industries, biotechnology and biomedical industries, government and policy agencies, and the health professions. The biochemistry curriculum also provides students with the courses necessary for continued education in areas such as human or veterinary medicine, dentistry, optometry, pharmacy and pharmacology, agricultural science, biochemistry, molecular biology, genetics, neuroscience, chemistry, food science, nutrition, and toxicology.

## Minors

All students have the possibility of earning one or more minors; list of all available minors and their requirements (p. 52). Please note that students may not earn a minor in their major field.

## Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 45.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 20, a MATH SAT of 520, or an ALEKS score of 40.
- Students transferring from another WVU major or from another institution with 24 hours or more must have at least a 2.0 overall GPA and meet the following requirements prior to being admitted to the major:completed CHEM 115, CHEM 115L, BIOL 115, and BIOL 115L with a C- or better in each. Students are encouraged to speak with a Biochemistry advisor to assess timely progression through the program.

Major Code: 1201

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

- **Writing Requirement;** Biochemistry Bachelor of Science students fulfill the Writing and Communication Skills requirement by completing ENGL 101 and ENGL 102 (or ENGL 103), and at least two additional **SpeakWrite Certified Courses™** from: BIOL 115, BIOL 117, BIOL 219, and CHEM 402.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 36 |
| Biochemistry Program Requirements | | 47 |
| Biochemistry Major Requirements | | 37 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| ANRD 191 | First-Year Seminar | 1 |
| General Electives | | 17 |
| Total Hours | | 36 |

## Biochemistry Program Requirements

| Code | Title | Hours |
|---|---|---|
| **STEM Foundations** | | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | 4 |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | 4 |
| BIOL 219<br>& 219L | Cellular and Molecular Biology<br>and Cellular & Molecular Biology Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |

| | | |
|---|---|---|
| CHEM 215<br>& 215L | Introductory Analytical Chemistry<br>and Introductory Analytical Chemistry Laboratory | 4 |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | 4 |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | 4 |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | 4 |
| MATH 155 | Calculus 1 | 4 |
| STAT 211 | Elementary Statistical Inference | 3 |
| Total Hours | | 47 |

## Biochemistry Major Requirements

| Code | Title | Hours |
|---|---|---|
| **Biochemistry Requirements** | | |
| AGBI 199 | Orientation to Biochemistry | 1 |
| CHEM 362<br>& 362L | Biochemistry 1<br>and Biochemistry 1 Laboratory | 4 |
| AGBI 420<br>& 420L | Principles of Biochemistry 2<br>and Principles of Biochemistry 2 Laboratory | 4 |
| BIOL 423 | Biochemistry of Nucleic Acids and Proteins | 3 |
| CHEM 341<br>& 341L | Physical Chemistry: Brief Course<br>and Physical Chemistry: Brief Course Laboratory | 4 |
| **Advanced Biochemistry Electives** | | |
| CHEM 312 | Environmental Chemistry * | 3 |
| or CHEM 322 | Inorganic Chemistry 1 | |
| or CHEM 336 | Fundamental Concepts in Early Drug Discovery | |
| BIOL 310 | Advanced Cellular/Molecular Biology | 3 |
| or BIOL 316 | Developmental Biology | |
| or BIOL 324 | Molecular Genetics | |
| or BIOL 335 | Cell Physiology | |
| or BIOL 420 | Genomics | |
| BIOL 410 | Cell and Molecular Biology Methods | 3 |
| or CHEM 310 | Instrumental Analysis | |
| or CHEM 335 | Methods of Structure Determination | |
| AEM 341<br>& 341L | General Microbiology<br>and General Microbiology Laboratory | 3 |
| or ANPH 400 | Growth and Lactation Physiology | |
| or ANPH 424<br>& 424L | Physiology of Reproduction<br>and Reproductive Laboratory | |
| or FDST 450 | Food Chemistry | |
| or GEN 371<br>& 371L | Principles of Genetics<br>and Principles of Genetics Laboratory | |
| or GEN 440 | Genetic Engineering Technologies | |
| or GEN 450 | Applied Developmental Genetics | |
| or HN&F 460 | Advanced Nutrition | |
| or PLSC 460 | Plant Biochemistry | |
| AEM 445 | Food Microbiology | 3 |
| or ANPH 301 | Introduction to Animal Physiology | |
| or BIOL 312 | Introduction to Virology | |
| or BIOL 313 | Molecular Basis of Cellular Growth | |

| | | |
|---|---|---|
| or BIOL 344 & 344L | Advanced Human Physiology and Advanced Human Physiology Laboratory | |
| or BIOL 348 | Neuroscience 1 | |
| or BIOL 350 | Plant Physiology | |
| or BIOL 409 | Biochemical Basis of Therapeutics | |
| or BIOL 418 | Medical Genetics | |
| or BIOL 426 | Molecular Biology of Cancer | |
| or BIOL 436 | Comparative Animal Physiology | |
| or BIOL 454 | Immunology | |
| or HN&F 348 | Science of Food Preparation | |
| or HN&F 473 | Medical Nutrition Therapy 1 | |
| or PPTH 401 | General Plant Pathology | |
| or VETS 405 | Parasitology | |
| or VETS 302 | Animal Pathology | |
| AGBI 386 | Undergraduate Research Experience 1 | 3 |
| or AGBI 491 | Professional Field Experience | |
| or BIOL 386 | Undergraduate Research | |
| or CHEM 497 | Research | |
| **Capstone** | | |
| AGBI 403 | Applied Biochemistry Literature | 3 |
| or CHEM 402 | Chemistry Capstone: Chemical Literature | |
| Total Hours | | 37 |

*****

Students interested in receiving accreditation from the American Chemical Society should choose CHEM 322 from the Advanced Chemistry Elective choices.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ANRD 191 | 1 | AGBI 199 | 1 |
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF1) | 3 |
| BIOL 115 & 115L (GEF 2) | 4 | BIOL 117 & 117L (GEF 8) | 4 |
| CHEM 110 | 3 | CHEM 115 & 115L | 4 |
| MATH 126 | 3 | MATH 128 | 3 |
| General Elective | 1 | | |
| | 15 | | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 219 & 219L | 4 | STAT 211 | 3 |
| CHEM 116 & 116L | 4 | CHEM 233 & 233L | 4 |
| MATH 155 | 4 | PHYS 101 & 101L | 4 |
| GEF 4 | 3 | GEF 5 | 3 |
| | | General Elective | 1 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 234 & 234L | 4 | CHEM 362 & 362L | 4 |

| | | | |
|---|---|---|---|
| CHEM 215 & 215L | 4 | CHEM 341 & 341L | 4 |
| BIOL 423 | 3 | Biochemistry Elective 1 | 3 |
| PHYS 102 & 102L | 4 | GEF 6 | 3 |
| | | General Elective | 1 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AGBI 420 & 420L | 4 | Biochemistry Elective 5 | 3 |
| Biochemistry Elective 2 | 3 | Biochemistry Elective 6 | 3 |
| Biochemistry Elective 3 | 3 | Capstone | 3 |
| Biochemistry Elective 4 | 3 | General Elective | 3 |
| GEF 7 | 3 | General Elective | 2 |
| | 16 | | 14 |

Total credit hours: 120

## Degree Progress

- By the end of the second semester in the major (excluding summer), students must have, at minimum, completed MATH 126 with a minimum grade of C-.
- By the end of their third semester in the major students are expected to have completed BIOL 115 & BIOL 115L,  BIOL 117 & 117L, CHEM 115, 115L with a minimum grade of C- in each course and an overall GPA of 2.0.
- Students must maintain a GPA of at least 2.0 in the major and overall.
- All majors must attend an advising session with their Biochemistry advisor each semester.

Students who do not meet those benchmarks may be removed from the major.

## Major Learning Outcomes

### BIOCHEMISTRY

Students graduating with a degree in Biochemistry will be able to:

1. Demonstrate working knowledge of the ways in which chemical principles inform and constrain biological processes, including:
    a. the implications of chemical structures and related chemical properties on biological processes
    b. the pathways and regulation involved in the metabolism of biomolecules
    c. the ways that organic and inorganic molecules can be used to modify and manipulate cellular mechanisms
    d. the mechanisms that organisms use to respond to changing conditions over short and long timescales
    e. ethical issues related to biochemical experimentation, analysis, and communication
2. Analyze molecules and pathways relevant to biological systems and evaluate quantitative and statistical data
3. Apply biochemical knowledge and skills to answer questions and solve problems in agriculture, health, and the environment
4. Communicate in written and oral formats
5. Work in collaborative teams
6. Recognize safety hazards, assess risks, and use methods to prevent and respond to incidents

# Medicine

## Degrees Offered

- B.A. in Human Performance and Health
- B.S. in Biomedical Laboratory Diagnostics
- B.S. in Communication Sciences and Disorders
- B.S in Exercise Physiology
- B.S. in Health Informatics and Information Management
- B.S. in Immunology and Medical Microbiology
- B.S.R.T. in Respiratory Therapy

## Introduction

The West Virginia University School of Medicine is a part of the Robert C. Byrd Health Sciences Center, a comprehensive academic health system with three campuses in the state, a network of affiliated hospitals and practice plans, and a mission of education, research, clinical care, and service to the state. On the main Morgantown campus, students have access to a full range of research and clinical facilities, including a new laboratory building and a wide range of advanced research centers. West Virginia University Hospitals includes sophisticated medical technology, including magnetic resonance imagery, lithotripsy, and laser surgery; the campus includes a large and busy tertiary hospital, a trauma center, children's hospital, cancer center, a psychiatric hospital, primary care and specialty clinics, a rehabilitation hospital and many other patient care facilities.

The undergraduate degrees in the School of Medicine are in the Health Professions division of the school. At the undergraduate level, BS degrees are offered in Biomedical Laboratory Diagnostics, with tracks in Medical Laboratory Science and Histotechnology; Communication Sciences and Disorders; Exercise Physiology; Health Informatics and Information Management; and Immunology and Medical Microbiology. A BSRT degree is offered in Respiratory Therapy. Minors are also offered in Communication Sciences; Disability Studies; Healthcare Data Analytics; Molecular Medicine; Performing Arts Medicine; and Rural Appalachian Health Disparities. The undergraduate experience is enhanced by the academic health sciences environment as described above and in most cases involves practical work in a health care setting in addition to classroom and laboratory experiences. Many students also have the opportunity to pursue undergraduate research experiences.

The undergraduate degree programs in the School of Medicine are enhanced by the presence of robust biomedical sciences graduate programs and other graduate and professional programs, including the MD degree program. The Health Professions division offers the following Master's degrees: Athletic Training (MS); Exercise Physiology (MS); Medical Laboratory Science (MS); Occupational Therapy (MOT); Pathologists' Assistant (MHS); Physician Assistant Studies (MHS); and Speech-Language Pathology (MS). The division also offers the following doctoral degrees: Audiology (AuD); Occupational Therapy (OTD); Pathophysiology, Rehabilitation, and Performance (PhD); and Physical Therapy (DPT).

Undergraduate students may choose to enter the workforce or to continue their study in a graduate or professional program. These programs often have competitive admission requirements for which the undergraduate degree programs provide an excellent foundation.

## ADMINISTRATION

### DEAN

- Clay Marsh - MD (West Virginia University School of Medicine)

### VICE DEAN-MEDICAL EDUCATION/ACADEMIC AFFAIRS

- Norman D. Ferrari III - MD (West Virginia University School of Medicine)
  Chief Academic Officer for Physician Education

### VICE DEAN FOR HEALTH PROFESSIONS

- MaryBeth Mandich - PhD (West Virginia University)

### VICE DEAN FOR CLINICAL SERVICES & CMO, WVU HEALTHCARE

- Michael Edmond - MD (West Virginia University School of Medicine), MPH

### ASSOCIATE DEANS

- Scott A. Cottrell - EdD (West Virginia University, College of Education & Human Services)
  Student Services & Curriculum, Medical Education
- Julie Green
  Faculty & Practice Plan Affairs
- James P. Griffith - MD (West Virginia University School of Medicine)

Charleston Campus Student Services

- Stephen Hoffmann - MD (University of Cincinnati)
  Clinical Programs
- Rosemarie Cannarella Lorenzetti - MD (West Virginia University School of Medicine)
  Eastern Campus Student Services
- Kathy Moffett - MD (West Virginia University School of Medicine)
  Faculty Services
- Linda Nield - MD (Dartmouth School of Medicine)
  MD Degree Admissions
- Becky Stauffer - CPA
  Finance & Chief Administrative Officer
- Manuel Vallejo - MD, DMD (West Virginia University School of Medicine)
  Graduate Medical Education and DIO

### ASSISTANT DEANS

- Melanie Fisher - MD (Pennsylvania State University)
  Continuing Medical Education
- Azalea Hulbert - PhD (Pennsylvania State University)
  Academic and Student Affairs, Health Professions
- Dorian Williams - MD (West Virginia University School of Medicine)
  Technology & Simulation

### ASSOCIATE VICE PRESIDENT FOR HEALTH SCIENCE

- John Linton - PhD (Kent State University)
  Dean, Charleston Campus
- Richard Thomas - MD (West Virginia University School of Medicine)
  Dean, Eastern Campus

## Accelerated Programs


- Mountaineer Accelerated Pathway (MAP) to MD (p. 799)
- B.S. Exercise Physiology and M.S. Athletic Training (p. 799)
- B.S. Exercise Physiology and D.P.T. Physical Therapy (p. 799)
- B.S. Health Informatics and Information Management and M.H.A. Health Administration (p. 800)
- B.S. Immunology and Medical Microbiology and M.S. Medical Laboratory Science (p. 800)
- B.S. Immunology and Medical Microbiology and M.P.H. Public Health (p. 800)


### MOUNTAINEER ACCELERATED PATHWAY (MAP) TO MD

The WVU Mountaineer Accelerated Pathway (MAP) to the Medical Degree (MD) Program helps provide students with a flexible pathway to earn a medical degree at the West Virginia University School of Medicine. MAP is for academically talented and highly motivated high school students from West Virginia and high school dependents of WVU and WVU Medicine employees.

Selected students must attend WVU and choose an undergraduate major in the WVU School of Medicine Health Sciences Center. Participants are responsible for undergraduate tuition and fees. Once in MAP, students must submit an application through AMCAS to apply to medical school. This program guarantees an interview if the MAP requirements are met. **Acceptance to the MD program is not guaranteed.**

If accepted, Medical school tuition will be supported with an annual scholarship of at least $10,000 a year or higher provided the student remains in good academic and professional standing.

Please visit the Mountaineer Accelerated Pathway's website (https://medicine.hsc.wvu.edu/md-admissions/programs/wvu-mountaineer-accelerated-pathway-map-to-md/) for more information.

### B.S. EXERCISE PHYSIOLOGY AND M.S. ATHLETIC TRAINING

Please visit the B.S. Exercise Physiology or M.S. Athletic Training catalog page for additional information.

### B.S. EXERCISE PHYSIOLOGY AND D.P.T. PHYSICAL THERAPY

Please visit the B.S. Exercise Physiology or D.P.T. Physical Therapy catalog page for additional information.

## B.S. HEALTH INFORMATICS AND INFORMATION MANAGEMENT AND M.H.A. HEALTH ADMINISTRATION

Please visit the B.S. Health Informatics and Information Management or M.H.A. Health Administration catalog page for additional information.

## B.S. IMMUNOLOGY AND MEDICAL MICROBIOLOGY AND M.S. MEDICAL LABORATORY SCIENCE

Please visit the B.S. Immunology and Medical Microbiology or M.S. Medical Laboratory Science catalog page for additional information.

## B.S. IMMUNOLOGY AND MEDICAL MICROBIOLOGY AND M.P.H. PUBLIC HEALTH

Please visit the B.S. Immunology and Medical Microbiology or M.P.H. Public Health catalog page for additional information.

# Major Learning Outcomes

## BACHELOR OF SCIENCE (BS) IN BIOMEDICAL LABORATORY DIAGNOSTICS

Upon graduation, students will:

- Demonstrate entry level knowledge for a laboratory medicine professional.
- Perform accurate and reliable qualitative and quantitative test procedures using sophisticated instrumentation.
- Model the professional traits of a laboratory medicine practitioner in a workplace setting (e.g., during clinical rotations).
- Communicate effectively in written and oral forms appropriate to a laboratory medicine professional.

## BACHELOR OF SCIENCE (BS) IN COMMUNICATION SCIENCES AND DISORDERS

The Department of Communication Sciences and Disorders is committed to the preparation of students interested in working with individuals with communication disorders. Upon completion of the Bachelor of Science in Communication Sciences and Disorders at West Virginia University, the student will be able to:

- Explain acoustic, psychoacoustic, and neurological principles of speech, language, and hearing as they relate to the anatomy of the speech, language, and hearing systems.
- Transcribe and analyze speech, language, and hearing across the lifespan to classify capabilities as typical or atypical.
- Identify basic concepts related to evaluation and treatment of communication and swallowing disorders during clinical observations.
- Communicate information regarding communication disorders in oral and written format while incorporating principles of evidence-based practice.

## BACHELOR OF SCIENCE (BS) IN EXERCISE PHYSIOLOGY

The Bachelor of Science program in exercise physiology is a preparatory program for graduate or professional school in areas such as exercise physiology, physical therapy, or medicine. The undergraduate program includes courses in science, anatomy, physiology, nutrition, and business, and hands-on laboratories in exercise physiology, and exercise instruction. Students will also complete a 180 hr. clinical internship or research in their senior year. Select senior students can take a hands-on cadaver dissection gross anatomy laboratory to further enhance their ability to compete for admission to Physician Assistant, Physical Therapy, Medicine or other Rehabilitative Science graduate programs.

Students will be able to:

- Critically evaluate scientific information and apply to exercise physiology related concepts.
- Integrate foundational science coursework and its application in exercise physiology.
- Use critical reasoning and evidence to methodically and systematically problem solve and develop interventions in exercise physiology.
- Perform and clinically apply health and fitness screening as well as exercise testing and prescription for healthy and chronic disease populations.
- Perform laboratory techniques, analysis and interpretation of data, and application to practice within the discipline.
- Apply professional competencies to discipline related practice, including effectively communicating scientific and clinical information to lay audiences.

## BACHELOR OF SCIENCE (BS) IN HEALTH INFORMATICS AND INFORMATION MANAGEMENT

Students completing the degree will be able to:

**Data Structure, Content, and Information Governance**

- Ensure data integrity, privacy, and security of health record content.

**Information Protection: Access, Disclosure, Archival, Privacy and Security**

- Recommend privacy and security strategies for health information.

**Informatics, Analytics, and Data Use**

- Conduct research and perform data analysis on healthcare issues.
- Present findings using data visualization for decision-making.

**Revenue Cycle Management**

- Code health records using ICD-10-CM, ICD-10-PCS, and CPT classifications in accordance with official guidelines and policies.
- Verify that documentation in the health record supports the diagnosis and reflects the patient's prognosis, clinical findings, and discharge status.
- Evaluate revenue cycle processes and reimbursement methodologies.

**Health Law and Compliance**

- Comply with healthcare legal processes, policy, and compliance, using an ethical perspective.
- Analyze components of risk management, quality improvement, and health policy.

**Organizational Management and Leadership**

- Oversee fundamental and change leadership activities, such as performance improvement, financial processes, training needs, and project management.

**Professional Preparedness**

- Engage in 400 hours of unique, customized, professional practice experience.
- Create a professional portfolio.

## BACHELOR OF SCIENCE (BS) IN IMMUNOLOGY AND MEDICAL MICROBIOLOGY

The Bachelor of Science degree in Immunology and Medical Microbiology will prepare students from diverse backgrounds to serve as professionals that are knowledgeable about the immune system of humans and other mammals, how the immune system functions, and the consequences of its malfunction on the health of the host. Knowledge of the immune system will be fully integrated with an excellent understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis. Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that cause disease in mammals. Graduates will be qualified to pursue several professional career paths in private industry, state and federal government, and academic institutions. The degree can also provide a strong foundation to progress to advanced studies including medical school, dental school, and graduate school.

Students will:

- Summarize and apply the basic concepts of microbiology and microbial pathogenesis.
- Summarize and apply the basic concepts of immunology and immunological disorders.
- Demonstrate expertise in the laboratory skills and knowledge needed to assess the functional status of the immune system.
- Demonstrate expertise in the laboratory skills and knowledge needed to safely cultivate and identify microorganisms that cause disease in mammals.
- Critically interpret microbiological and immunological assay data.
- Discuss, critique, and interpret primary literature in microbiology, microbial pathogenesis, and immunology.
- Demonstrate oral, written, and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

## BACHELOR OF SCIENCE IN RESPIRATORY THERAPY (BSRT)

The program in respiratory therapy will prepare graduates who:

- Deliver high quality respiratory therapy services to individuals and across a continuum of care and in a variety of settings.
- Demonstrate the ability to make evidence-based clinical decisions utilizing information literacy, critical thinking skills, and scientific evidence.
- Collaborate as members of interprofessional teams.
- Provide care that is characterized by cultural respect.
- Demonstrate competence in the recall, application, and analysis of respiratory therapy in all aspects of care and practice.
- Practice respiratory therapy in accordance with recognized professional and ethical standards.

## School of Medicine Minors

- Communication Sciences (http://catalog.wvu.edu/undergraduate/minors/communication_sciences/)
- Disability Studies (http://catalog.wvu.edu/undergraduate/minors/disability_studies/)
- Healthcare Data Analytics (http://catalog.wvu.edu/undergraduate/minors/healthcare_data_analytics/)
- Molecular Medicine (http://catalog.wvu.edu/undergraduate/minors/molecular_medicine/)
- Performing Arts Medicine (http://catalog.wvu.edu/undergraduate/minors/performing_arts_medicine/)
- Rural Appalachian Health Disparities (http://catalog.wvu.edu/undergraduate/minors/rural_app_health_disparities/)

## Accreditation

### BIOMEDICAL LABORATORY DIAGNOSTICS

The WVU Biomedical Laboratory Diagnostics tracks in Medical Laboratory Science and Histotechnology are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119, and (773) 714-8880. Graduates of the Medical Laboratory Science and Histotechnology programs are eligible for certification by the Board of Certification of the American Society for Clinical Pathology (ASCP).

### EXERCISE PHYSIOLOGY

The Bachelor of Science and Master of Science (Clinical) programs in Exercise Physiology are accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

### HEALTH INFORMATICS AND INFORMATION MANAGEMENT

The Health Information Management accreditor of West Virginia University is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College's accreditation for Baccalaureate degree in Health Informatics and Information Management has been reaffirmed through 2029-2030. All inquiries about the program's accreditation status should be directed by mail to CAHIIM, 200 East Randolph Street, Suite 5100, Chicago, IL, 60601; by phone at (312) 235-3255; or by email at info@cahiim.org.

### RESPIRATORY THERAPY

The Bachelor of Science in Respiratory Therapy Program at West Virginia University, (CoARC program # 200661-BSRT Degree) located at 64 Medical Center Drive, Morgantown, WV 26506 holds Provisional Accreditation from the Commission on Accreditation for Respiratory Care (www.CoARC.com). This status signifies that a program with an Approval of Intent has demonstrated sufficient compliance with the Standards (through submission of an acceptable Provisional Accreditation Self Study Report (PSSR) and any other documentation required by the CoARC, as well as satisfactory completion of an initial on-site visit), to be allowed to admit students. It is recognized as an accredited program by the National Board for Respiratory Care (NBRC), which provides enrolled students who complete the program with eligibility for the Respiratory Care Credentialing Examination(s). The program will remain on Provisional Accreditation until it achieves Continuing Accreditation.

# Biomedical Laboratory Diagnostics, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The BS in Biomedical Laboratory Diagnostics has two tracks: Medical Laboratory Science (https://medicine.wvu.edu/biomedical-laboratory-diagnostics/medical-laboratory-science-bs-ms/) (formerly Clinical Laboratory Science) and Histotechnology (https://medicine.wvu.edu/biomedical-laboratory-diagnostics/histotechnology-bs/). Medical laboratory scientists are healthcare professionals educated in all aspects of clinical laboratory analysis, including test development, performance, and evaluation. Medical laboratory scientists may work in many areas, including clinical chemistry, hematology, immunohematology, immunology, clinical microbiology, and molecular diagnostics.

Histotechnologists are healthcare professionals who are qualified through academic and applied science education and training to provide service, research, and management in histotechnology and areas related to anatomic pathology. Histotechnologists are integral to the success of the anatomic pathology department by performing routine and complex procedures to preserve and process tissue specimens for examination and diagnosis by a pathologist.

Practice settings for both medical laboratory scientists and histotechnologists include hospital, clinic, public health, or private clinical laboratories; research, cytogenetic, pharmaceutical, or in-vitro fertilization laboratories; technical or sales representatives for medical manufacturers and suppliers; biotechnology; and state or federal forensics laboratories.

Students may be admitted into either the medical laboratory science or the histotechnology track within the biomedical laboratory diagnostics major after completing the pre-requisite courses at an accredited college or university. As students complete the pre-requisite courses, they may apply to the biomedical laboratory diagnostics major, typically during the sophomore year.

Within both tracks, the junior year (the first year of the professional curriculum) includes core and area-specific lecture and laboratory courses to prepare for the senior year curriculum. During the senior year (the second year of the professional curriculum), the student receives didactic and student laboratory instruction, as well as practical experience at one or more of the affiliated hospital laboratories. Students must provide their own transportation and housing during the clinical rotations.

## ADMINISTRATION

### INTERIM PROGRAM DIRECTOR, MEDICAL LABORATORY SCIENCE

- Jason Evans - PhD, MLS(ASCP) (West Virginia University)
  Associate Professor

### PROGRAM DIRECTOR, HISTOTECHNOLOGY

- Kimberly Feaster - MA, HTL(ASCP)QIHC (West Virginia University)
  Assistant Professor

## FACULTY

### ASSOCIATE PROFESSORS

- Jason V. Evans - PhD, MLS(ASCP) (West Virginia University)
- Michelle Herdman - PhD, MLS(ASCP) (Marshall University)

### ASSISTANT PROFESSORS

- Kimberly Feaster - MA, HTL(ASCP)QIHC (West Virginia University)
- Rebecca A. Radabaugh - MA, HTL(ASCP)QIHC (West Virginia University)
- Jessica Rubenstein - MPH, MLS(ASCP) (West Virginia University)
- Amara Sugalski - MA, MLS(ASCP) (University of Michigan)

### INSTRUCTORS

- Magdalena Baumgartner - BS, MLS(ASCP) (West Virginia University)

### ASSOCIATE PROFESSORS EMERITI

- Barbara J. Gutman
- Kerry Harbert
- Beverly Kirby
- Mary Ellen Koenn
- Karen S. Long

## Admissions for 2026-2027

### DIRECT ADMIT

Entering WVU freshman may be admitted directly into the biomedical laboratory diagnostics major if they meet the minimum general admission requirements to the University. Direct admit students must maintain a minimum 3.0 overall GPA, and a prerequisite GPA of 2.75.

### CURRENT WVU STUDENTS

Students enrolled in another major at WVU who have sophomore level or higher standing and who do not meet the Direct Admit requirements must complete the Professional Program Admissions process (see below).

### PRE-REQUISITES

| Code | Title | Hours |
|---|---|---|
| **Biology** | | |
| BIOL 101 | General Biology 1 | 4 |
| & 101L | and General Biology 1 Laboratory (GEF 2) | |

| | | |
|---|---|---|
| or BIOL 115 & 115L | Principles of Biology and Principles of Biology Laboratory | |
| BIOL 102 & 102L | General Biology 2 and General Biology 2 Laboratory (GEF 8) | 4 |
| or BIOL 117 & 117L | Introductory Physiology and Introductory Physiology Laboratory | |
| **Chemistry** | | |
| CHEM 115 & 115L | Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory (GEF 8) | 4 |
| CHEM 116 & 116L | Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory | 4 |
| CHEM 233 & 233L | Organic Chemistry 1 and Organic Chemistry 1 Laboratory | 4 |
| or CHEM 231 & 231L | Organic Chemistry: Brief Course and Organic Chemistry: Brief Course Laboratory | |
| **Mathematics** | | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| **Statistics** | | |
| STAT 211 | Elementary Statistical Inference (GEF 8) | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| **Physiology** | | |
| BIOL 235 | Human Physiology | 3 |
| or PSIO 241 | Elementary Physiology | |
| **Medical Terminology** | | |
| PALM 200 | Medical Terminology | 3 |
| **GEF** | | **18** |
| Credits to satisfy foundations 1, 4, 5, 6 & 7 | | |
| Total Hours | | 50 |

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Students may take either CHEM 233 and CHEM 235 or CHEM 231 and CHEM 231L; however, two semesters of organic chemistry (CHEM 233/235 and CHEM 234/236) are strongly recommended to better prepare for the professional curriculum.

Although not required for admission to the biomedical laboratory diagnostics tracks in medical laboratory science and histotechnology, eight credits of organic chemistry, eight credits of physics, cell biology, and six credits of social sciences are suggested electives for those students interested in applying to medical, dental, or other graduate programs. In addition, a foreign language is recommended for students who plan to do graduate work.

Admission decisions are based upon the applicant's grade point average, recommendations, and interview. Applicants should have a minimum overall and pre-requisite science and math GPA of 2.5. A GPA of 2.5 or above does not ensure admission. Two letters of recommendation are required; one from a college science professor is preferred. A personal interview with the Biomedical Laboratory Diagnostics Admissions Committee is required.

## APPLICATION PROCEDURE

Each year the biomedical laboratory diagnostics major selects a limited number of applicants from the applications received for admission into the medical laboratory science and histotechnology track. The application is available online beginning December 1st.

There is an application fee for residents and non-residents. The priority deadline is March 15th. Applications received by March 15th will be given first consideration for admissions. The standard deadline is June 1st. In the event the class is not filled, the application deadline may be extended.

Major Code: 8351

Click each link below to view the corresponding track requirements and Suggested Plans of Study.

- Medical Laboratory Science (p. 808)
- Histotechnology (p. 807)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 & ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 19 |
| Biomedical Laboratory Diagnostics Program Requirements | | 32 |
| Biomedical Laboratory Diagnostics Major Requirements | | 71-72 |
| Total Hours | | 122-123 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| PALM 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Biomedical Laboratory Diagnostics Program Requirements

| Code | Title | Hours |
|---|---|---|
| BIOL 101 & 101L | General Biology 1 and General Biology 1 Laboratory | 4 |
| or BIOL 115 & 115L | Principles of Biology and Principles of Biology Laboratory | |
| BIOL 102 & 102L | General Biology 2 and General Biology 2 Laboratory | 4 |
| or BIOL 117 & 117L | Introductory Physiology and Introductory Physiology Laboratory | |
| BIOL 235 | Human Physiology * | 3 |
| or PSIO 241 | Elementary Physiology | |
| CHEM 115 & 115L | Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116 & 116L | Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory | 4 |
| Organic Chemistry ** | | 4 |
| CHEM 233 & 233L | Organic Chemistry 1 and Organic Chemistry 1 Laboratory | |

| | | |
|---|---|---|
| Or | | |
| CHEM 231<br>& 231L | Organic Chemistry: Brief Course<br>and Organic Chemistry: Brief Course Laboratory | |
| MATH 124 | Algebra with Applications (or higher) | 3 |
| PALM 200 | Medical Terminology | 3 |
| STAT 211 | Elementary Statistical Inference | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| Total Hours | | 32 |

## Biomedical Laboratory Diagnostics Major Requirements

| Code | Title | Hours |
|---|---|---|
| MICB 200 | Medical Microbiology | 3 |
| PALM 300 | Introduction to Pathology | 3 |
| PALM 303 | Laboratory Methods | 1 |
| PALM 320 | Medical Biochemistry | 3 |
| PALM 322 | Medical Biochemistry Laboratory | 1 |
| PALM 380 | Medical Immunology | 3 |
| PALM 381 | Research and Educational Methodology | 2 |
| PALM 464 | Scientific Writing Seminar | 1 |
| PALM 465 | Medical Laboratory Management | 2 |
| PALM 475 | Medical Relevance - Capstone | 3 |
| There are two Tracks: Histotechnology or Medical Laboratory Science | | 49-50 |
| **Histotechnology (50 credits)** | | |
| PSIO 441 | Mechanisms of Body Function | |
| PALM 307 | Introduction to Histotechniques | |
| PALM 205 | Introduction to Human Anatomy | |
| PALM 304 | Histotechnology Microanatomy | |
| PALM 305 | Staining Techniques 1 | |
| PALM 306 | Histotechnique 1 | |
| PALM 405 | Staining Techniques 2 | |
| PALM 406 | Histotechnique 2 | |
| PALM 407 | Histology Laboratory | |
| PALM 408 | Histotechnologist Practicum | |
| PALM 409 | Molecular Pathology for Laboratory Professionals | |
| **Medical Laboratory Science (49 credits)** | | |
| PALM 312 | Phlebotomy | |
| PALM 350 | Clinical Mycology & Parasitology | |
| PALM 360 | Urinalysis and Body Fluids | |
| PALM 382L | Medical Immunology Laboratory | |
| PALM 401 | Phlebotomy Practicum | |
| PALM 410 | Molecular Diagnostics | |
| PALM 412 | Molecular Diagnostics Laboratory | |
| PALM 420 | Immunohematology | |
| PALM 422 | Immunohematology Laboratory | |
| PALM 425 | Immunohematology Practicum | |
| PALM 430 | Clinical Chemistry | |
| PALM 432 | Clinical Chemistry Laboratory | |
| PALM 435 | Clinical Chemistry Practicum | |
| PALM 440 | Clinical Hematology | |
| PALM 442 | Clinical Hematology Laboratory | |
| PALM 444 | Hemostasis | |
| PALM 445 | Clinical Hematology Practicum | |

| | |
|---|---|
| PALM 446 | Hemostasis Laboratory |
| PALM 450 | Clinical Microbiology |
| PALM 452 | Clinical Microbiology Laboratory |
| PALM 455 | Clinical Microbiology Practicum |
| PALM 462 | Urinalysis and Body Fluids Laboratory |
| PALM 466 | Med Lab Science Review |
| Total Hours | 71-72 |

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Or 2 semester of combined Anatomy and Physiology courses.

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Two semesters of organic chemistry (CHEM 233/235 and CHEM 234/236) are strongly recommended to prepare for graduate level education.

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PALM 100, PALM 101, and PALM 201 are required for Direct Admit students and highly recommended for Pre-Biomedical Laboratory Diagnostics students. A minimum of 120 hours are required for graduation. However, students may have to take additional hours.

## SUGGESTED PLAN OF STUDY FOR HISTOTECHNOLOGY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 8) | 4 | CHEM 116 & 116L | 4 |
| MATH 124 (or higher; GEF 3) | 3 | ENGL 101 (GEF 1) | 3 |
| Select one of the following (GEF 2): | 4 | Select one of the following (GEF 8): | 4 |
| BIOL 101 & 101L | | BIOL 102 & 102L | |
| BIOL 115 & 115L | | BIOL 117 & 117L | |
| GEF 4, 5, 6, or 7 | 3 | GEF 4, 5, 6, or 7 | 3 |
| PALM 191 | 1 | | |
| | 15 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | BIOL 235 or PSIO 241 | 3 |
| STAT 211 or ECON 225 (GEF 8) | 3 | PALM 200 | 3 |
| CHEM 233 & 233L | 4 | GEF 4, 5, 6, or 7 | 3 |
| GEF 4, 5, 6, or 7 | 3 | | |
| | 13 | | 9 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| PSIO 441 | 4 | MICB 200 | 3 | PALM 305 | 4 |
| PALM 300 | 3 | PALM 205 | 3 | PALM 406 | 3 |
| PALM 303 | 1 | PALM 304 | 4 | | |
| PALM 307 | 1 | PALM 306 | 3 | | |
| PALM 320 | 3 | PALM 381 | 2 | | |
| PALM 322 | 1 | | | | |
| PALM 380 | 3 | | | | |
| | 16 | | 15 | | 7 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PALM 405 | 4 | PALM 408 | 14 |
| PALM 407 | 8 | PALM 475 | 3 |
| PALM 409 | 2 | | |
| PALM 464 | 1 | | |
| PALM 465 | 2 | | |
| | 17 | | 17 |

Total credit hours: 123

## SUGGESTED PLAN OF STUDY FOR MEDICAL LABORATORY SCIENCE

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115<br>& 115L (GEF 8) | 4 | CHEM 116<br>& 116L | 4 |
| MATH 124 (or higher; GEF 3) | 3 | ENGL 101 (GEF 1) | 3 |
| Select one of the following (GEF 2):<br>BIOL 101<br>& 101L<br>BIOL 115<br>& 115L | 4 | Select one of the following (GEF 8):<br>BIOL 102<br>& 102L<br>BIOL 117<br>& 117L | 4 |
| GEF 4, 5, 6, or 7 | 3 | GEF 4, 5, 6, or 7 | 3 |
| PALM 191 | 1 | | |
| | 15 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | BIOL 235 or PSIO 241 | 3 |
| STAT 211 or ECON 225 (GEF 8) | 3 | PALM 200 | 3 |
| CHEM 233<br>& 233L | 4 | GEF 4, 5, 6, or 7 | 3 |
| GEF 4, 5, 6, or 7 | 3 | | |
| | 13 | | 9 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| MICB 200 | 3 | PALM 350 | 2 | PALM 312 | 1 |
| PALM 300 | 3 | PALM 360 | 1 | PALM 401 | 1 |
| PALM 303 | 1 | PALM 381 | 2 | PALM 444 | 1 |
| PALM 320 | 3 | PALM 430 | 3 | PALM 446 | 1 |
| PALM 322 | 1 | PALM 432 | 2 | | |
| PALM 380 | 3 | PALM 440 | 3 | | |
| PALM 382L | 1 | PALM 442 | 2 | | |
| | | PALM 462 | 1 | | |
| | 15 | | 16 | | 4 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PALM 410 | 2 | PALM 425 | 4 |
| PALM 412 | 1 | PALM 435 | 4 |
| PALM 420 | 3 | PALM 445 | 4 |
| PALM 422 | 2 | PALM 455 | 4 |
| PALM 450 | 3 | PALM 466 | 1 |

| | | | |
|---|---|---|---|
| PALM 452 | 2 | PALM 475 | 3 |
| PALM 464 | 1 | | |
| PALM 465 | 2 | | |
| | 16 | | 20 |

Total credit hours: 122

## Major Learning Outcomes

### BIOMEDICAL LABORATORY DIAGNOSTICS

Upon graduation, students will:

- Demonstrate entry level knowledge for a laboratory medicine professional.
- Perform accurate and reliable qualitative and quantitative test procedures using sophisticated instrumentation.
- Model the professional traits of a laboratory medicine practitioner in a workplace setting (e.g., during clinical rotations).
- Communicate effectively in written and oral forms appropriate to a laboratory medicine professional.

**Accreditation**

The WVU Biomedical Laboratory Diagnostics tracks in Medical Laboratory Science and Histotechnology are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018, and (773) 714-8880. Graduates of the Medical Laboratory Science and Histotechnology programs are eligible for certification by the Board of Certification of the American Society for Clinical Pathology (ASCP).

# Communication Sciences and Disorders, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

The undergraduate program in Communication Sciences and Disorders is committed to the preparation of students interested in understanding the foundations of communication for typical and disordered speech, language, and hearing across the lifespan. Leading to the Bachelor of Science (BS) degree, this undergraduate program emphasizes education in liberal studies; anatomy and physiology of the speech and hearing mechanisms; development of speech and language skills; awareness of cultural diversity and its relationship to communication; phonetics; and a broad introduction to communication sciences and disorders.

Undergraduates with a BS in Communication Sciences and Disorders can pursue graduate school in speech-language pathology, audiology, public health care, public policy, education, and special education. Other options after the BS program include jobs as speech-language pathology or audiology assistants, hearing aid sales, in communications, in public affairs and policy for persons with disabilities, and in other education and health-related jobs related to advocacy and communication for persons with disabilities.

The demand for certified practitioners is continually increasing; consequently, job prospects remain very good. The undergraduate program and subsequent options in graduate study enable graduates to seek employment in a variety of settings and work with individuals of all ages as well as to pursue academic and research careers in the discipline of communication sciences and disorders.

## ADMINISTRATION

### CHAIR

- Jayne Brandel - PhD, CCC-SLP (University of Kansas)
  Associate Professor

### VICE CHAIRS

- Nancy Aarts - PhD, CCC-A (Northwestern University)
  Associate Professor and Vice Chair, Audiology

# FACULTY

## ASSOCIATE PROFESSORS

- Nancy Aarts - PhD, CCC-A (Northwestern University)
  Vice Chair, Audiology
- Jayne Brandel - PhD, CCC-SLP (University of Kansas)
  Chair
- Ashleigh Callahan - PhD, CCC-A (James Madison University)
- Alex Hollo - PhD, BCBA-D (Vanderbilt University)
- Kimberly Meigh - PhD, CCC-SLP (University of Pittsburgh)
  Coordinator of Clinical Services

## ASSISTANT PROFESSORS

- Molly Abitbol - MS, CCC-SLP (Nova Southeastern University)
- Christa Babjack - MA, CCC-SLP (Western Michigan University)
- Christina Dastolfo-Hromack - PhD, CCC-SLP (University of Pittsburgh)
- Heather Forbes - PhD, CCC-SLP, BCBA-D (University of Kansas)
- Anna Gravelin - PhD, CCC-SLP (Bowling Green State University)
- Almara Hutchinson - MA, CCC-SLP (Radford University)
  Coordinator of Clinical Education
- Megan Israelsen - PhD, CCC-SLP (Utah State University)
- Eric Johnson - PhD, AuD, CCC-A (Ohio State University, University of Utah)
- Kenneth Morse - PhD, AuD, CCC-A (Syracuse University)
- Tracy Toman - MS, CCC-SLP (West Virginia University)
- Leah Valensi - AuD, CCC-A (Syracuse University)

## PROFESSORS EMERITI

- Mary Ellen Tekieli Koay - PhD
- Norman J. Lass - PhD
- Dennis M. Ruscello - PhD, ASHA Honors
- Kenneth O. St. Louis - PhD
- Charles M. Woodford - PhD

## ASSOCIATE PROFESSORS EMERITI

- Leslie Graebe - MS
- Conrad Lundeen - PhD

## TEACHING ASSOCIATE PROFESSORS EMERITI

- Karen B. Haines - MS
- Gayle B. Neldon - EdD

## ASSISTANT PROFESSORS EMERITI

- Lynn R. Cartwright - EdD
- Cheryl L. Prichard - EdD

# Admissions for 2026-2027

## FRESHMAN ADMISSION

To be eligible for direct admission to the Communication Sciences and Disorders program, students must have an overall high school GPA of 3.0 or a 23 Composite ACT or 1150 SAT or 45 ALEKS placement score. Applications are reviewed on a case-by-case basis if the applicant's GPA or test scores are below the published requirements for automatic direct admission. Students who are not directly admitted are admitted to the Center for Learning, Advising and Student Success where they can work toward meeting eligibility.

### Early Assurance Program

The Early Assurance Program (EAP) provides a pathway for well-qualified CSD first-time freshmen to enter the Master's of Speech-Language Pathology or Doctor of Audiology program following completion of a CSD baccalaureate degree and meeting all other requirements outlined below.

To qualify, students entering WVU from high school must:

- Be admitted to WVU as a Communication Sciences and Disorders major.
- Have a high school GPA of 3.7 or higher.
- Have an ACT score of 26 or higher or a SAT score of 1230 or higher.

EAP students who meet the following requirements will continue into the graduate CSD program of their choice (Master's of Speech-Language Pathology or Doctor of Audiology) following completion of their baccalaureate degree:

- Maintain 30 credit hours each academic year.
- Maintain an overall GPA of 3.3 or higher and a prerequisite GPA in CSD courses of 3.7 or higher (evaluated at the end of each academic year).
- Successfully complete all admission requirements (in effect at the time you apply) for their intended graduate program.

Students who do not meet the EAP criteria for continuation outlined above or who withdraw from the EAP program during their undergraduate studies, but who still meet the minimum admission requirements for the Master's of Speech-Language Pathology or Doctor of Audiology programs are encouraged to apply using the traditional application process.

### TRANSFER ADMISSION

Students transferring must have an overall GPA of 2.8 to be considered for admission. This requirement applies to students who are external to WVU and current WVU students wishing to change their major. For more information, please contact us at somadvising@hsc.wvu.edu.

Major Code: 8360

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.8 is required in all coursework applied to the degree. | | |
| University Requirements | | 36 |
| Communication Sciences and Disorders Program Requirements | | 23 |
| Communication Sciences and Disorders Major Requirements | | 61 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 5, 6, 7, and 8 | | 12 |
| CSAD 191 | First-Year Seminar | 1 |
| General Electives | | 23 |
| Total Hours | | 36 |

## Communication Sciences and Disorders Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required for all coursework applied to the Communication Sciences and Disorders Program Requirements, except where noted. | | |
| ENGL 101 | Introduction to Composition and Rhetoric (GEF 1) | 3 |
| ENGL 102 | Composition, Rhetoric, and Research (GEF 1) | 3 |
| Select one of the following (GEF 2): | | 4 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory | |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| PHYS 105<br>& 105L | Conceptual Physics<br>and Conceptual Physics Laboratory | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |

| | | |
|---|---|---|
| CS 101 | Intro to Computer Applications (GEF 8) | 4 |
| Select one of the following (GEF 8): | | 3 |
| ECON 225 | Elementary Business and Economics Statistics | |
| STAT 211 | Elementary Statistical Inference | |
| Total Hours | | 23 |

## Communication Sciences and Disorders Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required for all coursework applied to the Communication Sciences and Disorders Major Requirements, except where noted. | | |
| A minimum GPA of 2.8 is required for all coursework applied to Communication Sciences and Disorders Major Requirements. | | |
| **Normal Human Developement (select two from the following):** | | **6** |
| CDFS 110 | Families Across the Life Span | |
| CDFS 210 | Introduction to Parenting | |
| CDFS 211 | Infant Development | |
| CDFS 212 | Development in Early and Middle Childhood | |
| CDFS 412 | Adolescent Development | |
| CDFS 413 | Stress in Families | |
| CDFS 414 | Adolescent Problems and Disorders | |
| CDFS 415 | Family Interaction and Communication | |
| CDFS 430 | Best Practices in Pre-K Movement | |
| COUN 303 | Introduction to Helping Professions | |
| LING 411 | Phonology | |
| LING 412 | Syntax | |
| PALM 200 | Medical Terminology | |
| PSYC 241 | Introduction to Human Development | |
| PSYC 332 | Multiculturalism in Psychology | |
| PSYC 342 | Prenatal and Infant Development | |
| PSYC 343 | Child and Adolescent Development | |
| PSYC 345 | Adulthood and Aging | |
| SOC 101 | Introduction to Sociology | |
| SOC 221 | Families and Society | |
| SOWK 330 | Human Behavior in the Social Environment | |
| **Abnormal Human Development (select one of the following):** | | **3** |
| CHPR 170 | Health of the Individual | |
| COMM 308 | Nonverbal Communication | |
| COMM 317 | Communication and Aging | |
| DISB 380 | Disability and the Family | |
| DISB 385 | Disability and Society | |
| PHIL 331 | Health Care Ethics | |
| PSYC 232 | Sex Roles and Behavior | |
| PSYC 251 | Introduction to Social Psychology | |
| PSYC 281 | Introduction to Psychological Disorders | |
| PSYC 302 | Behavior Principles | |
| PSYC 351 | Topics in Social Psychology | |
| PSYC 364 | Psychology of Adjustment | |
| PSYC 382 | Exceptional Children | |
| PSYC 423 | Cognition and Memory | |
| PSYC 424 | Learning and Behavior Theory | |
| PSYC 425 | Perception | |
| PSYC 474 | Applied Behavior Analysis | |
| SOWK 147 | Human Diversity | |

| | | |
|---|---|---|
| SOWK 151 | Introduction to Social Work | |
| SOWK 300 | Social Welfare Policy and Services 1 | |
| SOC 360 | Sociology of Gender | |
| SPED 404 | Special Education in Contemporary Society | |
| **Major Area Courses** | | |
| CSAD 200 | Introduction to Communication Disorders | 3 |
| CSAD 222 | Phonetics and Phonology | 3 |
| CSAD 234 | Anatomy and Physiology of Speech and Hearing | 4 |
| CSAD 236 | Language Science | 3 |
| CSAD 285 | Introduction to Research in Communication Sciences and Disorders | 3 |
| CSAD 320 | Speech Science | 3 |
| CSAD 330 | Foundations of Clinical Practice in CSD | 3 |
| CSAD 334 | Neuroscience in Communication Sciences and Disorders | 3 |
| CSAD 336 | Language Acquisition 1 | 3 |
| CSAD 340 | Hearing Science | 3 |
| CSAD 426 | Introduction to Speech Disorders | 3 |
| CSAD 442 | Aural Rehabilitation | 3 |
| CSAD 342 | Introduction To Audiology | 3 |
| CSAD 485 | Professional Applications in Communication Sciences and Disorders | 3 |
| or CSAD 496 | Senior Thesis | |
| **Content/Practica Electives** | | **9** |
| CSAD 388 | International Experience/Communication Sciences and Disorders | |
| CSAD 424 | Language Disorders | |
| CSAD 436 | Language Acquisition 2 | |
| CSAD 440 | Audiological Assessment | |
| CSAD 480 | Clinical Applications in Speech-Language Pathology | |
| CSAD 482 | Speech and Language Practicum | |
| CSAD 483 | Audiology Practicum | |
| CSAD 493 | Special Topics (up to 3 credits) | |
| CSAD 495 | Independent Study | |
| CSAD 497 | Research (up to 3 credits) | |
| Total Hours | | 61 |

## SENIOR CAPSTONE

All students in the B.S. in Communication Sciences and Disorders program must complete a capstone experience before graduation. Majors will engage in a variety of written, oral, and analytical activities related to the field and will develop an oral/PowerPoint presentation which will be graded by faculty members.

# Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CSAD 191 | 1 | CSAD 222 | 3 |
| CSAD 200 | 3 | CSAD 234 | 4 |
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF 1) | 3 |
| BIOL/PHYS Requirement (GEF 2) | 4 | PSYC 101 (GEF 4) | 3 |
| MATH 124 (GEF 3) | 3 | GEF 5 | 3 |
| General Elective | 3 | | |
| | 17 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CSAD 236 | 3 | CS 101 (GEF 8) | 4 |
| CSAD 285 | 3 | CSAD 330 | 3 |

| | | | |
|---|---|---|---|
| CSAD 320 | 3 | CSAD 336 | 3 |
| STAT 211 or ECON 225 (GEF 8) | 3 | CSAD 340 | 3 |
| GEF 6 | 3 | Normal Human Development | 3 |
| | 15 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CSAD 334 | 3 | CSAD Elective | 3 |
| CSAD 342 | 3 | GEF 8 | 3 |
| GEF 7 | 3 | General Elective | 3 |
| Normal Human Development | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CSAD 426 | 3 | CSAD 442 | 3 |
| CSAD Elective | 3 | CSAD 485 | 3 |
| Abnormal Human Development | 3 | CSAD Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 2 | | |
| | 14 | | 12 |

Total credit hours: 120

## Major Learning Outcomes

### COMMUNICATION SCIENCES AND DISORDERS

The Department of Communication Sciences and Disorders is committed to the preparation of students interested in working with individuals with communication disorders. Upon completion of the Bachelor of Science in Communication Sciences and Disorders at West Virginia University, the student will be able to:

- Explain acoustic, psychoacoustic, and neurological principles of speech, language, and hearing as they relate to the anatomy of the speech, language, and hearing systems.
- Transcribe and analyze speech, language, and hearing across the lifespan to classify capabilities as typical or atypical.
- Identify basic concepts related to evaluation and treatment of communication and swallowing disorders during clinical observations.
- Communicate information regarding communication disorders in oral and written format while incorporating principles of evidence-based practice.

# Exercise Physiology, B.S.

## Degrees Offered

- Bachelor of Science

## Nature of the Program

The mission of the Division of Exercise Physiology is to prepare qualified professionals at the BS level to promote health and quality of life through the use of appropriate physical activity and lifestyle behaviors. In addition, it is our mission to provide exercise physiology programs and expertise at the community, state, and national levels, and to make meaningful scientific contributions to the discipline of exercise science through faculty research and by training graduate students in research skills.

The WVU Exercise Physiology Program was established in the Health Sciences Center's School of Medicine in July 1993. The program offers a four-year curriculum leading to a Bachelor of Science (BS) degree in Exercise Physiology, a one- or two-year program leading to a Master of Science (clinical, thesis, or tactical area of emphasis), and a doctoral program leading to a PhD in Pathophysiology, Rehabilitation, & Performance. The BS and clinical MS programs were recently accredited by The Commission on Accreditation of Allied Health Education Programs (CAAHEP) and meet the knowledge, skill, and aptitude (KSA) requirements for students to be eligible to take the certification examinations offered by the American College of Sports Medicine.

## What is an Exercise Physiologist?

Exercise physiology is the study of the biological and biochemical processes associated with exercise and overload that affects the underlying function of cells and organ systems in the human body. Exercise physiology is a rapidly evolving field that is becoming increasingly important in the delivery of healthcare. Exercise physiologists work to prevent or delay the onset of chronic disease in healthy participants or to provide therapeutic or functional benefits to patients with known disease. Services may be offered in a variety of medical settings such as hospitals, rehabilitation centers, and outpatient clinics; in community, corporate, commercial, and university fitness and wellness centers; in nursing homes and senior citizens centers; and in research and academic settings.

Research by scientists trained in exercise physiology have greatly expanded our understanding of the ways in which exercise affects cell function. Advances in research in exercise physiology have provided a foundation for many types of medical treatment in areas that include but are not limited to cardiovascular diseases, diabetes, aging, obesity, and disuse atrophy. Employment opportunities are expanding and increase with experience and level of education.

Exercise physiologists are trained to evaluate people in the areas of cardiovascular fitness, muscular strength and endurance, flexibility, neuromuscular integration, and body composition. Based on the results of these evaluations, exercise physiologists are also trained to provide exercise programs that are designed to increase the functional capacity of the participants.

Exercise physiologists find employment working with athletes, patients, and healthy participants in the areas of disease prevention in wellness programs or rehabilitation in hospital settings. The BS is also a preparatory degree for graduate school. Graduates of this program continue their studies in exercise physiology, physical therapy, medicine, or other health-related careers. Graduates of the MS or PhD programs find employment in corporate wellness, hospital rehabilitation, higher education, or other research settings, while graduates of our PhD program have obtained postdoctoral positions in prestigious universities and medical schools. Additionally, they may be employed in a wide variety of private, community, state, and national agencies. Exercise physiology is an evolving field that is becoming increasingly important with the integration of preventive medicine into the healthcare system.

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## ADMINISTRATION

### CHAIR AND DIRECTOR, UNDERGRADUATE STUDIES

- Randall Bryner - EdD (West Virginia University)
  Associate Professor

### DIRECTOR, MASTERS OF SCIENCE GRADUATE PROGRAM

- Paul D. Chantler - PhD (Liverpool John Moores University)
  Professor

### DIRECTOR, PHD PROGRAM

- John M. Hollander - PhD (University of Wisconsin)
  Professor

### VICE DIRECTOR FOR GRADUATE STUDIES, DIVISION OF EXERCISE PHYSIOLOGY

- Dharendra Thapa - PhD (West Virginia University)
  Assistant Professor

### DIRECTOR OF ADMISSIONS, HSC OFFICE OF RESEARCH & GRADUATE EDUCATION

- Emidio E. Pistilli - PhD (West Virginia University)
  Associate Professor

### ASSISTANT CHAIR

- Miriam E. Leary - PhD (University of Texas at Austin)
  Associate Professor

### DIRECTOR OF GLOBAL EDUCATION AND SERVICE LEARNING

- Beth Nardella - PhD (West Virginia University)
  Associate Professor

### EXECUTIVE DIRECTOR OF CLINICAL PROGRAMS AND RESEARCH, HUMAN PERFORMANCE LABORATORY

- Paul D. Chantler - PhD (Liverpool John Moores University)
  Professor

### DIRECTOR, HUMAN PERFORMANCE LABORATORY

- Brett Rice - MS (West Virginia University)

### PROGRAM COORDINATORS

- Jillian Descoteaux - PhD (Ohio University)
  Dance Science, Assistant Professor
- Brian Leary - PhD (University of Texas at Austin)
  Tactical Performance Physiology, Assistant Professor
- Lori Sherlock - EdD (West Virginia University)
  Aquatic Therapy, Professor

### CO-DIRECTORS, CLINICAL & TRANSLATIONAL SCIENCE PHD PROGRAM

- Paul D. Chantler - PhD (Liverpool John Moores University)
  Professor
- I. Mark Olfert - PhD (Loma Linda University)
  Professor

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## FACULTY

### PROFESSORS

- Paul D. Chantler - PhD (Liverpool John Moores University)
  Director, Masters of Science Graduate Program, Co-Director, Clinical & Translational Science PhD Program
- John M. Hollander - PhD (University of Wisconsin)
  Director, PhD Program
- Jean L. McCrory - PhD (Penn State University)
- I. Mark Olfert - PhD (Loma Linda University)
  Co-Director, Clinical & Translational Science PhD Program
- Ming Pei - PhD, MD (Beijing Medical University, Xuzhou Medical College)
- Lori Sherlock - EdD (West Virginia University)
  Aquatic Therapy Program Coordinator

### ASSOCIATE PROFESSORS

- Daniel E. Bonner - MS (West Virginia University)
- Randall Bryner - EdD (West Virginia University)
  Chair and Director, Undergraduate Studies
- David Donley - MS (West Virginia University)
- Miriam E. Leary - PhD (University of Texas at Austin)
  Assistant Chair
- Beth Nardella - PhD (West Virginia University)
  Director of Global Education and Service Learning
- Emidio E. Pistilli - PhD (West Virginia University)
  Director of Admissions, HSC Office of Research & Graduate Education
- Emily Ryan - PhD (Kent State University)
- Sergiy Yakovenko - PhD (University of Alberta)

### ASSISTANT PROFESSORS

- Jillian Descoteaux - PhD (Ohio University)
  Dance Science Program Coordinator
- Andrew Lane - PhD (University of Florida)
- Brian Leary - PhD (University of Texas at Austin)
  Tactical Performance Physiology Program Coordinator
- Dharendra Thapa - PhD (West Virginia University)
  Vice Director for Graduate Studies, Division of Exercise Physiology
- James Thomas - MS (West Virginia University)

### ASSOCIATE PROFESSORS EMERITI

- Diana Gilleland - MS (West Virginia University)
- Guyton Hornsby - PhD (West Virginia University)

## Admissions for 2026-2027

First time freshmen eligible to be admitted to WVU are directly admitted to the program.

Transfer students must have a 2.75 cumulative GPA to be admitted to the program.

Current WVU students must attend a major change advising session and have a 2.75 cumulative GPA to be admitted to the program.

## EARLY ASSURANCE PROGRAM

The Early Assurance Program (EAP) provides a pathway for well-qualified WVU Exercise Physiology undergraduates to enter the DPT program following completion of their baccalaureate degree. To qualify, students entering WVU from high school must:

- Be admitted to WVU as an Exercise Physiology major
- Have a high school GPA of 3.50 or higher
- Have an ACT Math score of 24 or higher, or SAT Math score of 570 or higher

EAP students who meet the following requirements will continue into the DPT program following completion of their baccalaureate degree:

- Complete all prerequisite coursework (see table above) by the end of the spring semester of their junior year.
- Achieve both overall and prerequisite GPA of 3.50 or higher*.
- Meet the program's other admissions requirements, including a successful interview and satisfactory letters of recommendation, with the following exceptions:
  - The GRE is waived for EAP students.
  - EAP students must obtain at least 10 of the required 60 PT volunteer/observation hours in our program's faculty practice and/or at a WVU Medicine facility.
- Participate in meetings each semester organized by the DPT Admissions Committee and the Exercise Physiology academic advisor.

*EAP students will be evaluated for progression to the DPT program starting in June after completion of the junior year. Interviews will be conducted in August following the junior year.

Students who do not meet the EAP criteria for continuation outlined above but do meet the DPT program's minimum admissions requirements are encouraged to apply using the traditional application process.

## ACCELERATED BACHELOR'S TO MASTERS

The Accelerated Bachelor's to Master's (ABM) provides a pathway for well-qualified WVU Exercise Physiology (EXPH) students to enter the Master of Science in Athletic Training (MSAT) program early and complete both their undergraduate and graduate degrees within five years. To be eligible for early admission to the ABM, students entering WVU from high school must:

- Be admitted to WVU as an Exercise Physiology major.
- Have a high school GPA of 3.0 or higher.
- Place directly into CHEM 110 (Introduction to Chemistry) and MATH 124 (College Algebra), with an ACT Math score of 20 or SAT Math score of 520.

First-time freshmen admitted via the early admission pathway must maintain the standards described under regular admission in order to continue into the ABM program after completing a minimum of 60 credits.

Currently enrolled WVU students may apply no earlier than the semester in which they are expected to complete 60 credits and no later than the semester after which they will need two additional semesters to complete the bachelor's degree.

All early admission students wishing to continue in the ABM and students applying via the regular admission pathway must:

- Have a cumulative undergraduate GPA of 3.0, and a prerequisite GPA of 3.0 (with a grade of C or higher in each of the following prerequisite courses (or approved equivalent):
  - BIOL 101/L: General Biology/Laboratory (4 hrs)
  - CHEM 115/L: Fundamentals of Chemistry/Laboratory (4 hrs)
  - EXPH 440: Anatomy for Exercise Physiology (3 hrs)
  - PHYS 101/L: Introductory Physics/Laboratory (4 hrs)

  - PSIO 241: Elementary Physiology (4 hrs)
  - PSYC 101: Introduction to Psychology (3 hrs)
- Apply via ATCAS

Additional admission criteria will be required if in effect for the MSAT at time of application.

Students are expected to remain in compliance with all Exercise Physiology policies and procedures during the undergraduate portion of the program, and with all Athletic Training policies and procedures during the graduate portion. Students must maintain a minimum cumulative GPA of 3.0 in both undergraduate and graduate courses throughout their enrollment. Eligibility to remain in the ABM will be evaluated at the end of each semester, and may be placed on program probation for no more than one semester.

## OCCUPATIONAL THERAPY EARLY ASSURANCE PROGRAM

The OTD Early Assurance Program (EAP) provides a pathway for well-qualified WVU Exercise Physiology (EXPH) undergraduate students to enter the WVU Occupational Therapy Doctorate (OTD) program following completion of an EXPH baccalaureate degree and meeting all other requirements outlined below.

To be eligible for the EAP, current students must:

- Be enrolled at WVU as an Exercise Physiology major.
- Have an undergraduate GPA of 3.0 (overall and OTD prerequisite) or greater at the time the early assurance is granted. Students can apply for the EAP at any time during their sophomore or junior year in the Exercise Physiology program.

While in the EAP, students must:

- Achieve an overall and OTD pre-requisite GPA of 3.0 or higher. A grade of “C” or higher is required in all OTD prerequisite coursework (https://medicine.wvu.edu/ot/doctorate-otd/prerequisite-courses/).
- Successfully complete at least 20 hours of shadowing with an occupational therapist.
- Complete all OTD prerequisites by the end of the fall semester in the senior year of the WVU Exercise Physiology program.

To be formally admitted into the OTD program, assuming all other criteria are met, students must also:

- Obtain two satisfactory letters of recommendation.
- Completion of an OTD Program application through OTCAS (https://otcas.liaisoncas.com/applicant-ux/#/login).
- Must complete a minimum of 10 shadowing hours with OT faculty in clinical practice. These can be counted towards the 20-hour requirement noted above.

Major Code: 8335

Click here to view the Suggested Plan of Study (p. 820)

# General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 36 |
| Exercise Physiology Program Requirements | | 40 |
| Exercise Physiology Major Requirements | | 44 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |
| EXPH 191 | First-Year Seminar | 1 |
| General Electives | | 20 |
| Total Hours | | 36 |

## Exercise Physiology Program Requirements

A grade of C- or higher must be earned in all graded courses required for the Exercise Physiology Program Requirements. In addition, students must maintain a minimal cumulative GPA of 2.5 to remain in the program. Students who fail to meet or maintain these minimal requirements will be eligible for dismissal.

| Code | Title | Hours |
|---|---|---|
| Select one of the following sequences: | | 8 |
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory (GEF 2) | |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory (GEF 2 ) | |
| OR | | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory * | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory * | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (GEF 8) | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| MATH 124 | Algebra with Applications ** | 3 |
| Select one of the following sequences: *** | | 8 |
| PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | |
| PHYS 102<br>& 102L | Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| Or | | |
| PHYS 111<br>& 111L | General Physics 1<br>and General Physics 1 Laboratory | |
| PHYS 112<br>& 112L | General Physics 2<br>and General Physics 2 Laboratory | |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| PSYC 241 | Introduction to Human Development | 3 |

| | | |
|---|---|---|
| Select one of the following: | | 4 |
| PSIO 241 | Elementary Physiology | |
| PSIO 441 | Mechanisms of Body Function | |
| Select one of the following (GEF 3): *** | | 3 |
| STAT 211 | Elementary Statistical Inference | |
| ECON 225 | Elementary Business and Economics Statistics | |
| Total Hours | | 40 |

## Exercise Physiology Major Requirements

A grade of C- or higher must be earned in all graded courses required for the major. In addition, students must maintain a minimal cumulative GPA of 2.5 to remain in the program. Students who fail to meet or maintain these minimal requirements will be eligible for dismissal.

| Code | Title | Hours |
|---|---|---|
| EXPH 101 | Introduction to Exercise Physiology | 2 |
| EXPH 240 | Medical Terminology | 2 |
| EXPH 364 | Kinesiology | 3 |
| EXPH 367 | Exercise Nutrition | 3 |
| EXPH 369 | Strength/Conditioning Methods | 4 |
| EXPH 370 | Writing for Exercise Science | 3 |
| EXPH 386 | Advanced Physiology of Exercise 1 | 3 |
| EXPH 387 | Advanced Physiology of Exercise 2 | 3 |
| EXPH 388 | Physiology of Exercise Laboratory 1 | 1 |
| EXPH 389 | Advanced Physiology of Exercise Lab 2 | 1 |
| EXPH 425 | Motor Learning & Control | 3 |
| EXPH 440 | Anatomy for Exercise Physiology | 3 |
| EXPH 461 | Exercise is Medicine | 3 |
| EXPH 475 | Industry Organization in Exercise Physiology (or) | 3 |
| EXPH 491 | Professional Field Experience | 3 |
| or EXPH 497 | Research | |
| EXPH 477 | Professional Development for Exercise Physiologists | 1 |
| EXPH 496 | Senior Thesis | 3 |
| All students must complete 25 hours of community service per year. | | |
| Total Hours | | 44 |

*****

BIOL 115/BIOL 115L, BIOL 117/BIOL 117L, CHEM 233/CHEM 233L and CHEM 234/CHEM 234L are required for students selecting the Health Professions Area of Emphasis.

******

Students who place out of MATH 124 via ALEKs, SAT or ACT will be allowed to replace the MATH 124 program requirement with a general elective approved by their advisor.

*******

Additional MATH prerequisites may be required for PHYS and STAT courses which are determined by placement. These prerequisite courses will be part of the required General Electives.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 101 & 101L (GEF 2) | 4 | BIOL 102 & 102L (GEF 8) | 4 |
| ENGL 101 (GEF 1) | 3 | EXPH 101 | 2 |
| EXPH 191 | 1 | PSYC 101 (GEF 4) | 3 |
| MATH 124 | 3 | GEF 5, 6, or 7 | 3 |
| EXPH 240 | 2 | General Elective | 3 |

| | | | |
|---|---|---|---|
| GEF 5, 6, or 7 | | 3 | |
| | | 16 | 15 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 101 & 101L | 4 | PHYS 102 & 102L | 4 |
| CHEM 115 & 115L (GEF 8) | 4 | CHEM 116 & 116L (GEF 8) | 4 |
| EXPH 364 | 3 | PSIO 241 | 4 |
| ENGL 102 (GEF 1) | 3 | EXPH 367 | 3 |
| | 14 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| STAT 211 (GEF 3) | 3 | PSYC 241 | 3 |
| EXPH 370 | 3 | EXPH 369 | 4 |
| EXPH 386 | 3 | EXPH 387 | 3 |
| EXPH 388 | 1 | EXPH 389 | 1 |
| EXPH 440 | 3 | General Elective | 3 |
| General Elective | 3 | | |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EXPH 425 | 3 | EXPH 461 | 3 |
| EXPH 475 | 3 | EXPH 477 | 1 |
| EXPH 491 | 3 | EXPH 496 | 3 |
| General Electives | 6 | General Electives | 5 |
| | | GEF 5, 6, or 7 | 3 |
| | 15 | | 15 |

Total credit hours: 120

## Areas of Emphasis

- Aquatic Therapy (p. 821)
- Dance Science (p. 821)
- Health Professions (p. 822)

## AQUATIC THERAPY AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| Minimum GPA of 2.5 required. | | |
| EXPH 450 | Theory of Aquatic Therapy | 4 |
| EXPH 451 | Application of Aquatic Therapy | 3 |
| EXPH 452 | Aquatic Therapy Facility Management | 3 |
| EXPH 491 | Professional Field Experience | 5 |
| Total Hours | | 15 |

## DANCE SCIENCE AREA OF EMPHASIS REQUIREMENTS

A GPA of 3.0 is required for acceptance in to the Dance Science Area of Emphasis. An interview with the coordinator of the program is required for admission. The first class in the area of emphasis as seen in the Suggested Plan of Study is offered in the fall semester of junior year.

| Code | Title | Hours |
|---|---|---|
| Minimum GPA of 2.5 required. | | |
| EXPH 480 | Introduction to Performing Arts Medicine | 3 |

| | | |
|---|---|---|
| EXPH 481 | Performance Enhancement for Performing Artists | 3 |
| EXPH 482 | Injuries and Illnesses of Performing Artists | 4 |
| EXPH 483 | Seminar in Applied Anatomy for Dance Movements | 1 |
| EXPH 491 | Professional Field Experience | 5 |
| Total Hours | | 16 |

## HEALTH PROFESSIONS AREA OF EMPHASIS REQUIREMENTS

| Code | Title | Hours |
|---|---|---|
| All courses must be completed but 12 hours replace courses from the general course list | | |
| BMM 339 | Introduction to Human Biochemistry | 3 or 4 |
| or BMM 531 | General Biochemistry | |
| or AGBI 410 | Introductory Biochemistry | |
| BIOL 219 & 219L | Cellular and Molecular Biology and Cellular & Molecular Biology Laboratory | 4 |
| EXPH 460 | Pathophysiology | 3 |
| Select one of the following: | | 4 |
| AEM 341 & 341L | General Microbiology and General Microbiology Laboratory | |
| GEN 371 | Principles of Genetics | |
| Upper Division BIOL Courses (Excluding BIOL 491, 495, 497) | | |
| Total Hours | | 14 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 115 & 115L (GEF 8) | 4 | CHEM 116 & 116L | 4 |
| BIOL 115 & 115L (GEF 2) | 4 | BIOL 117 & 117L (GEF 8) | 4 |
| MATH 124 (GEF 3) | 3 | MATH 128 (GEF 8) | 3 |
| PSYC 101 (GEF 4) | 3 | ENGL 101 | 3 |
| EXPH 191 | 1 | EXPH 101 (GEF 1) | 2 |
| EXPH 240 | 2 | | |
| | 17 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PHYS 101 & 101L | 4 | PHYS 102 & 102L | 4 |
| CHEM 233 & 233L | 4 | CHEM 234 & 234L | 4 |
| BIOL 219 & 219L | 4 | PSIO 241 | 4 |
| ENGL 102 (GEF 1) | 3 | EXPH 493 (Nurtirion and Exercise) | 3 |
| EXPH 364 | 3 | | |
| | 18 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BMM 339 | 4 | PSYC 241 | 3 |
| EXPH 386 | 3 | EXPH 369 | 4 |
| EXPH 388 | 1 | EXPH 370 | 3 |
| EXPH 440 | 3 | EXPH 387 | 3 |
| STAT 211 | 3 | EXPH 389 | 1 |

| | | | |
|---|---|---|---|
| | | GEF 5, 6 or 7 | 3 |
| | | 14 | 17 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EXPH 460 | 3 | EXPH 461 | 3 |
| EXPH 496 | 3 | EXPH 475 | 3 |
| Elective Science | 3 | EXPH 491 | 4 |
| GEF 5, 6, or 7 | 3 | GEF 5, 6, or 7 | 3 |
| | 12 | | 13 |

Total credit hours: 122

## Accelerated Programs

- Accelerated BS Exercise Physiology and MS Athletic Training (p. 823)
- Accelerated BS Exercise Physiology and DPT Physical Therapy (p. 824)

## Accelerated Bachelor's/Master's Curriculum Requirements

A grade of C or higher must be earned in all graded courses required for the Exercise Physiology Program and Major Requirements. Students are expected to remain in compliance with all Exercise Physiology policies and procedures during the undergraduate portion of the program, and with all Athletic Training policies and procedures during the graduate portion. Students must maintain a minimum cumulative GPA of 3.0 in both undergraduate and graduate courses throughout their enrollment, and must have a prerequisite GPA of 3.0 to progress into the graduate phase. Eligibility to remain in the ABM will be evaluated at the end of each semester, and students may be placed on program probation for no more than one semester (with program dismissal following for students who do not return to good standing after one semester of program probation).

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| Undergraduate EXPH Curriculum Requirements | | 102 |
| Shared Bachelor's/Master's Curriculum Requirements | | 22 |
| Graduate AT Curriculum Requirements | | 45 |
| Total Hours | | 169 |

## Shared Bachelor's/Master's Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| PALM 503 | AT Human Anatomy | 4 |
| AT 511 | Managing Athletic Medical Trauma | 2 |
| AT 513 | Foundations of Athletic Training | 5 |
| AT 520 | Musculoskeletal Assessment & Diagnosis 1 | 3 |
| AT 521 | Musculoskeletal Assessment & Diagnosis 2 | 3 |
| AT 522 | Clinical Decision Making 1 | 2 |
| AT 524 | Pediatric Sports Medicine Clinical Rotation | 3 |
| Total Hours | | 22 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| EXPH 191 | 1 | EXPH 101 | 2 |
| EXPH 240 | 2 | BIOL 102 | 3 |
| BIOL 101 (GEF 2) | 3 | BIOL 102L | 1 |
| BIOL 101L (GEF 2) | 1 | CHEM 115 | 3 |
| CHEM 110 | 3 | CHEM 115L | 1 |
| ENGL 101 (GEF 1) | 3 | PSYC 101 (GEF 4) | 3 |
| MATH 124 (GEF 3) | 3 | GEF 5, 6, 7 | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| GEF 5, 6, 7 | | 3 | | | | |
| | | 19 | | 16 | | |
| **Second Year** | | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | | | |
| CHEM 116 | | 3 EXPH 367 | | 3 | | |
| CHEM 116L | | 1 PHYS 102 (GEF 8) | | 4 | | |
| ENGL 102 (GEF 1) | | 3 PHYS 102L | | 0 | | |
| PHYS 101 (GEF 8) | | 4 PSIO 241 | | 4 | | |
| PHYS 101L | | 0 PSYC 241 (GEF 8) | | 3 | | |
| EXPH 364 | | 3 STAT 211 | | 3 | | |
| GEF 5, 6, 7 | | 3 | | | | |
| | | 17 | | 17 | | |
| **Third Year** | | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | **Summer** | **Hours** | |
| EXPH 386 | | 3 EXPH 369 | | 4 PALM 503 | | 4 |
| EXPH 388 | | 1 EXPH 387 | | 3 AT 513 | | 5 |
| EXPH 370 | | 3 EXPH 389 | | 1 | | |
| EXPH 425 | | 3 EXPH 461 | | 3 | | |
| EXPH 440 | | 3 EXPH 475 | | 3 | | |
| EXPH 441 | | 2 EXPH 477 | | 1 | | |
| | | EXPH 496 | | 3 | | |
| | | 15 | | 18 | | 9 |
| **Fourth Year** | | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | **Summer** | **Hours** | |
| AT 511 | | 2 AT 523 | | 2 AT 610 | | 3 |
| AT 520 | | 3 AT 530 | | 3 AT 613 | | 2 |
| AT 521 | | 3 AT 531 | | 3 AT 622 | | 2 |
| AT 522 | | 2 AT 532 | | 2 | | |
| AT 524 | | 3 AT 534 | | 3 | | |
| | | 13 | | 13 | | 7 |
| **Fifth Year** | | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | | | |
| AT 620 | | 2 AT 630 | | 1 | | |
| AT 623 | | 9 AT 631 | | 2 | | |
| AT 629 | | 1 AT 632 | | 2 | | |
| | | AT 633 | | 8 | | |
| | | 12 | | 13 | | |

Total credit hours: 169

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 16 |
| Accelerated BS in EXPH to DPT Program Requirements | | 37 |
| Undergraduate EXPH Curriculum Requirements | | 74 |
| Professional PT Curriculum Requirements | | 96 |
| Total Hours | | 223 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 5, 6, and 7 | | 15 |

| | | |
|---|---|---|
| EXPH 191 | First-Year Seminar | 1 |
| Total Hours | | 16 |

## Accelerated BS in EXPH to DPT Program Requirements

Students are expected to remain in compliance with all Exercise Physiology policies and procedures during the undergraduate portion of the program, and with all Physical Therapy policies and procedures during the professional portion. Students must maintain a minimum cumulative GPA of 3.5 in both undergraduate and professional courses throughout their enrollment, and must have a prerequisite GPA of 3.5 to progress from the undergraduate to the professional phase. Eligibility to remain in the accelerated program will be evaluated at the end of each semester, and students may be placed on program probation for no more than one semester (with program dismissal following for students who do not return to good standing after one semester of program probation).

| Code | Title | Hours |
|---|---|---|
| BIOL 115 | Principles of Biology (GEF 2) | 3 |
| BIOL 115L | Principles of Biology Laboratory (GEF 2) | 1 |
| BIOL 117 | Introductory Physiology | 3 |
| BIOL 117L | Introductory Physiology Laboratory | 1 |
| CHEM 115 | Fundamentals of Chemistry 1 | 3 |
| CHEM 115L | Fundamentals of Chemistry 1 Laboratory | 1 |
| CHEM 116 | Fundamentals of Chemistry 2 | 3 |
| CHEM 116L | Fundamentals of Chemistry 2 Laboratory | 1 |
| PHYS 101 | Introductory Physics 1 (GEF 8) | 4 |
| PHYS 101L | Introductory Physics 1 Laboratory | 0 |
| PHYS 102 | Introductory Physics 2 (GEF 8) | 4 |
| PHYS 102L | Introductory Physics 2 Laboratory | 0 |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| PSYC 241 | Introduction to Human Development (GEF 8) | 3 |
| STAT 211 | Elementary Statistical Inference (GEF 3) | 3 |
| PSIO 441 | Mechanisms of Body Function | 4 |
| Total Hours | | 37 |

## Undergraduate EXPH Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| EXPH 101 | Introduction to Exercise Physiology | 2 |
| EXPH 240 | Medical Terminology | 2 |
| EXPH 364 | Kinesiology | 3 |
| EXPH 367 | Exercise Nutrition | 3 |
| EXPH 369 | Strength/Conditioning Methods | 4 |
| EXPH 370 | Writing for Exercise Science | 3 |
| EXPH 386 | Advanced Physiology of Exercise 1 | 3 |
| EXPH 387 | Advanced Physiology of Exercise 2 | 3 |
| EXPH 388 | Physiology of Exercise Laboratory 1 | 1 |
| EXPH 389 | Advanced Physiology of Exercise Lab 2 | 1 |
| EXPH 425 | Motor Learning & Control | 3 |
| EXPH 440 | Anatomy for Exercise Physiology | 3 |
| EXPH 441 | Gross Anatomy Laboratory for Exercise Physiology | 2 |
| EXPH 460 | Pathophysiology | 3 |
| EXPH 461 | Exercise is Medicine | 3 |
| EXPH 475 | Industry Organization in Exercise Physiology | 3 |
| EXPH 491 | Professional Field Experience | 3 |
| EXPH 496 | Senior Thesis | 3 |
| PT 501 | Professional Development 1 | 3 |
| PT 506 | Advanced Clincal Anatomy | 5 |
| PT 508 | Movement Diagnosis 1 | 2 |

| | | |
|---|---|---|
| PT 513 | Lifespan Functional Movement | 2 |
| PT 514 | Foundational Science 1 | 4 |
| PT 515 | Evidence Based Physical Therapy 1 | 3 |
| PT 516 | Kinesiologic Foundations | 4 |
| PT 518 | Movement Diagnosis 2 | 3 |
| Total Hours | | 74 |

## Professional PT Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| PT 720 | Clinical Education 1 | 2 |
| PT 723 | Developmental Life Tasks | 3 |
| PT 724 | Cardiopulmonary Physical Therapy 1 | 3 |
| PT 725 | Evidence-Based Physical Therapy 2 | 3 |
| PT 727 | Neurobiologic Foundations | 4 |
| PT 729 | Physical Therapy Interventions 1 | 3 |
| PT 731 | Professional Development 2 | 1 |
| PT 734 | Cardiopulmonary Physical Therapy 2 | 3 |
| PT 736 | Orthopedic Physical Therapy 1 | 4 |
| PT 738 | Movement Diagnosis 3 | 1 |
| PT 739 | PT Interventions 2 | 3 |
| PT 740 | Clinical Education 2 | 1 |
| PT 741 | Professional Development 3 | 3 |
| PT 743 | Geriatric Physical Therapy | 2 |
| PT 744 | Foundational Science 2 | 2 |
| PT 745 | Evidence Based Physical Therapy 3 | 1 |
| PT 746 | Orthopedic Physical Therapy 2 | 4 |
| PT 747 | Neurorehabilitation 1 | 3 |
| PT 749 | Survey of PT Practice | 1 |
| PT 754 | Foundational Science 3 | 3 |
| PT 756 | Orthopedic Physical Therapy 3 | 4 |
| PT 757 | Neurorehabilitation 2 | 3 |
| PT 758 | Movement Diagnosis 4 | 1 |
| PT 759 | Prosthetics and Orthotics | 3 |
| PT 760 | Clinical Education 3 | 5 |
| PT 761 | Professional Development 4 | 2 |
| PT 770 | Clinical Education 4 | 5 |
| PT 771 | Professional Development 5 | 3 |
| PT 773 | Pediatric Physical Therapy | 3 |
| PT 775 | Evidence Based Physical Therapy 4 | 1 |
| PT 780 | Clinical Education 5 | 8 |
| PT 781 | Professional Development 6 | 1 |
| PT 785 | Advanced Clinical Decision Making | 2 |
| PT 797 | Research | 5 |
| Total Hours | | 96 |

## Plan of Study - Undergraduate Classification

Under the plan of study below, students will be classified as undergraduates for the first 3.5 years in the accelerated program and will be able to utilize undergraduate financial aid, even when taking graduate courses. However, once reclassified as graduate students - typically after completing the fall semester, fourth year - undergraduate financial aid can no longer be utilized.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115 & 115L (GEF 2) | 4 | BIOL 117 & 117L | 4 |
| CHEM 115 & 115L | 4 | CHEM 116 & 116L | 4 |
| ENGL 101 (GEF 1) | 3 | EXPH 101 | 2 |
| EXPH 191 | 1 | EXPH 367 | 3 |
| EXPH 240 | 2 | PHYS 101 & 101L (GEF 8) | 4 |
| PSYC 101 (GEF 4) | 3 | | |
| | 17 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | EXPH 369 | 4 |
| EXPH 364 | 3 | EXPH 370 | 3 |
| EXPH 386 | 3 | EXPH 387 | 3 |
| EXPH 388 | 1 | EXPH 389 | 1 |
| PSIO 441 | 4 | PHYS 102 & 102L (GEF 8) | 4 |
| | | GEF 5, 6, 7 | 3 |
| | 14 | | 18 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| EXPH 425 | 3 | EXPH 461 | 3 | PT 501 | 3 |
| EXPH 440 | 3 | EXPH 475 | 3 | PT 506 | 5 |
| EXPH 441 | 2 | EXPH 491 | 3 | | |
| EXPH 460 | 3 | EXPH 496 | 3 | | |
| PSYC 241 | 3 | STAT 211 (GEF 3) | 3 | | |
| GEF 5, 6, 7 | 3 | GEF 5, 6, 7 | 3 | | |
| | 17 | | 18 | | 8 |

**Fourth Year**

| Fall | Hours |
|---|---|
| PT 508 | 2 |
| PT 513 | 2 |
| PT 514 | 4 |
| PT 515 | 3 |
| PT 516 | 4 |
| PT 518 | 3 |
| | 18 |

Total credit hours: 127

## Plan of Study - Professional Classification

**First Year**

| | | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| | | PT 720 | 2 | PT 731 | 1 |
| | | PT 723 | 3 | PT 734 | 3 |
| | | PT 724 | 3 | PT 736 | 4 |
| | | PT 725 | 3 | PT 738 | 1 |
| | | PT 727 | 4 | PT 739 | 3 |
| | | PT 729 | 3 | | |
| | | | 18 | | 12 |

| Second Year | | | | | |
|---|---|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** | **Summer** | **Hours** |
| PT 740 | | 1 PT 744 | | 2 PT 760 | 5 |
| PT 741 | | 3 PT 754 | | 3 PT 761 | 2 |
| PT 743 | | 2 PT 756 | | 4 PT 797 | 1 |
| PT 745 | | 1 PT 757 | | 3 | |
| PT 746 | | 4 PT 758 | | 1 | |
| PT 747 | | 3 PT 759 | | 3 | |
| PT 749 | | 1 PT 797 | | 2 | |
| PT 797 | | 2 | | | |
| | | 17 | | 18 | 8 |

| Third Year | | | | |
|---|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** | |
| PT 770 | | 5 PT 780 | | 8 |
| PT 771 | | 3 PT 781 | | 1 |
| PT 773 | | 3 PT 785 | | 2 |
| PT 775 | | 1 | | |
| | | 12 | | 11 |

Total credit hours: 96

## Major Learning Outcomes

### BACHELOR OF SCIENCE (BS) IN EXERCISE PHYSIOLOGY

The Bachelor of Science program in exercise physiology is a preparatory program for graduate or professional school in areas such as exercise physiology, physical therapy, or medicine. The undergraduate program includes courses in science, anatomy, physiology, nutrition, and business, and hands-on laboratories in exercise physiology, and exercise instruction. Students will also complete a 180 hr. clinical internship or research in their senior year. Select senior students can also take a hands on cadaver dissection gross anatomy laboratory to further enhance their ability to compete for admission to Physician Assistant, Physical Therapy, Medicine or other Rehabilitative Science graduate programs.

Students will be able to:

- Critically evaluate scientific information and apply to exercise physiology related concepts
- Integrate foundational science coursework and its application in exercise physiology.
- Use critical reasoning and evidence to methodically and systematically problem solve and develop interventions in exercise physiology.
- Perform and clinically apply health and fitness screening as well as exercise testing and prescription for healthy and chronic disease populations.
- Perform laboratory techniques, analysis and interpretation of data, and application to practice within the discipline.
- Apply professional competencies to discipline related practice, including effectively communicating scientific and clinical information to lay audiences.

## Accreditation

The Bachelor of Science and Master of Science (Clinical) programs in Exercise Physiology are accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

# Health Informatics and Information Management, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Health Informatics and Information Management (HIIM) integrates business, science, and information technology. The Bachelor of Science (BS) program is designed for students who are hands-on learners interested in having a direct and valuable impact on patients without being in the physical clinic. The program strives to graduate students who understand current and emerging healthcare industry trends and issues; who can develop, communicate and manage resources and solutions to address healthcare industry challenges; and who have the skills and experience to improve overall quality and outcomes of the healthcare system.

Students gain valuable experience with advanced healthcare applications currently in use through the internet-based V-Lab, developed by the American Health Information Management Association (AHIMA), and through three required professional practice experiences (PPE). Typically, students are required to complete 400 hours of PPE to fulfill program requirements and be eligible to graduate. However, non-traditional students holding a significant level of work experience and/or certification relevant to HIIM may be eligible to create a professional portfolio to reduce the total amount of PPE hours needed. Qualifying experiences will be reviewed on a case-by-case basis.

The program - which is the first and only baccalaureate degree of its kind in West Virginia - is offered via the HyFlex format, with all HIIM classes offered face-to-face and online during the class time and also recorded for viewing later. HyFlex is a student-directed, multi-option approach to learning which allows each student to decide on a day-to-day basis how to participate in each class and activity.

Students graduating with this degree are prepared for leadership roles in a wide variety of job settings, or for graduate study in fields related to healthcare management, data analytics and informatics, or business. Career opportunities are available in the areas of compliance and risk management; medical and health services management; healthcare privacy and security; health informatics and data analytics; clinical documentation improvement; information governance; operations and administration; and revenue cycle management (clinical coding and billing).

## ADMINISTRATION

### PROGRAM DIRECTOR

- Sally Lucci - MS, RHIA, CCA (Geneva College)
  Assistant Professor

### ASSISTANT PROGRAM DIRECTOR

- Megan McDougal - MS, RHIA, CHTS-IM (College of Saint Scholastica)
  Assistant Professor

## FACULTY

### ASSISTANT PROFESSORS

- Sally Lucci - MS, RHIA, CCA (Geneva College)
  Program Director
- Megan McDougal - MS, RHIA, CHTS-IM (College of Saint Scholastica)
  Assistant Program Director
- Ashley Simmons - MBA, RHIA, CCS, CDIP (West Liberty University)
- Danielle Sollenberger - MS (University of North Carolina at Greensboro)

### ADJUNCT FACULTY

- Nicole Ludwig - MS, PA-C (Seton Hill University)
- Zach Otey - MS, RHIA (Marshall University)

## Admissions for 2026-2027

First-time freshmen and transfer applicants who meet the WVU minimum admission requirements are admitted to the program.

Current WVU students must have a 2.0 overall grade point average to be admitted to the program.

Please see details at http://admissions.wvu.edu/how-to-apply (http://admissions.wvu.edu/how-to-apply/).

Major Code: 8320

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |

| | | |
|---|---|---|
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 26 |
| Program Requirements | | 22 |
| Health Informatics and Information Management Major Requirements | | 72 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, 7, and 8 | | 24 |
| HIIM 191 | First-Year Seminar | 1 |
| General Electives | | 1 |
| Total Hours | | 26 |

## Program Requirements

| Code | Title | Hours |
|---|---|---|
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory (GEF 2) | 4 |
| CS 101 | Intro to Computer Applications (GEF 8) | 4 |
| STAT 111 | Understanding Statistics (GEF 3) | 3 |
| PALM 200 | Medical Terminology | 3 |
| PALM 205<br>& PALM 206 | Introduction to Human Anatomy<br>and Human Anatomy Laboratory | 4 |
| PSIO 241 | Elementary Physiology | 4 |
| Total Hours | | 22 |

## Health Informatics and Information Management Major Requirements

| Code | Title | Hours |
|---|---|---|
| A grade of C- or higher must be earned in all graded courses required for the major. | | |
| HIIM 110 | Introduction to U.S. Healthcare Delivery System | 3 |
| HIIM 112 | Fundamentals of Health Information Management | 3 |
| HIIM 231 | Health Information Management Applications | 2 |
| HIIM 233 | Health Informatics and Information Management Disease Fundamentals and Management | 3 |
| HIIM 235 | Coding and Classification of Diseases | 3 |
| HIIM 237 | Introduction to Professional Practice | 1 |
| HIIM 240 | Classification of Healthcare Procedures | 3 |
| HIIM 242 | Healthcare Reimbursement and Revenue Cycle Management | 2 |
| HIIM 244 | Principles of Health Informatics and Information Management Quality Management | 2 |

| | | |
|---|---|---|
| HIIM 246 | Fundamentals of Clinical Documentation Improvement | 3 |
| HIIM 247 | Registries in Healthcare | 2 |
| HIIM 248 | Health Informatics and Information Management Professional Practice 1 | 1 |
| HIIM 351 | Healthcare Data Privacy, Confidentiality, and Security | 3 |
| HIIM 353 | Healthcare Information System Analysis and Design | 3 |
| HIIM 355 | Health Informatics and Information Management Legal Issues | 3 |
| HIIM 360 | Application of Healthcare Classification Systems | 3 |
| HIIM 362 | Data Governance in Healthcare Systems | 3 |
| HIIM 364 | Healthcare Data Design | 3 |
| HIIM 366 | Healthcare Analytics 1 | 2 |
| HIIM 368 | Health Informatics & Information Management Professional Practice 2 | 1 |
| HIIM 471 | Health Informatics & Information Management Research | 3 |
| HIIM 473 | Healthcare Analytics 2 | 2 |
| HIIM 475 | Project Management in Health Informatics & Information Management | 3 |
| HIIM 477 | Leadership in Health Informatics & Information Management | 3 |
| HIIM 480 | Health Informatics & Information Management Administration | 3 |
| HIIM 482 | Health Informatics and Information Governance | 3 |
| HIIM 484 | Capstone in Health Informatics & Information Management | 3 |
| HIIM 486 | Advanced Professional Practice in Health Informatics & Information Management | 3 |
| Total Hours | | 72 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIIM 191 | 1 | ENGL 101 | 3 |
| BIOL 102 & 102L (GEF 2) | 4 | PALM 205 & PALM 206 | 4 |
| CS 101 (GEF 8) | 4 | HIIM 110 | 3 |
| PALM 200 | 3 | HIIM 112 | 3 |
| STAT 111 | 3 | GEF Requirements (4, 5, 6, 7 or 8) | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 | 3 | HIIM 240 | 3 |
| HIIM 231 | 2 | HIIM 242 | 2 |
| HIIM 233 | 3 | HIIM 244 | 2 |
| HIIM 235 | 3 | HIIM 246 | 3 |
| HIIM 237 | 1 | HIIM 247 | 2 |
| PSIO 241 | 4 | HIIM 248 | 1 |
| | | General Elective | 1 |
| | 16 | | 14 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIIM 351 | 3 | HIIM 360 | 3 |
| HIIM 353 | 3 | HIIM 362 | 3 |
| HIIM 355 | 3 | HIIM 364 | 3 |
| GEF Requirements (4, 5, 6, 7, or 8) | 6 | HIIM 366 | 2 |
| | | HIIM 368 | 1 |
| | | GEF Requirement (4, 5, 6, 7 or 8) | 3 |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIIM 471 | | 3 HIIM 480 | 3 |
| HIIM 473 | | 2 HIIM 482 | 3 |
| HIIM 475 | | 3 HIIM 484 | 3 |
| HIIM 477 | | 3 HIIM 486 | 3 |
| GEF Requirement (4, 5, 6, 7 or 8) | | 3 GEF Requirement (4, 5, 6, 7 or 8) | 3 |
| | | 14 | 15 |

Total credit hours: 120

## Accelerated Program

- B.S. Health Informatics and Information Management and M.H.A. Health Administration (p. 832)

## Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for the B.S. in Health Informatics and Information Management, including earning a minimum grade of C- in all HIIM courses required for the major and a 3.0 GPA average in all 400 level HIIM courses and all HPML courses. In addition to all the requirements of the M.H.A in Health Administration, students must also meet all the requirements of the ABM.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| HIIM Undergraduate Coursework | | 107 |
| Shared Bachelor's/Master's Coursework | | 14 |
| MHA Graduate Coursework | | 21 |
| Total Hours | | 142 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| HIIM 366 | Healthcare Analytics 1 * | 2 |
| HIIM 473 | Healthcare Analytics 2 * | 2 |
| HIIM 477 | Leadership in Health Informatics & Information Management * | 3 |
| HIIM 480 | Health Informatics & Information Management Administration * | 3 |
| HPML 555 | Health Services Project Management | 3 |
| HPML 582 | Managing Quality Improvement in Healthcare | 3 |
| HPML 596 | Graduate Seminar | 2 |
| Total Hours | | 14 |

*

ABM students are not required to take PUBH 540 or HPML 522 from the traditional Master's program. The SOPH accepts 10 hours of equivalent coursework from the HIIM program (HIIM 366, HIIM 473, HIIM 477, HIIM 480).

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIIM 191 | 1 | STAT 111 (GEF 3) | 3 |
| BIOL 102 (GEF 2) | 3 | PALM 205 | 3 |
| BIOL 102L (GEF 2) | 1 | PALM 206 | 1 |
| CS 101 (GEF 8) | 4 | HIIM 110 | 3 |
| PALM 200 | 3 | HIIM 112 | 3 |
| ENGL 101 (GEF 1) | 3 | GEF 4, 5, 6, 7, or 8 | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | HIIM 240 | 3 |
| HIIM 231 | 2 | HIIM 242 | 2 |
| HIIM 233 | 3 | HIIM 244 | 2 |
| HIIM 235 | 3 | HIIM 246 | 3 |
| HIIM 237 | 1 | HIIM 247 | 2 |
| GEF 4, 5, 6, 7, or 8 | 3 | HIIM 248 | 1 |
| | | PSIO 241 | 4 |
| | 15 | | 17 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HIIM 351 | 3 | HIIM 360 | 3 |
| HIIM 353 | 3 | HIIM 362 | 3 |
| HIIM 355 | 3 | HIIM 364 | 3 |
| GEF 4, 5, 6, 7, or 8 | 3 | HIIM 366 | 2 |
| GEF 4, 5, 6, 7, or 8 | 3 | HIIM 368 | 1 |
| GEF 4, 5, 6, 7, or 8 | 3 | GEF 4, 5, 6, 7, or 8 | 3 |
| | 18 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| HIIM 471 | 3 | HIIM 480 | 3 | HPML 626 | 1 |
| HIIM 473 | 2 | HIIM 482 | 3 | | |
| HIIM 477 | 3 | HIIM 484 | 3 | | |
| HPML 582 | 3 | HPML 555 | 3 | | |
| HPML 596 | 1 | HPML 596 | 1 | | |
| | 12 | | 13 | | 1 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| HPML 510 | 3 | HPML 523 | 3 |
| HPML 556 | 3 | HPML 601 | 3 |
| HPML 575 | 3 | HPML 659 | 3 |
| HPML 696 | 1 | HPML 696 | 1 |
| | 10 | | 10 |

Total credit hours: 142

# Major Learning Outcomes

## BACHELOR OF SCIENCE IN HEALTH INFORMATICS AND INFORMATION MANAGEMENT (HIIM)

Students completing the degree will be able to:

**Data Structure, Content, and Information Governance**

- Ensure data integrity, privacy, and security of health record content

**Information Protection: Access, Disclosure, Archival, Privacy and Security**

- Recommend privacy and security strategies for health information.

**Informatics, Analytics, and Data use**

- Conduct research and perform data analysis on healthcare issues.
- Present findings using data visualization for decision-making.

**Revenue Cycle Management**

- Code health records using ICD-10-CM, ICD-10-PCS, and CPT classifications in accordance with official guidelines and policies.
- Verify that documentation in the health record supports the diagnosis and reflects the patient's prognosis, clinical findings, and discharge status.
- Evaluate revenue cycle processes and reimbursement methodologies.

**Health Law and Compliance**

- Comply with healthcare legal processes, policy, and compliance, using an ethical perspective.
- Analyze components of risk management, quality improvement, and health policy.

**Organizational Management and Leadership**

- Oversee fundamental and change leadership activities, such as performance improvement, financial processes, training needs, and project management.

**Professional Preparedness**

- Engage in 400 hours of unique, customized, professional practice experience.
- Create a professional portfolio.

**Accreditation**

The Health Information Management accreditor of West Virginia University is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College's accreditation for Baccalaureate degree in Health Informatics and Information Management has been reaffirmed through 2029-2030. All inquiries about the program's accreditation status should be directed by mail to CAHIIM, 200 East Randolph Street, Suite 5100, Chicago, IL, 60601; by phone at (312) 235-3255; or by email at info@cahiim.org.

# Immunology & Medical Microbiology, B.S.

## Degree Offered

- Bachelor of Science

## Introduction

Every day of our lives, we are exposed to microbes such as bacteria, viruses, and parasites. For the most part we suffer no disease or symptoms from these organisms, and they often go unnoticed. The single system in the body that allows life to continue in the face of these assaults is the immune system. The immune system is the network of cells and their biological processes that enable the body to recognize diseased cells or the invasion by microorganisms (bacteria, viruses, parasites, and prions) and eliminate them. The scientific discipline called immunology is the study of this system, and medical microbiology is the study of the disease states induced by the invasion of microorganisms. Collectively, these two disciplines address how humans and other mammals respond to infectious disease. These scientific disciplines have become the cornerstone for many industries - including the biotechnology, pharmaceutical, and medical and public health industries. These are all areas of particular emphasis and are being targeted for further development in West Virginia.

## Educational Objectives

The Bachelor of Science (BS) degree in Immunology and Medical Microbiology will prepare students from diverse backgrounds to serve as professionals that are knowledgeable about the immune system of humans and other mammals, how the immune system functions, and the consequences of its malfunction on the health of the host. Knowledge of the immune system will be fully integrated with an excellent understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis. Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that cause disease in mammals. Graduates will be qualified to pursue several professional career paths in private industry, state and federal government, and academic institutions. The degree can also provide a strong foundation to progress to advanced studies including medical school, dental school, and graduate school.

## Relationship of the Objectives to the Mission of WVU

The Bachelor of Science (BS) degree in Immunology and Medical Microbiology directly fulfills many of the stated objectives in the Strategic Plan for WVU, the WVU Health Sciences Center, and the WVU School of Medicine. It will be a financially viable, innovative, and dynamic educational program that provides a unique opportunity to earn a degree in Immunology and Medical Microbiology for both in-state and out-of-state undergraduate students. Its learner-centered curriculum will integrate both classroom and hands-on laboratory experiences. Graduates of the program will provide the state of

West Virginia with a well-trained healthcare and research workforce who have the education and experience to work in a variety of occupations that require knowledge in immunology, medical microbiology and related disciplines.

# ADMINISTRATION

## CHAIR

- Mariette Barbier - PhD (Universitat de les Iles Balears)
  Associate Professor

## VICE CHAIR OF UNDERGRADUATE EDUCATION

- Kelly Collins - PhD (University of Cincinnati)
  Teaching Associate Professor

## DIRECTORS

- Kathy Brundage - PhD (University of Pennsylvania)
  Research Assistant Professor and Director, WVU Flow Cytometry and Single Cell Core Facility
- F. Heath Damron - PhD (Marshall University)
  Associate Professor and Director, Vaccine Development Center
- Karen Martin - PhD (Duke University Medical Center)
  Director of Core Resources

# FACULTY

## CHAIR

- Mariette Barbier - PhD (Universitat de les Iles Balears)

## PROFESSORS

- Tim Eubank - PhD (The Ohio State University)
- Ming Lei - PhD (Cornell University)
  Sr. Associate Vice President, Office of Research and Graduate Education and Vice Dean of Research, School of Medicine
- Slawomir Lukomski - PhD (University of Lodz, Poland)
- Cory Robinson - PhD (Miami University of Ohio)
  Vice Chair for Research and Graduate Education, Microbiology, Immunology, and Cell Biology, School of Medicine

## ASSOCIATE PROFESSORS

- F. Heath Damron - PhD (Marshall University)
  Director, Vaccine Development Center
- Ivan Martinez - PhD (University of Pittsburgh)
- Edwin Wan - PhD (City University of Hong Kong)

## SERVICE PROFESSOR

- Kathy Brundage - PhD (University of Pennsylvania)
- Karen Martin - PhD (Duke University Medical Center)

## TEACHING ASSOCIATE PROFESSOR

- Kelly Collins - PhD (University of Cincinnati)
  Vice Chair of Undergraduate Education, Microbiology, Immunology, and Cell Biology
- Meenal Elliott - PhD (University of Alabama)

## ASSISTANT PROFESSORS

- Jonathan Busada - PhD (East Carolina University)
- Michael Hu - PhD (Peking University)
- Tracy Liu - PhD (University of Toronto)

### TEACHING ASSISTANT PROFESSORS

- Chad Sethman - PhD (Miami University)
- Valerie Watson - MS (West Virginia University)

### TEACHING INSTRUCTOR

- Michelle Witt - MS (Virginia Tech)

### ADJUNCT PROFESSORS

- Lisa Holland - PhD (University of North Carolina at Chapel Hill)
- Qiang Ma - PhD (Rutgers University)
- John Noti - PhD (Purdue University)
- Vazhaikkurichi Rajendran - PhD (University of Madras)
- Rita Rio - PhD (Yale University)
- Robert Taylor - PhD (Mississippi State University)
- David Weissman - MD (Northwestern University)

### ADJUNCT ASSOCIATE PROFESSOR

- Candice Brown - PhD (Duke University)
- Matthew Dietz - MD (Temple University School of Medicine)
- Salik Hussain - PhD (Université Paris Cité)
- Emidio Pistilli - PhD (West Virginia University)

### ADJUNCT ASSISTANT PROFESSORS

- Stacey Anderson - PhD (West Virginia University)
- Margaret Bennewitz - PhD (Yale University)
- Brian Boone - MD (University of South Florida College of Medicine)
- Tara Cotroneo - DVM (Western University of Health Sciences)
- Jennifer Franko - PhD (Case Western Reserve University)
- Brett Green - PhD (University of Sydney)
- Ida Holaskova - PhD (West Virginia University)
- Sreekumar Othumpangat - PhD (University of Mysore)
- Yong Qian - PhD (West Virginia University)
- Jenny Roberts - PhD (West Virginia University)

### ADJUNCT RESEARCH INSTRUCTOR

- Jamie McCall - PhD (University of Nebraska Medical Center)

### ADJUNCT ASSOCIATE SERVICE FELLOW

- Tara Croston - PhD (West Virginia University)

### PROFESSORS EMERITI

- John B. Barnett - PhD (University of Louisville)
- Nyles Charon - PhD (University of Minnesota)
- Christopher Cuff - PhD (Temple University)
- Laura Gibson - PhD (West Virginia University)

### ASSOCIATE PROFESSORS EMERITI

- Rosana Schafer - PhD (Temple University)

## Admissions for 2026-2027

In order to be admitted to the BS program in Immunology and Medical Microbiology, you must fulfill the general admission requirements for WVU and the following program-specific requirements.

Entering WVU freshmen are admitted directly into the program with a high school GPA of 3.5 or higher and placement into CHEM 115 (e.g., 26 Math ACT, 610 Math SAT, or ALEKs placement score of 65). Applications are reviewed on a case-by-case basis if the applicant does not submit test scores, and/or the applicant's GPA or test scores are below the published requirements for automatic direct admission.

Prospective transfer students must have a 3.0 cumulative grade point average (GPA) and be progressing towards completion of BIOL 115/115L and CHEM 115/115L (or equivalents). Admission is also contingent on whether there is space available in the program, as only 40 students can be accepted into any class (freshman, sophomore, junior, senior). Transferees must be approved by the Immunology and Medical Microbiology Scholarship Committee.

Major Code: 8352

Click here to view the Suggested Plan of Study (p. 840)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.75 is required in all coursework. | | |
| University Requirements | | 19 |
| Immunology and Medical Microbiology Program Requirements | | 42 |
| Immunology and Medical Microbiology Major Requirements | | 59 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 4, 5, 6, and 7 | | 18 |
| IMMB 191 | First-Year Seminar | 1 |
| Total Hours | | 19 |

## Immunology and Medical Microbiology Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in Immunology and Medical Microbiology Program Requirements. | | |
| BMM 339 | Introduction to Human Biochemistry | 4 |

| | | |
|---|---|---|
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | 4 |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | 4 |
| BIOL 219<br>& 219L | Cellular and Molecular Biology<br>and Cellular & Molecular Biology Laboratory | 4 |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | 4 |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| Select one of the following: | | 3 |
| MATH 150 | Applied Calculus | |
| MATH 155 | Calculus 1 | |
| Select one of the following: | | 3 |
| STAT 211 | Elementary Statistical Inference | |
| STAT 215 | Introduction to Probability and Statistics (or) | |
| ECON 225 | Elementary Business and Economics Statistics | |
| Select one of the following sequences: | | 8 |
| PHYS 101<br>& 101L<br>& PHYS 102<br>& PHYS 102L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory<br>and Introductory Physics 2<br>and Introductory Physics 2 Laboratory | |
| PHYS 111<br>& 111L<br>& PHYS 112<br>& PHYS 112L | General Physics 1<br>and General Physics 1 Laboratory<br>and General Physics 2<br>and General Physics 2 Laboratory | |
| Total Hours | | 42 |

## Immunology and Medical Microbiology Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C- is required in Immunology and Medical Microbiology Major Requirements. | | |
| IMMB 150 | Microbiology Colloquium 1 | 2 |
| IMMB 175 | Immunology and Medical Microbiology Colloquium | 2 |
| IMMB 201<br>& 201L | Basic Medical Microbiology<br>and Basic Medical Microbiology Laboratory | 4 |
| IMMB 275 | Immunology Colloquium 1 | 2 |
| IMMB 276 | Principles of Immunobiology | 3 |
| IMMB 305 | Microbial Genetics | 3 |
| IMMB 310<br>& 310L | Bacterial Pathogenesis<br>and Bacterial Pathogenesis Laboratory | 4 |
| IMMB 320 | Cellular Immunobiology | 3 |
| IMMB 350 | IMMB Careers and Professional Development | 1 |
| IMMB 375 | Immunology Colloquium 2 | 2 |
| IMMB 405 | Scientific Integrity | 2 |
| IMMB 420<br>& 420L | Molecular Immunobiology<br>and Molecular Immunobiology Laboratory | 5 |
| IMMB 450 | Immunology/Microbiology Journal Club 2 | 1 |
| IMMB 460 | Contemporary Issues for Majors | 3 |
| IMMB 470 | Medical Virology | 3 |
| IMMB 484 | Senior Thesis (Capstone) | 3 |
| IMMB 494 | Seminar | 1 |
| IMMB Electives | | 15 |

| | |
|---|---|
| IMMB 293 | Special Topics (Origins of Western Medicine) |
| IMMB 327 | Parasitology |
| IMMB 480 | Vaccinology |
| IMMB 490 | Teaching Practicum * |
| IMMB 491 | Professional Field Experience ** |
| IMMB 497 | Research *** |
| AEM 216 | Living in a Microbial World |
| AEM 401<br>& 401L | Environmental Microbiology<br>and Environmental Microbiology Laboratory |
| AEM 445<br>& AEM 449 | Food Microbiology<br>and Food Microbiology Lab |
| ANPH 424 | Physiology of Reproduction |
| BIOL 302 | Biometry |
| BIOL 310<br>& 310L | Advanced Cellular/Molecular Biology<br>and Advanced Cellular/Molecular Biology Laboratory |
| BIOL 313 | Molecular Basis of Cellular Growth |
| BIOL 315 | Communicating Natural Science |
| BIOL 316<br>& 316L | Developmental Biology<br>and Developmental Biology Laboratory |
| BIOL 324<br>& 324L | Molecular Genetics<br>and Molecular Genetics Laboratory |
| BIOL 335 | Cell Physiology |
| BIOL 348 | Neuroscience 1 |
| BIOL 349 | Neuroscience 2 |
| BIOL 409 | Biochemical Basis of Therapeutics |
| BIOL 410 | Cell and Molecular Biology Methods |
| BIOL 413 | Molecular Endocrinology |
| BIOL 415 | Epigenetics |
| BIOL 418 | Medical Genetics |
| BIOL 420 | Genomics |
| BIOL 422 | Current Topics in Genome Biology |
| BIOL 423 | Biochemistry of Nucleic Acids and Proteins |
| BIOL 424 | Protein Structure and Function |
| BIOL 426 | Molecular Biology of Cancer |
| BIOL 430 | Bioinformatics |
| BIOL 453 | Molecular Basis of Disease |
| BIOL 455 | Evolution of Infectious Diseases |
| BIOL 457 | Ecology of Parasites |
| BIOL 461 | Principles of Evolution |
| BIOL 474 | Neurogenetics and Behavior |
| BIOL 475 | Neurobiological Diseases |
| BIOL 476<br>& 476L | Computational Neuroscience<br>and Computational Neuroscience Laboratory |
| BIOL 478 | Sensory Neural Systems and Behavior |
| BIOL 490 | Teaching Practicum |
| BMM 235 | Introduction to Molecular Medicine |
| BMM 407 | Methods to Diagnose Diseases |
| BMM 445 | Molecular Mechanisms of Age-Associated Diseases |
| BIOC 452 | Molecular Mechanisms of Metabolic Disorders |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory |
| FDST 445 | Food Microbiology |
| FDST 445L | Food Microbiology Laboratory |

| | |
|---|---|
| HIST 393 | Special Topics (Epidemics in Modern World History) |
| PALM 200 | Medical Terminology |
| PALM 205 | Introduction to Human Anatomy |
| PALM 206 | Human Anatomy Laboratory |
| PCOL 449 | Drugs and Medicine |
| PHIL 331 | Health Care Ethics |
| PSIO 241 | Elementary Physiology |
| PSYC 234 | Drugs and Behavior |
| PUBH 201 | Global Perspectives of Public Health |
| PUBH 222 | Epidemiology |
| SOC 393 | Special Topics (Bioarcheology) |
| SOC 481 | Society and Health |
| VETS 401 | Veterinary Anatomy |
| Total Hours | 59 |

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A total of 2-credits of IMMB 490 can be applied to the IMMB Approved Electives Group.

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A total of 3-credits of IMMB 491 can be applied to the IMMB Approved Electives Group.

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A total of 3-credits of IMMB 497 can be applied to the IMMB Approved Electives Group.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMMB 191 | 1 | IMMB 175 | 2 |
| IMMB 150 | 2 | GEF 4, 5, 6, or 7 | 3 |
| ENGL 101 (GEF 1) | 3 | MATH 150 or 155 (GEF 3) | 3 |
| CHEM 115 (GEF 8) | 3 | BIOL 117 | 3 |
| CHEM 115L | 1 | BIOL 117L | 1 |
| BIOL 115 (GEF 8) | 3 | CHEM 116 (GEF 2) | 3 |
| BIOL 115L | 1 | CHEM 116L | 1 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMMB 201 | 3 | IMMB 275 | 2 |
| IMMB 201L | 1 | IMMB 276 | 3 |
| BIOL 219 | 3 | PHYS 101 | 4 |
| BIOL 219L | 1 | PHYS 101L | 0 |
| CHEM 233 | 3 | IMMB Elective | 3 |
| CHEM 233L | 1 | GEF 4, 5, 6, or 7 | 3 |
| ENGL 102 (GEF 1) | 3 | | |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMMB 320 | 3 | IMMB 375 | 2 |
| IMMB 305 | 3 | IMMB 310 | 3 |
| BMM 339 | 4 | IMMB 310L | 1 |
| IMMB Elective | 3 | IMMB 350 | 1 |
| GEF 4, 5, 6 or 7 | 3 | PHYS 102 | 4 |
| | | PHYS 102L | 0 |

| | | | |
|---|---|---|---|
| | | IMMB Elective | 3 |
| | 16 | | 14 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMMB 420 | 3 | IMMB 484 | 3 |
| IMMB 420L | 2 | IMMB 470 | 3 |
| IMMB 450 | 1 | IMMB 460 | 3 |
| IMMB 405 | 2 | IMMB 494 | 1 |
| STAT 211 or 215 | 3 | IMMB Elective | 3 |
| IMMB Elective | 3 | GEF 4, 5, 6 or 7 | 3 |
| | 14 | | 16 |

Total credit hours: 120

## Accelerated Programs

- Accelerated B.S. Immunology and Medical Microbiology and M.S. Medical Laboratory Science
- Accelerated B.S. Immunology and Medical Microbiology and M.P.H. Public Health

## Accelerated Bachelor's/Master's Degree Requirements

A minimum grade of C- is required for students for the duration of the ABM, including both undergraduate and graduate study. In addition, students must maintain a minimal cumulative GPA of 2.75 to remain in the program. Students who fail to meet or maintain these minimal requirements will be eligible for dismissal. Students will also be subject to IMMB academic and professional standards while classified as undergraduate students and to MLS academic and professional standards while classified as graduate students.

## ABM Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| Undergraduate IMMB Curriculum Requirements | | 105 |
| Shared Bachelor's/Master's Curriculum Requirements | | 16 |
| Graduate MLS Curriculum Requirements | | 39 |
| Total Hours | | 160 |

## Shared Bachelor's/Master's Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| IMMB 527 | Medical Parasitology | 2 |
| IMMB 540 | Medical Mycology | 2 |
| PALM 432 | Clinical Chemistry Laboratory | 2 |
| PALM 442 | Clinical Hematology Laboratory | 2 |
| PALM 462 | Urinalysis and Body Fluids Laboratory | 1 |
| PALM 530 | Clinical Chemistry | 3 |
| PALM 540 | Clinical Hematology | 3 |
| PALM 560 | Urinalysis and Body Fluids | 1 |
| Total Hours | | 16 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| IMMB 191 | 1 | IMMB 175 | 2 |
| IMMB 150 | 2 | BIOL 117 & 117L (GEF 8) | 4 |
| BIOL 115 & 115L (GEF 2) | 4 | CHEM 116 & 116L (GEF 8) | 4 |

| | | | | | |
|---|---|---|---|---|---|
| CHEM 115 & 115L (GEF 8) | 4 | ENGL 102 (GEF 1) | 3 | | |
| ENGL 101 (GEF 1) | 3 | MATH 150 (GEF 3) | 3 | | |
| | 14 | | 16 | | |

**Second Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| IMMB 201 & 201L | 4 | IMMB 275 | 2 | | |
| BIOL 219 & 219L | 4 | IMMB 276 | 3 | | |
| CHEM 233 & 233L | 4 | PHYS 101 & 101L | 4 | | |
| GEF 4, 5, 6, or 7 | 3 | GEF 4, 5, 6, or 7 | 3 | | |
| | | GEF 4, 5, 6, or 7 | 3 | | |
| | 15 | | 15 | | |

**Third Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| IMMB 305 | 3 | IMMB 310 & 310L | 4 | | |
| IMMB 320 | 3 | IMMB 350 | 1 | | |
| BMM 339 | 4 | IMMB 375 | 2 | | |
| STAT 211 | 3 | IMMB 527 | 2 | | |
| GEF 4, 5, 6 or 7 | 3 | PALM 560 & PALM 462 | 2 | | |
| | | PHYS 102 & 102L | 4 | | |
| | 16 | | 15 | | |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| IMMB 405 | 2 | IMMB 460 | 3 | PALM 544 & PALM 446 | 2 |
| IMMB 420 & 420L | 5 | IMMB 470 | 3 | PALM 580 | 3 |
| IMMB 450 | 1 | PALM 530 & PALM 432 | 5 | PALM 604 | 1 |
| IMMB 484 | 3 | PALM 540 & PALM 442 | 5 | PALM 606 | 1 |
| IMMB 494 | 1 | | | | |
| IMMB 540 | 2 | | | | |
| | 14 | | 16 | | 7 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PALM 465 | 2 | PALM 525 | 4 |
| PALM 510 & PALM 412 | 3 | PALM 535 | 4 |
| PALM 520 & PALM 422 | 5 | PALM 545 | 4 |
| PALM 550 & PALM 452 | 5 | PALM 555 | 4 |
| | | PALM 602 | 1 |
| | 15 | | 17 |

Total credit hours: 160

## Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for the B.S in Immunology and Medical Microbiology, and must maintain a cumulative GPA of 3.0 or higher in IMMB in order to be eligible to continue in the accelerated IMMB-MPH program. They must continue to maintain a minimum 3.0 GPA beginning with the semester in which they enroll in MPH courses, continuing through the end of the ABM program, and must successfully complete 120 undergraduate credit hours by the end of year 4. Students are expected to remain in compliance with all Immunology and Medical Microbiology policies and procedures during the undergraduate portion, and with all Public Health policies and procedures during the graduate portion.

**ABM Requirements**

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 2.75 is required in all coursework. | | |
| Undergraduate IMMB Curriculum Requirements | | 106 |
| Shared Bachelor's/Master's Curriculum Requirements | | 14 |
| Graduate Public Health Curriculum Requirements | | 25 |
| Total Hours | | 145 |

## Shared Bachelor's/Master's Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| EPID 501 | Epidemiology for Public Health | 3 |
| BIOS 501 | Applied Biostatistics 1 * | 3 |
| BIOS 502 | Applied Biostatistics Lab | 1 |
| PUBH 200 | Introduction to Public Health Careers and Information ** | 1 |
| PUBH 510 | Contemporary Foundations of Public Health Practice | 2 |
| PUBH 520 | Building and Sustaining Public Health Capacity | 2 |
| PUBH 540 | Leading and Managing Health Organizations | 3 |
| PUBH 541 | Systems Thinking in Public Health Practice | 2 |
| PUBH 596 | Graduate Seminar | 1 |
| Total Hours | | 14 |

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ABM students take BIOS 501 instead of STAT 211 in the undergraduate curriculum.

******

ABM students replace one credit of general elective with PUBH 200.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115 & 115L (GEF 2)) | 4 | BIOL 117 & 117L (GEF 8) | 4 |
| CHEM 115 & 115L (GEF 8) | 4 | CHEM 116 & 116L (GEF 8) | 4 |
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF 1) | 3 |
| IMMB 150 | 2 | IMMB 175 | 2 |
| IMMB 191 | 1 | PUBH 101 (GEF 4) | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 219 & 219L | 4 | IMMB 275 | 2 |
| CHEM 233 & 233L | 4 | IMMB 276 | 3 |
| IMMB 201 & 201L | 4 | PHYS 101 & 101L | 4 |

| | | | |
|---|---|---|---|
| MATH 150 (GEF 3) | 3 | PUBH 200 | 1 |
| | | PUBH 201 (GEF 7) | 3 |
| | | GEF 5, 6 | 3 |
| | 15 | | 16 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOS 501 & BIOS 502 | 4 | IMMB 310 & 310L | 4 |
| BMM 339 | 4 | IMMB 350 | 1 |
| IMMB 305 | 3 | IMMB 375 | 2 |
| IMMB 320 | 3 | PHYS 102 & 102L | 4 |
| PUBH 510 | 2 | PUBH 540 | 3 |
| | | GEF 5, 6 | 3 |
| | 16 | | 17 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| EPID 501 | 3 | IMMB 460 | 3 | PUBH 630 | 3 |
| IMMB 405 | 2 | IMMB 470 | 3 | | |
| IMMB 420 & 420L | 5 | IMMB 484 | 3 | | |
| IMMB 450 | 1 | IMMB 494 | 1 | | |
| PUBH 541 | 2 | PUBH 520 | 2 | | |
| | | PUBH 596 | 1 | | |
| | 13 | | 13 | | 3 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PUBH 521 | 3 | PUBH 613 | 3 |
| Area of Emphasis Courses | 6 | PUBH 629 | 1 |
| Area of Emphasis Elective | 3 | Area of Emphasis Courses | 6 |
| | 12 | | 10 |

Total credit hours: 145

[1]

Note: Students in the ABM program are not required to take PUBH 511 or PUBH 512.

# Major Learning Outcomes

## IMMUNOLOGY & MEDICAL MICROBIOLOGY

The Bachelor of Science degree in Immunology and Medical Microbiology will prepare students from diverse backgrounds to serve as professionals that are knowledgeable about the immune system of humans and other mammals, how the immune system functions, and the consequences of its malfunction on the health of the host. Knowledge of the immune system will be fully integrated with an excellent understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis. Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that cause disease in mammals. Graduates will be qualified to pursue several professional career paths in private industry, state and federal government, and academic institutions. The degree can also provide a strong foundation to progress to advanced studies including medical school, dental school, and graduate school.

**Students will:**

- Summarize and apply the basic concepts of microbiology and microbial pathogenesis.
- Summarize and apply the basic concepts of immunology and immunological disorders.
- Demonstrate expertise in the laboratory skills and knowledge needed to assess the functional status of the immune system.

- Demonstrate expertise in the laboratory skills and knowledge needed to safely cultivate and identify microorganisms that cause disease in mammals.
- Critically interpret microbiological and immunological assay data.
- Discuss, critique, and interpret primary literature in microbiology, microbial pathogenesis, and immunology.
- Demonstrate oral, written, and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

## Policies

### REQUIREMENTS TO REMAIN IN THE IMMB PROGRAM

Students will be reviewed at the completion of each semester and summer term by the Microbiology, Immunology, and Cell Biology Academic and Professional Standards Committee. Students must be in good academic standing as determined by the following:

- Maintain a cumulative GPA of # 2.75 in all coursework attempted
  - Students who do not maintain a minimum cumulative GPA of # 2.75 will be placed on probation for one semester and be required to meet with their academic advisor on a monthly basis. Students on probation, who do not raise their cumulative GPA to 2.75 or better after one semester, will be dismissed from the program. Exceptions to this requirement must be approved by the IMMB Scholarship Committee and the Chair of the MICB Department.
- Pass all required courses for the IMMB major with a grade of C or better
- A student who earns a W as a first attempt in a required IMMB course may re-enroll in the course two more times to earn a grade of C or better. If the student fails to earn a grade of C or better on the third attempt, the student will be dismissed from the major.
- A student who earns a grade of D, F, FNA, or FSA in any course required for the Immunology and Medical Microbiology Bachelor of Science degree may repeat that course ONCE and must earn a grade of C or better.
- A student may only repeat ONLY ONE Immunology and Medical Microbiology core course (i.e. a course with an IMMB prefix). Students who earn a D, F, FNA, or FSA in more than one IMMB core course will be dismissed from the major.
- Any exceptions to these requirements must be approved by the Academic and Professional Standards Committee and the Chair of the MICB Department, Dr. Mariette Barbier.
- Dismissal from the program under the circumstances described above is not dismissal from WVU and the student may be eligible to enroll in another degree program.
- Pre- or corequisite courses in which students earn a grade of D, F, U, or W must be repeated prior to the student's progression to the next course(s) in the sequence.
- Any general education course that is not a pre- or corequisite of the Immunology and Medical Microbiology program and in which a grade of D has been earned, must be repeated prior to graduation if it is to be counted toward graduation requirements (WVU requirement).

# Occupational Therapy

## Undergraduate Degree Offered

- Bachelor of Arts in Human Performance and Health, leading upon successful completion to the Master of Occupational Therapy (MOT) program.

## Graduate Degrees Offered

- For information on the Master of Occupational Therapy (MOT) and Occupational Therapy Doctorate (OTD), refer to the Graduate Catalog (http://catalog.wvu.edu/graduate/schoolofmedicine/divisionofoccupationaltherapy/).

## Introduction

In the fall of 1993, the West Virginia Board of Trustees approved the establishment of a new master’s degree program at WVU, leading to an entry-level master’s degree in occupational therapy. WVU accepted its first students into the professional program in the fall semester of 1996.

The MOT program is designed as a combined Bachelor's/Master's degree program. Students are admitted to the MOT program after completion of 56 credit hours and successful completion of the application process. Prior to application, students are required to complete several prerequisite courses, which in most instances will take two years to fulfill. Completion of the Classroom and Fieldwork portions of the program takes 8 semesters. Students start the program in May of the year admitted and are continuously enrolled.

## The Profession of Occupational Therapy

Occupational therapy is the only profession that helps people across the lifespan to do the things they want and need to do through the therapeutic use of meaningful daily activities (occupations). Occupational therapists use the "occupations" of self-care, work, and play/leisure activities to increase independence, enhance development, and/or prevent disability. To achieve these goals occupational therapists may also adapt the task or the environment. Occupational therapists enable people of all ages to live life to its fullest by helping them promote health, and prevent—or live better with

—injury, illness, or disability. Common occupational therapy interventions include helping children with disabilities to participate fully in school and social situations, helping people recovering from injury to regain skills, and providing supports for older adults experiencing physical and cognitive changes.

Occupational therapists work in a variety of settings. These could include hospitals, rehabilitation centers, nursing facilities, home health, outpatient clinics, private practice, school systems, private organizations, industry, and community agencies such as return to work programs, prisons, and community settings. The number of different places where therapists work is growing every year.

## Accreditation Status MOT

The MOT program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 7501 Wisconsin Avenue, Suite 510E Bethesda, MD 20814. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its web address is www.acoteonline.org (http://www.acoteonline.org/). Graduates of the MOT program are eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, all states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.  Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

## What to Expect

Like many professional programs, the curriculum in the occupational therapy program is fixed and intense. The first professional year begins in the summer with basic sciences coursework relevant to the profession and practice of occupational therapy. Immersion in practice occurs from the first fall semester onward through integrated experiential, simulated, Level I and Level II fieldwork experiences. Coursework includes hands-on learning and interprofessional experiences that are directly linked to academic content, theory, and research.

Students in the program are required to participate in community service activities and the School of Medicine's laptop computer purchase lease-to-own program, which provides each student with a state-of-the-art computer that contains course and program-relevant software.

Students in occupational therapy must obtain a grade of at least C or a Pass in all professional courses.  In addition occupational therapy students must maintain an OT coursework GPA of 3.0 or higher while in the OT Program.  Since professional courses are offered once per year and are specifically sequenced, course failure may result in program dismissal or the delay of fieldwork and graduation.

Students in the OT Program must complete all didactic coursework and all fieldwork within a period of five years after commencing the occupational therapy program. Furthermore, all Level II Fieldwork must be completed within eighteen months following completion of academic coursework while remaining within the five-year time frame.

## Housing and Travel for Clinical Fieldwork

The professional curriculum includes two off-campus, full-time clinical experiences known as Level II Fieldwork. Clinical fieldwork is an essential part of professional training and required by national OT educational standards. Students are assigned to Level I and Level II fieldwork sites locally, and at locations across the United States. Assignment to specialty fieldwork or elective internship is done based on student interest and site availability. Students can expect that at least some of their placements will be at a distance from home. Students are responsible for any related fieldwork or experiential expenses (i.e., background checks, physicals, etc.) as well as transportation, housing, and meal expenses. Students are also responsible for making their own housing and travel arrangements for clinical fieldwork. Information about housing options for affiliations is available from the academic fieldwork coordinator.

## Background Checks

A felony conviction may impact a graduate's ability to take the NBCOT (National Board for Certification in Occupational Therapy, Inc.) examination and/or obtaining a state license. For further information on NBCOT's Character Review Program, interested parties can obtain information from that Board on their web site at: http://www.nbcot.org (http://www.nbcot.org/).

Students enrolled in the WVU OT education program must complete drug testing and background checks to qualify for clinical and fieldwork.

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## ADMINISTRATION

### INTERIM CHAIR

- Mary Beth Mandich - PT, PhD

### VICE CHAIR AND PROGRAM DIRECTOR, OTD

- Diana Davis - PhD, OTR/L (West Virginia University)
  Associate Professor

### PROGRAM DIRECTOR, MOT

- SueAnn Woods - PhD, MOT, OTR/L (West Virginia University)
  Associate Professor

### ACADEMIC FIELDWORK COORDINATOR

- Brian Scaife - OTD, OTR/L (Chatham University)
  Assistant Professor

### DOCTORAL CAPSTONE COORDINATOR

- Kayleigh Nolan - PhD, MOT, OTR/L (Towson University)
  Assistant Professor

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## FACULTY

### PROFESSOR

- Amanda Acord-Vira - EdD, OTR/L

### ASSOCIATE PROFESSORS

- Diana Davis - PhD, OTR/L (West Virginia University)
  Vice Chair and Program Director, OTD
- SueAnn Woods - PhD, MOT, OTR/L (West Virginia Univeristy)
  MOT Program Director

### ASSISTANT PROFESSORS

- Breanna Adkins - EdD, MOT, OTR/L (A.T. Still University)
- Richelle Gray - OTD, OTR/L (University of Toledo)
- Jacob Tyler Greenfield - OTD, MOT, OTR/L (West Virginia University)
- Heather Livengood - PhD, MOT (University of Pittsburgh)
- Kayleigh Nolan - PhD, MOT, OTR/L (Towson University)
  OTD Doctoral Capstone Coordinator
- Brandon "Seth" Powers - MOT, OTR/L, CHT (West Virginia University)
- Brian Scaife - OTD, OTR/L (Chatham University)
  Academic Fieldwork Coordinator

### INSTRUCTOR

- Carrie Smith-Bell - MOT, OTR/L (West Virginia University)

### PROFESSOR EMERITUS

- Anne Cronin - PhD, OTR/L (University of Florida)

### ASSOCIATE PROFESSOR EMERITUS

- Randy McCombie - PhD, OTR/L (Loyola University of Chicago)

## Admissions for 2026-2027

Students typically spend the first two years of undergraduate study completing pre-requisite courses. Successful applicants to the MOT come from a variety of undergraduate degree backgrounds. Students may consult with an advisor or admissions specialist in the School of Medicine's Division of Professional and Undergraduate Programs to identify an appropriate entry major.

Current undergraduate students may apply to the MOT using the OTCAS application system. The application will be open from July 21 – February 15 each year and each class starts in May.

Course and program of study information for the graduate phase of the Master of Occupational Therapy (MOT) degree can be found in the Graduate Catalog (http://catalog.wvu.edu/graduate/schoolofmedicine/divisionofoccupationaltherapy/).

## ADMISSIONS REQUIREMENTS

Admission to the MOT program is competitive. In order to apply and be eligible for an interview for the MOT 2026 program, students must complete the following:

- MOT application through OTCAS between July 21-February 15
- Completion of 20 hours of observation with at least two different occupational therapists in at least two different sites
- Two recommendation letters (professional, academic or personal/non-relative) that speak to your skills, knowledge, aptitude related to becoming an occupational therapist
- Overall and pre-requisite GPA of 3.0
- The following courses* must be completed prior to admission to the program. Course work will only be accepted from an accredited institution in the United States. Applicants must complete each course with a grade of "C" or higher (including any remaining GEF courses).

  Students applying to the program may only be enrolled in a maximum of 3 pre-requisite courses in the Spring semester prior to the start of the program. This does not include any remaining GEF courses.

  - English Composition - 6 credits
  - Introductory Psychology - 3 credits
  - Developmental Psychology - 3 credits
  - Abnormal Psychology - 3 credits
  - Introduction to Sociology or Anthropology - 3 credits
  - Biology with lab - 8 credits
  - Statistics - 3 credits
  - Physiology - 3 or 4 credits
  - Medical Terminology - 1 credit
  - Completion of General Education Foundations (GEF)** - 9 to 12 credits

*Some of the  courses may have their own departmental pre-requisite requirements. Please check with individual departments to ensure that you have completed all requirements.

**Applicants from another college or university should consult the WVU Office of the University Registrar for information on current General Education Foundations (GEF) (https://registrar.wvu.edu/curriculum-catalog/general-education-foundations-gef/) courses and on how to transfer courses to WVU (https://registrar.wvu.edu/transfer/).

Major Code: 8336

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 28 |
| Human Performance & Health Program Requirements/Prerequisites | | 31 |
| Human Performance & Health Major Requirements/Undergraduate OT Courses | | 67 |
| Total Hours | | 126 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundation (GEF) 1,2,3,4,5,6,7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 5, 6 | | 6 |
| WVUE 191 | First Year Seminar | 1 |
| General Electives | | 21 |
| Total Hours | | 28 |

## Human Performance & Health Program Requirements/Prerequisite course work for OT

| Code | Title | Hours |
|---|---|---|
| An minimum overall program/pre-requisite course work grade point average of 3.0. | | |
| Select one of the following: | | 4-8 |
| BIOL 101 | General Biology 1 | |
| & 101L | and General Biology 1 Laboratory | |
| & BIOL 102 | and General Biology 2 | |
| & BIOL 102L | and General Biology 2 Laboratory | |
| or BIOL 115 | Principles of Biology | |
| & 115L | and Principles of Biology Laboratory | |
| ENGL 101 | Introduction to Composition and Rhetoric | 3 |
| ENGL 102 | Composition, Rhetoric, and Research | 3 |
| or ENGL 103 | Accelerated Academic Writing | |
| OTH 201 | Medical Terminology for Occupational Therapy | 1 |
| PSIO 241 | Elementary Physiology | 4 |
| or PSIO 441 | Mechanisms of Body Function | |
| PSYC 241 | Introduction to Human Development * | 3 |
| PSYC 281 | Introduction to Psychological Disorders * | 3 |
| SOC 101 | Introduction to Sociology | 3 |
| or ANTH 105 | Introduction to Anthropology | |
| STAT 211 | Elementary Statistical Inference | 3 |
| Total Hours | | 31 |

*

PSYC 101 Introduction to Psychology serves as a prerequisite course and must be passed prior to enrolling in this course. Three credits of general electives will need to be used to take this course.

## Human Performance & Health Major Requirements/Undergraduate OT Courses

| Code | Title | Hours |
|---|---|---|
| **Undergraduate Occupational Therapy Courses** | | |
| Minimum grade of C required. | | |
| Minimum GPA of 3.0 required | | |
| OTH 330 | Clinical Reasoning Foundations | 2 |
| OTH 360 | Scientific Inquiry for OT 1 | 3 |
| OTH 361 | Scientific Inquiry for OT 2 | 3 |
| OTH 370 | Theories and Science of Occupation | 3 |
| OTH 431 | Clinical Reasoning in OT 2 | 2 |

| | | |
|---|---|---|
| OTH 497 | Research (Graded as Pass/Fail) | 2 |
| OTH 502 | Foundations of OT Intervention | 3 |
| OTH 504 | Anatomic Foundations in OT | 4 |
| OTH 505 | Disruptions in Occupational Performance | 4 |
| OTH 506 | Functional Movement Across the Lifespan | 2 |
| OTH 507 | Functional Kinesiology in Occupational Therapy | 2 |
| OTH 508 | Developmental Life Tasks | 3 |
| OTH 509 | Neurobiologic Foundations | 4 |
| OTH 510 | Occupational Performance Evaluation 1 | 3 |
| OTH 511 | Occupational Performance Evaluation 2 | 4 |
| OTH 514 | Occupational Performance Eval 3 | 4 |
| OTH 515 | Interventions Across the Lifespan 1 | 4 |
| OTH 516 | Interventions Across the Lifespan 2 | 4 |
| OTH 517 | Interventions Across the Lifespan 3 | 4 |
| OTH 532 | Clinical Reasoning for Groups 3 | 3 |
| OTH 584 | Level 1 Fieldwork 1 Clinical Skills | 2 |
| OTH 585 | Level 1 Fieldwork 2 | 2 |
| Total Hours | | 67 |

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| BIOL 101 & 101L (GEF 2) | 4 | BIOL 102 & 102L (GEF 8) | 4 | PSIO 241 | 4 |
| MATH 124 | 3 | PSYC 241 (GEF 8) | 3 | | |
| PSYC 101 (GEF 4) | 3 | SOC 101 or ANTH 105 (GEF 8) | 3 | | |
| WVUE 191 | 1 | General Elective | 3 | | |
| General Elective | 3 | | | | |
| | 14 | | 13 | | 4 |

**Second Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | ENGL 102 (GEF 1) | 3 | OTH 370 | 3 |
| PSYC 281 (GEF 7) | 3 | GEF 6 | 3 | OTH 504 | 4 |
| STAT 211 (GEF 3) | 3 | Electives | 6 | OTH 507 | 2 |
| OTH 201 | 1 | | | | |
| GEF 5 | 3 | | | | |
| | 13 | | 12 | | 9 |

**Third Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| OTH 330 | 2 | OTH 361 | 3 | OTH 431 | 2 |
| OTH 360 | 3 | OTH 508 | 3 | OTH 497 | 1 |
| OTH 502 | 3 | OTH 509 | 4 | OTH 516 | 4 |
| OTH 505 | 4 | OTH 511 | 4 | OTH 584 | 2 |
| OTH 506 | 2 | OTH 515 | 4 | | |
| OTH 510 | 3 | | | | |
| | 17 | | 18 | | 9 |

**Fourth Year**

| Fall | Hours |
|---|---|
| OTH 497 | 1 |
| OTH 514 | 4 |
| OTH 517 | 4 |

| | |
|---|---|
| OTH 532 | 3 |
| OTH 585 | 2 |
| General Elective | 3 |
| | 17 |

Total credit hours: 126

## Major Learning Outcomes

### OCCUPATIONAL THERAPY

- Program content based on a broad foundation in the liberal arts and sciences. A strong foundation in the biological, physical, social, and behavioral sciences supports an understanding of occupation across the lifespan.
- The basic tenants of occupational therapy including its history, philosophy, foundation in occupation, and models of occupational performance.
- The process of screening, evaluation, and referral as related to occupational performance and participation that is culturally relevant and based on theoretical perspectives, models of practice, frames of reference, and available evidence.
- The process of formulation and implementation of the therapeutic intervention plan to facilitate occupational performance and participation that is culturally relevant; reflective of current occupational therapy practice; based on available evidence; and based on theoretical perspectives, models of practice, and frames of reference.
- Context of service delivery information and skills including the knowledge and understanding of the various contexts, such as professional, social, cultural, political, economic, and ecological, in which occupational therapy services are provided.
- Leadership and management skills including principles and applications of leadership and management theory.
- Promotion of scholarly endeavors including describing and interpreting the scope of the profession, establishing new knowledge, and interpreting and applying this knowledge to practice.
- Professional ethics, values, and responsibilities, including an understanding and appreciation of ethics and values of the profession of occupational therapy.

# Respiratory Therapy, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Respiratory professionals are members of the interprofessional care team who work with physicians and other care providers to support optimal patient outcomes. They assist in the diagnosis, prognosis, and treatment of patients and perform specialized work to target the improvement of breathing difficulties. They provide care to patients of all ages in a variety of work environments, which leads to excellent career opportunities.

Respiratory therapists perform a wide range of services, including delivery of therapeutics to neonatal, pediatric, and adult populations; patient transportation; hemodynamic and critical care monitoring of patients; delivery of specialized pulmonary diagnostic testing within acute and outpatient areas; ventilator management; and sleep studies.

Students may be directly admitted into the BS in Respiratory Therapy program as incoming first-year students. Students currently in another major at WVU or attending another accredited college or university are welcome to apply to the program via the indirect pathway. Students pursuing program admission consideration via the indirect pathway should complete the required prerequisite courses which will prepare them for application to the Respiratory Therapy major, typically occurring during the sophomore year.

During the junior year (the first year of the professional curriculum), coursework includes core courses that introduce the student to the field of respiratory therapy and to clinical practice. During the senior year (the second year of the professional curriculum), students continue to receive didactic instruction, as well as intensive clinical experience with one or more affiliates. Students must provide their own transportation and housing during clinical rotations.

## ADMINISTRATION

### PROGRAM DIRECTOR

- Michael B. Mehall - MEd, BSRT, RRT, RRTR-ACCS, RRT-NPS, CPFT (American Intercontinental University)
  Assistant Professor

### MEDICAL DIRECTOR

- Sunil Sharma - MD (Jawaharlal Institute of Postgraduate Medical Education & Research)
  Division Chief and Professor, Division of Pulmonary/Critical Care & Sleep Medicine

### DIRECTOR OF CLINICAL EDUCATION

- Keleigh Pershina - MHA, BSRT, RRT, RRT-ACCS, RRT-NPS, RRT-SDS, CPFT, CTTS (Oklahoma State University)
  Assistant Professor

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## FACULTY

### PROFESSOR

- Sunil Sharma - MD (Jawaharlal Institute of Postgraduate Medical Education & Research)
  Professor, Division of Pulmonary/Critical Care & Sleep Medicine and Medical Director, Respiratory Therapy Program

### ASSISTANT PROFESSORS

- Michael B. Mehall - MEd, BSRT, RRT, RRT-ACCS, RRT-NPS, CPFT (American Intercontinental University)
  Program Director
- Keleigh Pershina - MHA, BSRT, RRT, RRT-ACCS, RRT-NPS, RRT-SDS, CPFT, CTTS (Oklahoma State University)
  Director of Clinical Education

## Admissions for 2026-2027

### DIRECT ADMIT

Entering WVU freshman who have a minimum overall high school GPA of 2.75 and meet all other general admission requirements to the University may be provisionally admitted into the respiratory therapy major, space permitting. Applicants who do not meet the provisional admission requirements will be placed in the Healthcare Pathway in the Center for Learning, Advising and Student Success (CLASS), where they may pursue prerequisite coursework.

Students will be provisionally admitted on a rolling basis, with a priority deadline of December 1. Due to current accreditation requirements, sixteen students per cohort, per year can enroll in the respiratory therapy program, thus academic deposits will also be accepted on a rolling basis until the class is filled. The program anticipates a competitive process for the limited number of seats in this new program, therefore interested candidates are strongly encouraged to apply and if admitted, deposit as early as possible.

For the first sixteen provisionally admitted students who submit their academic deposit, their admission status will be updated to reflect that they are fully admitted. Students who were provisionally admitted but are not one of the first sixteen to deposit will be placed within the (CLASS) pathway and future admission is not guaranteed. However, CLASS students may apply for admission consideration (if seats would become available) using the RT indirect pathway process reflected below.

Should the program cohort not receive maximum enrollment of direct admission pathway (high school) applicants by December 1, the program will continue to assess new high school candidates in an ongoing manner and also open the admission process to consider qualified indirect admission pathway students. This process will occur until the program has filled the vacant cohort seats.

### INDIRECT ADMIT

The indirect admission pathway will be available to change of major applicants currently enrolled in another major at WVU and transfer students.

Students/applicants from the indirect pathways that wish to apply for admission consideration into the respiratory therapy program must meet all the following:

1. Possess a minimum overall GPA of 2.50 or higher.
2. Fulfill all other general admission requirements for WVU.
3. Complete all components of the online application and Health Science Application Supplemental Information (HSASI) (available via the Respiratory Therapy program website). The HSASI contains multiple components which will be utilized to assess candidates to determine which applicants are selected for admission to fill any vacant seats in the program. The program will utilize the HSASI to assess all candidates on a 5-criteria scoring system. The highest overall score achieved by applicants from the 5 criteria components reflected below will be offered admission into the RT Program until the cohort is full. If two or more applicants achieve the highest scores but the same score, then the candidate(s) with the highest overall GPA will be offered the seat.

### ENTRY INTO PROFESSIONAL PHASE

Regardless of entry method (direct or indirect), students admitted into the BSRT program must complete the following criteria prior to transitioning (entering) into the professional phase of the program (typically Fall term, junior year).

1. Possess a minimum overall GPA of 2.50 or higher.
2. Complete PALM 205 (3 credits) and PALM 206 (lab 1 credit) or PSIO 107 (4 credits) with a minimum final course grade of C of higher.
3. Successfully pass all the following prerequisite courses:
   - General Biology I and Lab (4 hrs): BIOL 101 and 101L or BIOL 115 and 115L or equivalent
   - General Biology II and Lab (4 hrs): BIOL 102 and 102L or BIOL 117 and 117L or equivalent
   - Introductory Chemistry and Lab (4 hrs): CHEM 111 and 111L or CHEM 115 and 115L or equivalent
   - Composition and Rhetoric I (3 hrs): ENGL 101 or equivalent
   - Public Communication (3 hrs): COMM 104 or MDS 270 or equivalent
   - Introductory Psychology (3 hrs): PSYC 101 or equivalent
4. Review and meet all the Technical Standards requirements of the program.
5. Complete all components of the Student Professional Phase Core Requirements Policy (at least 30 days prior to the start of the professional phase) including health insurance verification, health examination/health form, immunization and titer requirements, drug screen, and clearances required within the program.

Major Code: 8321

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

The first two years of study consist of a pre-professional curriculum where students complete prerequisite, recommended support, and general education courses while the last two years consist of the respiratory therapy professional curriculum. The pre-professional curriculum can be completed at the main campus, one of the WVU regional campuses, or any regionally accredited college or university.

The third and fourth years target detailed respiratory therapy content with the inclusion of hands-on laboratory and clinical education activities. The program includes didactic education which is strongly complemented by a series of robust clinical courses which are coordinated with the program's clinical partners, including WVU Medicine.

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 13 |
| Respiratory Therapy Pre-Professional Requirements | | 48 |
| Respiratory Therapy Major Requirements | | 67 |
| Total Hours | | 128 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 6, and 7 | | 12 |
| RT 191 | First-Year Seminar | 1 |
| Total Hours | | 13 |

## Respiratory Therapy Pre-Professional Requirements

| Code | Title | Hours |
|---|---|---|
| BIOL 101<br>& 101L | General Biology 1<br>and General Biology 1 Laboratory (GEF 2) | 4 |
| or BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory (GEF 8) | 4 |
| or BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory | |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory (GEF 8) | 4 |
| or CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| COMM 104 | Fundamentals of Public Communication | 3 |
| or COMM 270<br>& 270S | Presentational Speaking<br>and Effective Public Speaking Studio | |
| HIIM 110 | Introduction to U.S. Healthcare Delivery System | 3 |
| HIIM 351 | Healthcare Data Privacy, Confidentiality, and Security | 3 |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| PALM 200 | Medical Terminology | 3 |
| PALM 205<br>& PALM 206 | Introduction to Human Anatomy<br>and Human Anatomy Laboratory | 4 |
| or PSIO 107 | Introduction to Human Anatomy and Physiology | |
| PHIL 130 | Current Moral Problems (GEF 5) | 3 |
| PHYS 105<br>& 105L | Conceptual Physics<br>and Conceptual Physics Laboratory (GEF 8) | 4 |
| or PHYS 101<br>& 101L | Introductory Physics 1<br>and Introductory Physics 1 Laboratory | |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| RT 301 | An Introduction to Respiratory Therapy | 4 |
| Elective (select one of the following): | | 3 |
| BMM 235 | Introduction to Molecular Medicine | |
| HIIM 233 | Health Informatics and Information Management Disease Fundamentals and Management | |
| HIIM 246 | Fundamentals of Clinical Documentation Improvement | |
| PCOL 260 | Pharmacology | |
| PSIO 241 | Elementary Physiology | |
| Total Hours | | 48 |

## Respiratory Therapy Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum grade of C is required in all Respiratory Therapy Major Requirements. | | |
| RT 310 | Respiratory Therapy Equipment, Procedures, and Processes | 3 |
| RT 311 | Respiratory Therapy Equipment, Procedures, and Processes Lab | 1 |
| RT 320 | Respiratory Therapy Cardiopulmonary Anatomy and Physiology | 3 |
| RT 340 | Pharmacology Fundamentals in Respiratory Therapy | 3 |

| | | |
|---|---|---|
| RT 350 | PFTs, Sleep, and RT Alternative Settings | 3 |
| RT 360 | Patient Assessment and Therapeutic Procedures in Respiratory Therapy | 3 |
| RT 370 | Neonatal and Pediatric Diseases and Therapeutics in Respiratory Therapy | 3 |
| RT 371 | Neonatal and Pediatric Laboratory Exercises and Interventions in Respiratory Therapy | 1 |
| RT 378 | Respiratory Therapy Clinical Practicum 1 (An Introduction to Clinical Practice) | 1 |
| RT 380 | Mechanical Ventilation Foundations | 3 |
| RT 381 | Mechanical Ventilation Laboratory Exercises and Applications in Respiratory Therapy | 1 |
| RT 388 | Respiratory Therapy Clinical Practicum 2 | 4 |
| RT 389 | Cardiopulmonary Disease Pathophysiology | 3 |
| RT 400 | Hemodynamic and Intensive Care Principles and Practices | 3 |
| RT 401 | Senior Respiratory Therapy Capstone | 2 |
| RT 420 | Advanced Application and Theories in Mechanical Ventilation | 3 |
| RT 430 | Interdisciplinary Science, Leadership, Management, and Education in Respiratory Therapy | 3 |
| RT 436 | Comprehensive Board Preparation and Review 1 | 3 |
| RT 460 | Interpretation and Assessment of Labs, Tests, and Diagnostic imagery | 3 |
| RT 466 | Comprehensive Board Preparation and Review 2 | 3 |
| RT 478 | Respiratory Therapy Advanced Clinical Practicum 3 | 6 |
| RT 488 | Respiratory Therapy Advanced Clinical Practicum 4 | 6 |
| RT 497 | Research | 3 |
| Total Hours | | 67 |

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 101 & 101L (GEF 2) | 4 | ENGL 101 (GEF 1) | 3 |
| HIIM 110 | 3 | BIOL 102 & 102L (GEF 8) | 4 |
| PALM 205 & PALM 206 | 4 | COMM 104 | 3 |
| MATH 124 (GEF 3) | 3 | PSYC 101 (GEF 4) | 3 |
| RT 191 | 1 | General Education Elective (GEF 6) | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ENGL 102 (GEF 1) | 3 | HIIM 351 | 3 |
| PALM 200 | 3 | PHIL 130 (GEF 5) | 3 |
| PHYS 105 & 105L (GEF 8) | 4 | CHEM 111 & 111L (GEF 8) | 4 |
| RT 301 | 4 | General Education Elective (GEF 7) | 3 |
| Elective | 3 | | |
| | 17 | | 13 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| RT 310 | 3 | RT 360 | 3 |
| RT 311 | 1 | RT 370 | 3 |
| RT 320 | 3 | RT 371 | 1 |
| RT 340 | 3 | RT 380 | 3 |
| RT 350 | 3 | RT 381 | 1 |
| RT 378 | 1 | RT 388 | 4 |
| | | RT 389 | 3 |
| | 14 | | 18 |

| Fourth Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| RT 400 | | 3 RT 401 | 2 |
| RT 420 | | 3 RT 430 | 3 |
| RT 436 | | 3 RT 460 | 3 |
| RT 478 | | 6 RT 466 | 3 |
| RT 497 | | 3 RT 488 | 6 |
| | | 18 | 17 |

Total credit hours: 128

# Major Learning Outcomes

## RESPIRATORY THERAPY

The proposed program in respiratory therapy will prepare graduates who:

- Deliver high quality respiratory therapy services to individuals and across a continuum of care and in a variety of settings.
- Demonstrate the ability to make evidence based clinical decisions utilizing information literacy, critical thinking skills, and scientific evidence.
- Collaborate as members of inter-professional teams.
- Provide care that is characterized by cultural respect
- Demonstrate competence in the recall, application, and analysis of respiratory therapy in all aspects of care and practice.
- Practice respiratory therapy in accordance with recognized professional and ethical standards.

# Accreditation

The Bachelor of Science in Respiratory Therapy Program at West Virginia University, (CoARC program # 200661-BSRT Degree) located at 64 Medical Center Drive, Morgantown, WV 26506 holds Provisional Accreditation from the Commission on Accreditation for Respiratory Care (www.CoARC.com (https://nam04.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.coarc.com%2F&data=05%7C02%7Cazalea.hulbert%40hsc.wvu.edu%7Cb092c2a6de3c48519ff708dc49c13a1d%7Ca2d1f95f851044248ae15c596bdbd578%7C0%7C0%7C638466341931826777%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=4DQXEa9T3YWw%2B1XWnwZGeVuOe6q4CscKvyzWFY1zjRE%3D&reserved=0)). This status signifies that a program with an Approval of Intent has demonstrated sufficient compliance with the Standards (through submission of an acceptable Provisional Accreditation Self Study Report (PSSR) and any other documentation required by the CoARC, as well as satisfactory completion of an initial on-site visit), to be allowed to admit students. It is recognized as an accredited program by the National Board for Respiratory Care (NBRC), which provides enrolled students who complete the program with eligibility for the Respiratory Care Credentialing Examination(s). The program will remain on Provisional Accreditation until it achieves Continuing Accreditation.

# Nursing

## Degrees Offered

- Bachelor of Science in Nursing

## Introduction

The mission of the WVU School of Nursing is to improve the health of West Virginians, as well as our regional and global communities, through the delivery of excellent student-centered programs and evidence-based teaching, scholarship, and service. This mission is responsive to changing healthcare needs and emerging national and state changes in technology and healthcare delivery and is enhanced by a supportive and open environment. The faculty's educational effort is directed at providing high quality, student-centered programs of instruction at all levels which prepare superb professional nurses to meet basic healthcare needs; advance practiced nurses to address complex health needs; and enable doctorally-educated nurses to advance nursing knowledge through research, to assist in the formulation of policies to improve health care, and to serve as faculty in higher degree programs. Unique characteristics of the state mandates that the healthcare needs of rural populations and vulnerable groups be a major focus of education, research, and service, including faculty practice.

The School of Nursing offers undergraduate and graduate degrees and post-graduate certificates of study. The baccalaureate program (BSN) is available for high school graduates who aspire to a career in nursing (basic or traditional BSN program) and to registered nurses (RNs) and licensed practical nurses (LPNs) who are licensed graduates of associate degree or diploma nursing programs seeking to continue their career development (RN to BSN and LPN to BSN programs). In addition, an ABSN (fast track) program is available for the college graduate seeking a BSN in Morgantown and Bridgeport.

## Accreditation

The baccalaureate degree program in nursing/master's degree program in nursing/Doctor of Nursing Practice program at West Virginia University are accredited by the Commission on Collegiate Nursing Education, 655 K Street, NW, Suite 750, Washington, DC 20001, 202-887-6791.

## Fees, Expenses, Housing, Transportation, and Immunization

Students enrolling at the Morgantown campus pay fees which are detailed on the Cost and Aid page of the West Virginia University Undergraduate Admissions website (https://admissions.wvu.edu/cost-and-aid/). Special fees and deposits are also required. Students enrolling at other sites pay the fees shown in the catalog for that site. Fees are subject to change without notice. Students' expenses vary according to the course of study and individual needs. Information concerning financial assistance, application forms, and the Free Application for Federal Student Aid (FAFSA) form may be obtained from the Professional - Health Sciences Center page of the Student Financial Services website (https://financialaid.wvu.edu/students/professional-hsc/) or by contacting the HSC Financial Aid Office, PO Box 9810, Morgantown, WV 26506-9810; telephone (304) 293-3706 (toll free) or 1-800-344-WVU1.

The University Housing and Residence Life Office, telephone (304) 293-4491, provides information concerning university-owned housing. The Student Life Office in E. Moore Hall, telephone (304) 293-5611, provides information concerning privately owned, off-campus housing.

Students are expected to provide their own transportation, equipment, and instruments for the clinical courses. Some clinical experiences require travel in a multi-county area.

Students entering the traditional BSN or ABSN program on the Morgantown campus are required to participate in the WVU Health Sciences Center Student Computer Program. A laptop computer will be issued to all students entering these programs. Please visit the Undergraduate Programs page of the West Virginia University School of Nursing website (https://nursing.hsc.wvu.edu/students/undergraduate-programs/bachelor-of-science/) for more information.

Proof of specific immunizations is required for all health sciences students. Students in the BSN, ABSN, RN to BSN, LPN to BSN, MSN, DNP, and post graduate certificate nursing programs must undergo a criminal background check prior to clinical courses. Felony convictions, serious misdemeanors, illicit drug use, or positive drug screens may result in admission ineligibility or program dismissal.

## Scholarships

The School of Nursing offers several scholarships. These scholarships are administered by the Health Science Center Financial Aid Office and require completion of the Free Application for Federal Student Aid (FAFSA) form in order to be considered for financial aid. Most School of Nursing scholarships are available only to students already admitted to the School of Nursing and are awarded each April for the following academic year. However, there are a limited number of scholarships for which students may apply before admission. Further information is provided on the Student Resources page of the West Virginia University School of Nursing website (https://nursing.hsc.wvu.edu/students/resources/).

## Additional Information

Visit the West Virginia University School of Nursing website (https://nursing.hsc.wvu.edu/). Call the WVU school of Nursing Office of Student Services at 1-866-WVUNURS or (304) 293-1386. Write to WVU School of Nursing at PO Box 9600, Morgantown, WV 26506-9600

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# ADMINISTRATION

### DEAN

- Tara F. Hulsey - PhD (University of South Carolina)

### ASSOCIATE DEAN OF CURRICULUM AND GRADUATE PROGRAMS

- Stacy Huber - EdD (West Virginia University)
  Clinical Education Associate Professor

### ASSOCIATE DEAN OF UNDERGRADUATE PROGRAMS

- Brad Phillips - PhD (West Virginia University)
  Assistant Professor

### ASSOCIATE DEAN FOR RESEARCH

- Ubolrat Piamjariyakul - PhD (University of Kansas)
  Professor

### ASSOCIATE DEAN OF FACULTY PRACTICE

- Emily Barnes - DNP (West Virginia University)
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### ASSOCIATE DEAN OF COMMUNITY ENGAGEMENT

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### CHAIR, DEPARTMENT OF FAMILY/COMMUNITY HEALTH

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### CHAIR, BECKLEY DIVISION

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### CHAIR, BRIDGEPORT DIVISION

- Veronica Gallo - PhD (West Virginia University)
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### CHAIR, CHARLESTON DIVISION

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### CHAIR, KEYSER DIVISION

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### DIRECTOR, DNP PROGRAM AND FNP TRACK COORDINATOR

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  Clinical Associate Professor

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## FACULTY

### PROFESSORS

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- Mary Jane Smith - PhD (University of New York)

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- Susan Newfield - PhD (Texas Tech University)
- Suzy Walter - PhD (West Virginia University

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- Stephanie Young - PhD (West Virginia University)

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- Amy Miner - MSN (Waynesburg University)
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- Laura Vollmer - MSN (Chamberlain University)
- Amber Walker Ziese - MSN (Marshall University)

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- Sherri Boone - BSN (University of Pittsburgh)
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- Mary Craft - MSN (Vanderbilt University)
- Mike Frame - DMPNA (Marshall University)
- Jamie Haynes - MSN (Marshall University)
- Angela Jeffries - DNP (Missouri State University)
- Marian Longstreth - DNP (Waynesburg University)
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- Georgia Narsavage - PhD (University of Pennsylvania)
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- Barbara Kupchak - PhD (University of Texas)
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- C. Lynne Ostrow - EdD (West Virginia University)
- Kari Sand-Jecklin - EdD (West Virginia University)
- Elisabeth Shelton - PhD (Widener University)
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- Mindy Harris - MSN (Marshall University)

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- Jennifer Gross - MSN (Marshall University)
- Patsy Stoots - MSN (Bluefield University)

## BECKLEY DIVISION - CLINICAL EDUCATION LECTURERS

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- Debra Crowder - MSN (Philadelphia University)
- Taylor Holland - BSN (West Virginia University)
- Michelle Huerta - BSN (Northern Colorado University)
- Kathy Talley - MA (Marshall University)

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- Kelly Morton - DNP (Capella University)

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- Teresa Ritchie - DNP (West Virginia University)
- Crystal Sheaves - PhD (West Virginia University)
  Director of Clinical Placements
- Melanie Whelan - PhD (West Virginia University)

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- Matthew Hottle - PhD (West Virginia University)
- Diana Niland - PhD (West Virginia University)

### KEYSER DIVISION - CLINICAL EDUCATION INSTRUCTORS

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- Mary Keister - MSN (Aspen University)
- Brittany Knox - BSN (Capella University)

### KEYSER DIVISION - SENIOR LECTURER

- Krystal Abucevicz-Swick - DNP (West Virginia University)
- Mary Beth McCloud - PhD (Medical University of South Carolina)

## Academic Standards and Graduation Requirements

### PRE-NURSING PROGRESSION POLICY

Students admitted to the University as "Pre-Nursing" students must maintain good academic standing and a 3.0 GPA beginning with the first semester at WVU. If a student's GPA falls below 3.0, they will be placed on academic notice for one semester. If the student's GPA remains below 3.0 for a second semester, the student will be dismissed from "Pre-Nursing".

Student athletes or students involved in University-sponsored organizations who, as a part of their participation may be required to be absent from either classroom or clinical experiences, must provide course coordinators with potential dates of absence during the first week of class. Excessive absences may jeopardize student success in nursing courses.

Note: Keyser Campus (Potomac State) policies for general nursing (Pre-Nursing) are different. Please refer to the Potomac State catalog for details.

### DIRECT ADMISSION FRESHMAN PROGRESSION REQUIREMENTS

Students admitted directly to nursing as freshman must fulfill direct admission academic progression requirements to maintain advanced standing as a direct admission student and enter the sophomore level nursing courses. If students do not meet the requirements in the freshman year, they will be moved to the Pre-Nursing major and will have the opportunity to enter the Pre-Nursing BSN program applicant pool for consideration for program re-entry and progression to the sophomore nursing courses.

Freshman year academic progression standards for direct admit students in the BSN program include:

- Maintaining good academic standing
- Completion of all prerequisite coursework with a C - or better prior to the end of the summer term of the freshman year
- Maintaining a 3.0 overall GPA or better at the end of the first semester (higher GPAs are recommended in preparation for the rigorous nursing curriculum)
- Achieving or maintaining a cumulative 3.5 GPA or better at the end of the second semester of the freshman year

## TRADITIONAL BSN ACADEMIC STANDARDS & PROGRESSION POLICIES

From entry into sophomore nursing courses to program completion, students must fulfill the following academic requirements to maintain good academic standing.

1. GPA

- Students must maintain an overall college GPA of at least 3.0.
- Students who do not maintain an overall GPA of at least 3.0 will be placed on academic notice for two semesters. Students who do not raise their overall GPA to 3.0, after two semesters on academic notice, will be dismissed from the School of Nursing.

2. Required course grades

- All courses used to earn the BSN degree must be completed with a minimum grade of C -.
- Students who earn a grade of D or F in more than two NSG courses used to earn the BSN degree will be dismissed from the School of Nursing.
- All courses used to earn the BSN degree in which students earn a grade of D, F, W, or WU must be repeated prior to the student's progression to the next semester in the nursing sequence. Nursing courses must be repeated in the next spring or fall semester that the course is offered. There is an exception to this individual standard regarding nursing electives; students who receive a W in a nursing elective are not required to repeat it.

3. Repeats

- Students who receive a D, F, W or WU in a course used to earn the BSN degree must repeat the course and earn a minimum grade of C -. Students may repeat a NSG course only once.
- Students who repeat a NSG course used to earn the BSN degree and earn a grade of D, F, W, or WU will be dismissed from the School of Nursing.

4. Readmission

- Students who have been dismissed from the BSN program are not eligible for readmission. See Undergraduate Readmission Policy.

**Grading Scale**

The grading scale for nursing courses using letter/numerical values is: A= 93-100, B = 85-92, C = 77-84, D = 70-76, F = 69 and below.

## ABSN AND LPN TO BSN ACADEMIC STANDARDS & PROGRESSION POLICIES

From entry into sophomore nursing courses to program completion, students must fulfill the following academic requirements to maintain good academic standing.

1. GPA

- Students must maintain a Nursing GPA of at least 3.0. Nursing GPA includes only NSG courses completed while enrolled in the ABSN or LPN to BSN programs.
- Students who do not maintain a Nursing GPA of at least 3.0 will be placed on academic notice and issued a formal Student Success Plan.
- Students who do not participate in the requirements outlined in the Student Success Plan will be at risk for being dismissed from the WVU SON. Nursing GPAs can be obtained from the Director of Admissions and Enrollment.

2. Required course grades

- All courses used to earn the BSN degree must be completed with a minimum grade of C -.
- Students who earn a grade of D or F in more than two NSG courses used to earn the BSN degree will be dismissed from the School of Nursing.
- All courses used to earn the BSN degree in which students earn a grade of D, F, W, or WU must be repeated prior to the student's progression to the next semester in the nursing sequence. Nursing courses must be repeated in the next spring or fall semester that the course is offered. There is an exception to this individual standard regarding nursing electives; students who receive a W in a nursing elective are not required to repeat it.

3. Repeats

- Students who receive a D, F, W or WU in a course used to earn the BSN degree must repeat the course and earn a minimum grade of C -. Students may repeat a NSG course only once.
- Students who repeat a NSG course used to earn the BSN degree and earn a grade of D, F, W, or WU will be dismissed from the School of Nursing.

4. Readmission

- Students who have been dismissed from the ABSN or LPN to BSN programs are not eligible for readmission. See Undergraduate Readmission Policy.

**Grading Scale**

The grading scale for nursing courses using letter/numerical values is: A= 93-100, B = 85-92, C = 77-84, D = 70-76, F = 69 and below.

## RN TO BSN ACADEMIC STANDARDS & PROGRESSION POLICIES

1. GPA

- Students must maintain a Nursing GPA of at least 2.5. Nursing GPA includes only NSG courses completed while enrolled in the RN to BSN program.
- Students who do not maintain a Nursing GPA of at least 2.5 will be placed on academic notice and issued a formal Student Success Plan.
- Students who do not participate in the requirements outlined in the Student Success Plan will be at risk for being dismissed from the WVU SON. Nursing GPAs can be obtained from the Director of Admissions and Enrollment.

2. Required course grades

- All courses used to earn the BSN degree must be completed with a minimum grade of C -.
- Students who earn a grade of D or F in more than two NSG courses used to earn the BSN degree will be dismissed from the School of Nursing.

3. Repeats

- Students who receive a D, F, W or WU in a course used to earn the BSN degree must repeat the course and earn a minimum grade of C -. Students may repeat a NSG course only once.
- Students who repeat a course used to earn the BSN degree and earn a grade of D, F, W, or WU will be dismissed from the School of Nursing.

4. Readmission

- Students who have been dismissed from the RN to BSN program are not eligible for readmission to the same program. See Undergraduate Readmission Policy.

**Grading Scale**

The grading scale for nursing courses using letter/numerical values is: A= 93-100, B = 85-92, C = 77-84, D = 70-76, F = 69 and below.

## UNDERGRADUATE READMISSION POLICY

Students who have been *dismissed* from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU SON undergraduate programs. However, students who have received degrees or additional credentialing following dismissal from a nursing program are eligible for admission to the ABSN, RN to BSN, or graduate programs provided that they meet all other admission requirements and based upon space available.

Students who have *withdrawn* from the WVU SON may be considered for readmission. Students may apply for readmission in accordance with the following guidelines and criteria, but must follow the standard admission procedures and meet all original admission requirements.

- Students previously enrolled in a WVU nursing program must complete all exit procedures and forms during the semester of withdrawal to be eligible for readmission.
- Readmission to a WVU undergraduate nursing program will be considered one time only.
- Students unable to complete the program within 7 years of the original admission date will be required to restart the program if readmitted.

Readmission is not guaranteed and is dependent upon space available, applicant qualifications, and academic discretion.

## Accreditation

The School of Nursing has specialized accreditation through the Commission on Collegiate Nursing Education.

The baccalaureate degree program in nursing, the master's degree program in nursing and the Doctor of Nursing Practice program at West Virginia University is accredited by the Commission on Collegiate Nursing Education, 655 K Street, NW, Suite 750, Washington, DC 20001, 202-887-6791.

# Bachelor of Science in Nursing, B.S.N.

## Degree Offered

- Bachelor of Science in Nursing (BSN)

## Nature of the Program

The School of Nursing undergraduate program in nursing is recognized by health care agencies as providing excellent preparation for the nursing profession. Our graduates are in great demand and enjoy a large number of career opportunities. The BSN curriculum includes courses in the humanities, social sciences, basic sciences, and nursing science. The clinical component of nursing courses enables students to apply their learning to

actual client, family, and community situations that warrant nursing intervention. The curriculum has been carefully designed to equip graduates to begin professional nursing practice with patients of all ages in any health care setting where there is a position for the professional nurse at the start of his or her career. The program also provides an excellent foundation for graduate study in nursing and in other fields.

The basic (traditional) baccalaureate program (BSN) is available for high school graduates who aspire to a career in nursing. The basic (traditional) BSN program can be completed in four years at WVU's Morgantown campus, at WVU Institute of Technology (Beckley), or at Potomac State College (Keyser). Upon successful completion, students attain the BSN degree and are eligible to take the NCLEX-RN licensure examination.

Registered nurses (RNs) can complete the BSN requirements online through a completely web-based RN to BSN program. Advising for the program occurs at WVU's Morgantown campus. Nursing courses for RN to BSN students are scheduled every semester to provide an opportunity for individualized progression plans and completion of degree requirements in two to three semesters of full-time study if non-nursing courses are already completed. Part-time options are also available. The School of Nursing offers in-state tuition for all students enrolled in the RN to BSN program, regardless of residency.

An ABSN program is available for the college graduate with a bachelor's degree in a field other than nursing. Following eighteen months of continuous enrollment, successful students attain the BSN degree and are eligible to take the NCLEX-RN licensing examination. The ABSN program is offered at WVU in Morgantown and Bridgeport.

The WVU School of Nursing Keyser Campus (https://nursing.wvu.edu/campuses/?visit=keyser) LPN to BSN Program provides a seamless pathway for a licensed practical nurse (LPN) to earn a BSN degree and enter the RN profession. Courses are offered afternoons/evenings and weekends at WVU Potomac State College (https://www.potomacstatecollege.edu/) to accommodate the working LPN's schedule. Didactic nursing courses are online, with hands-on clinical experiences in state of the science skills/simulation labs and healthcare facilities in the region. Upon successful completion of the program, LPN to BSN students earn 22 hours of escrow credits for their LPN licensure and professional experience, which translates to more than a semester's worth of work. Upon conferral of the BSN degree, the graduate will take the NCLEX-RN licensing examination.

Further information about the BSN program or the MSN, DNP, and Ph.D. graduate programs in nursing may be obtained from the School of Nursing website at http://nursing.hsc.wvu.edu/ or by contacting the WVU School of Nursing Office of Student Services, 6400 Health Sciences South, P.O. Box 9600, Morgantown, WV 26506-9600; telephone (304) 293-1386 or (toll free) 1-866-WVUNURS.

## Accreditation

The baccalaureate degree program in nursing at West Virginia University is accredited by the Commission on Collegiate Nursing Education, 655 K Street NW, Suite 750, Washington, DC 20001, 202-887-6791.

## Criminal Background Checks and Drug Screening

Students are required by clinical agencies to undergo federal and state criminal background checks and a drug screen prior to clinical experiences. Felony convictions, some serious misdemeanors, and positive drug screens may preclude participation in clinical rotations. This could, in turn, prevent the completion of clinical course requirements and completion of the nursing program. It could also result in admission ineligibility or program dismissal.

## Transportation, Immunizations, Confidentiality/ HIPAA Training, and BLS Certification

Students are expected to provide their own transportation, approved uniforms, equipment, and instruments for clinical courses. Clinical experiences may require travel throughout a multi-county area. Proof of a physical exam, tuberculosis testing, specific immunizations, and titers are required for all BSN nursing students. Annual training in confidentiality and the Health Insurance Portability and Accountability Act (HIPAA) are also required. Nursing students are required to maintain current American Heart Association Basic Life Support (BLS) certification.

Curriculum details are also available on the School of Nursing webpage: http://nursing.hsc.wvu.edu/.

## Admissions for 2026-2027


- Direct Admission to Basic Program (p. 865)
- Admission to Basic Program as Pre-Nursing or Other College Major (p. 867)
- Transfer (p. 868)


To be considered, applicants will be required to meet all WVU admission requirements in addition to program-specific admission criteria.

### DIRECT ADMISSION TO BASIC (TRADITIONAL) BSN PROGRAM

Applicants are eligible to enter the BSN program as freshmen on the Morgantown and Beckley campuses. Admission is based on a combination of high school grade point average and superscored composite ACT or total SAT scores. Students admitted directly to the basic (traditional) BSN program have until the end of summer semester of the freshman year to complete the required prerequisite coursework with a grade of "C" or better.

High school students eligible for admission to the University may be admitted directly into Nursing if they meet the following criteria (admission is also dependent upon space available):

- GPA of 3.6 or higher, + Math ACT score of 20 or SAT score of 520, + ACT Composite of 25 or SAT EBRW and Math of 1200 or higher
- Students with a GPA of 3.8 or higher and no ACT or SAT score should see test-optional policy below*
- GPA refers to cumulative high school GPA

In addition, students must have completed the following high school credits required by the University:

## UNITS (YEARS)

- 4 units of English (including courses in grammar, composition, and literature)
- 4 units of Social Studies/Fine Arts (any combination of Social Studies, Fine Arts or Humanities will fulfill the requirement; combination must include U.S. Studies/History)
- 3 units of college preparatory mathematics (units must be Algebra I or higher, Math I or higher and include Algebra II; Transitional Math for High School Seniors will also be accepted)
- 3 units of Science (recommended units include Biology, Chemistry, Physics, Anatomy and Environmental Science)
- 2 units of the same world language (American Sign Language is acceptable)

Priority application deadline is December 1st.

Students directly admitted to the program as freshmen must meet the freshman year direct admission academic requirements (progression policy) to maintain advanced admission standing and enter the sophomore-level courses. Please see the direct admission progression policy in the catalog and student handbook for details. If students do not meet the requirements in the freshman year, they will be moved to the Pre-Nursing major and will have the opportunity to enter the Pre-Nursing BSN applicant pool for consideration for program re-entry and progression to the sophomore nursing courses.

*Test-optional applicants for BSN direct admission beginning Fall 2021 must receive a minimum ATI TEAS exam composite score of 80% or higher, and a cumulative high school GPA of 3.8 or higher. The TEAS exam must be taken within 12 months of the application submission, and only the first two TEAS exam attempts will be eligible for consideration. Students will still be required to follow University course placement policies. Students that have submitted test-optional applications will be placed in CAHS until eligible test results have been received.

Note: Admission criteria are subject to change.  Please see the School of Nursing website for the most up-to-date criteria (http://nursing.hsc.wvu.edu/).

## ADVANCED ADMISSION STANDING FOR MEDICAL PROFESSIONALS AND COLLEGE GRADUATES

Applicants with experience as a licensed medical professional may be eligible to enter the BSN Program directly on the Beckley Campus. Admission is based on the following criteria:

- Active, unrestricted licensure in a medical profession listed below
- A minimum of two years of experience within the medical profession, and
- A minimum cumulative GPA of 3.0 on a 4.0 scale.

Eligible medical professionals include:

- Dental hygienists
- Licensed practical nurses (LPNs)
- Medical assistants
- Occupational therapists or occupational therapy assistants
- Paramedics
- Physical therapists or physical therapy assistants
- Radiology technicians
- Respiratory therapists

Applicants with an earned four-year or graduate degree in any field and a cumulative college GPA of 3.0 or higher may be eligible to enter the BSN Program directly on the Beckley Campus.

*Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN programs; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the BS/BA to BSN, RN to BSN, or graduate programs provided that they meet all other admission requirements and based on space available.

Students with advanced admission status admitted directly into the nursing major have until the end of the summer session of the first year to complete the required first-year BSN Progression Plan courses with a grade of C or better.

The priority application deadline for advanced admission status is December 1st.

## ADMISSION TO GENERAL NURSING (PRE-NURSING)

If a student does not meet the nursing admission criteria for direct admission as a freshman or if direct admission is not available, the student can apply for admission to Pre-Nursing.

To be admitted to the University as a general nursing (Pre-Nursing) major, high school students must meet the following criteria:

- GPA of 3.2 or higher + Math ACT score of 20 or SAT score of 520 +ACT Composite of 23 or SAT EBRW and Math of 1130
- GPA of 3.6 or higher (test-optional)
- Students with a GPA of 3.2 or higher and no ACT or SAT score should see test-optional policy below*
- GPA refers to cumulative high school GPA

To be admitted to the University as a general nursing (Pre-Nursing) major, transfer students must meet the following criteria:

- A 3.00 overall GPA on all college work attempted
- No more than 70 transferable credit hours
- MATH 126 placement: SAT Math 540 (old), SAT Math 540 (new), ACT Math 22, or "C" grade in MATH 122 or equivalent course, or 45 on ALEKS.

If the student has fewer than 24 credit hours, they must also meet freshman requirements.

*Test-optional applicants for Pre-Nursing beginning Fall 2021 must receive a minimum ATI TEAS exam composite score of 70% or higher, and a cumulative high school GPA of 3.2 or higher. The TEAS exam must be taken within 12 months of the application submission, and only the first two TEAS exam attempts will be eligible for consideration. Students will still be required to follow University course placement policies. Students that have submitted test-optional applications will be placed in CAHS (Morgantown campus) until eligible test results have been received.

Note: Keyser Campus (Potomac State) students have different General Nursing (Pre-Nursing) requirements. Please refer to the Potomac State catalog for criteria.

Students are admitted into this program in order to complete entrance requirements for this major. When students are ready to apply to Nursing, they must complete a separate application. Admission to the nursing program is competitive, and admission to the pre-program does not guarantee admission into the major.

## ADMISSION TO THE BASIC (TRADITIONAL) BSN PROGRAM FROM GENERAL NURSING (PRE-NURSING) OR OTHER COLLEGE MAJOR

High school students not eligible for direct admission and college students from other majors may apply for admission to the basic (traditional) BSN nursing program after one semester or more of college coursework. Admission consideration in this case is dependent upon:

- A minimum GPA of 3.0 on all college work attempted
- Completion of required prerequisite courses from any regionally accredited college or university with a grade of C or better (see below)
- Space available in the admission class

Prerequisites: English Composition (3 cr.), Introduction to Psychology (3 cr.), Intro to Nursing (2 cr.), College Algebra (3 cr.), Chemistry with lab (8 cr.), General Biology with lab (4 cr.), and Anatomy & Physiology with lab (4 cr.). See student handbook and website for more information. Statistics is in the freshman progression plan but is not a pre-requisite for admission to the sophomore year.

Applications are available online from the admissions website after December 1st. Complete applications, including transcripts, for the basic (traditional) BSN program must be received by March 15 of the year the candidate wishes to be admitted. Applicants not applying for fall and wishing to be considered for spring admission (Morgantown campus only) must also complete the application process by March 15 of the year prior to the start of the spring semester. Applicants must choose which campus they would like to attend. Applications will only be considered for the chosen campus. Spaces are limited, and the most qualified applicants are admitted. Applicants will be admitted to either the fall (Morgantown, Beckley, or Keyser) or spring semester (Morgantown only) and must have and maintain a 3.0 cumulative GPA and a 3.0 pre-requisite GPA as a provision of their admission. All transcripts must be submitted no later than May 15.

**Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN programs; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the BS/BA to BSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.**

Note: Admission criteria are subject to change. Please see the School of Nursing website (http://nursing.hsc.wvu.edu/) for the most up-to-date criteria.

## TRANSFER STUDENTS

- a statement of good standing from the nursing program in which they are currently enrolled
- a minimum cumulative GPA of 3.0 for previous college coursework (students transferring to pre-nursing must have a minimum overall GPA of 2.5 and must be eligible to take MATH 124 (or equivalent) if not already completed)
- a minimum GPA of 3.0 in the previous nursing program
- earned grades of C- or higher in all nursing and prerequisite non-nursing courses with no grade below a C- in any nursing course

Acceptance and placement in the program are dependent on the individual's academic record and the number of spaces available. Applications should be initiated six months prior to the beginning of the semester in which the applicant wishes to begin nursing courses. Transcripts and other required materials must be received no later than three months before the start of entering semester.

Applicants may request review of previously completed nursing courses for transferability. Syllabi of current and completed nursing courses may be sent electronically to nursing@hsc.wvu.edu for review. Only courses that are comparable to required courses in the BSN curriculum will be transferable as determined by program administration. Nursing credits from a program that is not nationally accredited or an institution that is not regionally accredited are not transferable.

**Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN programs; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the WVU Morgantown BS/BA to BSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.**

Note: Admission criteria are subject to change.  Please see the School of Nursing website for the most up-to-date criteria (http://nursing.hsc.wvu.edu/).

Major Code: 8649

Click here to view the Suggested Plan of Study (p. 870)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| University Requirements | | 10 |
| Pre-Requisite or Co-Requisite Coursework | | 46 |
| Bachelor of Science in Nursing Major Coursework | | 66 |
| Total Hours | | 122 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, and 8 (28-34 Credits) | | |
| Outstanding GEF Requirements 5, 6, and 7 | | 9 |
| NSG 191 | First-Year Seminar | 1 |
| Total Hours | | 10 |

## Pre-Requisite or Co-Requisite Coursework

| Code | Title | Hours |
|---|---|---|
| **A minimum GPA of 3.0 is required in all courses applied towards the degree.** | | |
| **Pre-requisite courses required with a grade of C- or better before enrollment in Sophomore nursing courses.** | | |
| Select one of the following (GEF 2B): | | 4 |
| BIOL 102<br>& 102L | General Biology 2<br>and General Biology 2 Laboratory | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory | |
| Select one of the following (GEF 8): | | 4 |
| CHEM 111<br>& 111L | Survey of General, Organic, and Biological Chemistry 1<br>and Survey of Chemistry 1 Laboratory | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory | |
| Select one of the following (GEF 8): | | 4 |
| CHEM 112<br>& 112L | Survey of General Organic Biological Chemistry 2<br>and Survey of Chemistry 2 Laboratory | |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory | |
| ENGL 101 | Introduction to Composition and Rhetoric (GEF 1) | 3 |
| PALM 107 | Introduction to Human Anatomy and Physiology | 4 |
| or PSIO 107 | Introduction to Human Anatomy and Physiology | |
| NSG 100 | Introduction to the Profession and Discipline of Nursing | 2 |
| PSYC 101 | Introduction to Psychology (GEF 4) | 3 |
| **Pre- or Co-requisites with enrollment of Sophomore courses. Must be completed with a C- or better.** | | |
| MATH 124 | Algebra with Applications (GEF 3) | 3 |
| ENGL 102 | Composition, Rhetoric, and Research (GEF 1) | 3 |
| MICB 200 | Medical Microbiology | 3 |
| HN&F 171 | Introduction to Human Nutrition (GEF 8) | 3 |
| PALM 207 | Human Anatomy and Physiology 2 | 4 |
| PSYC 241 | Introduction to Human Development | 3 |
| STAT 211 | Elementary Statistical Inference | 3 |
| Total Hours | | 46 |

## Bachelor of Science in Nursing

| Code | Title | Hours |
|---|---|---|
| **A minimum GPA of 3.0 is required in all courses applied towards the degree.** | | |
| **A minimum grade of C- is required in Nursing coursework.** | | |
| NSG 211 | Health Assessment & Communication | 6 |
| NSG 212 | Fundamentals of Nursing | 6 |
| NSG 250 | Principles of Pharmacology | 3 |
| NSG 311 | Alterations in Adult Health 1 | 6 |
| NSG 312 | Alterations in Adult Health 2 | 6 |
| NSG 320 | Pediatrics and Family-Centered Care | 4 |
| NSG 330 | Alterations in Mental Health and Wellbeing | 4 |

| | | |
|---|---|---|
| NSG 350 | Evidence-Based Practice and Nursing Scholarship | 3 |
| NSG 360 | Professional Standards of Nursing Care | 3 |
| NSG 410 | Women's Health and Newborn Nursing Care | 4 |
| NSG 411 | Population Health and Healthcare Policy | 6 |
| NSG 412 | Personal and Professional Leadership Development | 7 |
| NSG 460 | Alterations in Adult Health 3 | 4 |
| NSG 486 | Comprehensive NCLEX Review | 2 |
| Select one of the following: | | 2 |
| NSG 402 | Nutrition for Nursing | |
| NSG 404 | Tobacco Treatment | |
| NSG 409 | Emerging Technologies and Innovations in Healthcare | |
| NSG 435 | Cardiology for Nursing | |
| NSG 470 | Advanced Life-Saving Technologies | |
| NSG 478 | The Role of the Nurse in the Patient Experience | |
| NSG 480 | Core Concepts in Gerontological Nursing | |
| NSG 482 | Palliative Care Nursing | |
| NSG 485 | Children With Complex Health Needs | |
| NSG 487 | Movies and Mental Health | |
| NSG 350, NSG 360, and NSG 411 will fulfill Writing and Communication Skills Requirement | | |
| Total Hours | | 66 |

## Suggested Plan of Study for Basic Nursing and Pre-Nursing Majors

Nursing courses must be taken in the sequence indicated in the Plan of Study and must be passed with a grade of C- or better before progressing to nursing courses in the next semester.

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Select one of the following (GEF 8): | 4 | Select one of the following (GEF 8): | 4 |
| CHEM 111 & 111L | | CHEM 112 & 112L | |
| CHEM 115 & 115L | | CHEM 116 & 116L | |
| Select one of the following (GEF 2): | 4 | PALM 107 | 4 |
| BIOL 102 & 102L | | ENGL 101 (GEF 1) | 3 |
| BIOL 115 & 115L | | STAT 211 | 3 |
| NSG 100 | 2 | PSYC 101 (GEF 4) | 3 |
| NSG 191 | 1 | | |
| MATH 124 (GEF 3) | 3 | | |
| | 14 | | 17 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYC 241 | 3 | ENGL 102 (GEF 1) | 3 |
| PALM 207 | 4 | HN&F 171 (GEF 8) | 3 |
| MICB 200 | 3 | NSG 212 | 6 |
| NSG 211 | 6 | NSG 250 | 3 |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| NSG 311 | 6 | NSG 312 | 6 |
| NSG 330 | 4 | NSG 320 | 4 |
| NSG 350 | 3 | NSG 360 | 3 |

| | | | |
|---|---|---|---|
| GEF 7 | | 3 GEF 5 or 6 | 3 |
| | | 16 | 16 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| NSG 411 | | 6 NSG 412 | 7 |
| NSG 410 | | 4 NSG 460 | 4 |
| Nursing Elective | | 2 NSG 486 | 2 |
| GEF 5 or 6 | | 3 | |
| | | 15 | 13 |

Total credit hours: 122

# Major Learning Outcomes

## BACHELOR OF SCIENCE IN NURSING

1. Integrate knowledgeand theories fromnursing and other disciplines to form the basis for clinical judgement and innovation in nursing practice.
2. Evaluate evidence-based, inclusive, equitable,and compassionate nursing care for diverse individuals, families,and communities.
3. Engage in collaborative partnerships with communities, public health, and other industries to address social determinants of health and improve health outcomes.
4. Utilize evidence-based nursing interventions, information, and communication technologies to drive decisions that enhance quality of care, reduce risk potential, and improve health outcomes in accordance with regulatory standards and health policy.
5. Collaborate with interprofessional teams, families, and communities to support the acquisition of shared knowledge and expertise to optimize communication and the healthcare experience to strengthen health outcomes.
6. Coordinate nursing resources within complex systems to promote safe, quality, and equitable care to diverse populations.
7. Model behaviors that reflect accountability, integrity, and characteristics that align with professional and ethical nursing standards.
8. Participate in activities and self-reflection that foster personal health and resilience to support well-being, the acquisition of nursing expertise, leadership development, and lifelong learning.

# Progression Requirements

## PRE-NURSING PROGRESSION POLICY

Students admitted to the University as "Pre-Nursing" students must maintain good academic standing and a 3.0 GPA beginning with the first semester at WVU. If a student's GPA falls below 3.0, they will be placed on academic notice for one semester. If the student’s GPA remains below 3.0 for a second semester, the student will be dismissed from "Pre-Nursing".

Student athletes or students involved in University-sponsored organizations who, as a part of their participation may be required to be absent from either classroom or clinical experiences, must provide course coordinators with potential dates of absence during the first week of class. Excessive absences may jeopardize student success in nursing courses.

Note: Keyser Campus (Potomac State) policies for general nursing (Pre-Nursing) are different. Please refer to the Potomac State catalog for details.

## DIRECT ADMISSION FRESHMAN PROGRESSION REQUIREMENTS

Students admitted directly to nursing as freshman must fulfill direct admission academic progression requirements to maintain advanced standing as a direct admission student and enter the sophomore level nursing courses. If students do not meet the requirements in the freshman year, they will be moved to the Pre-Nursing major and will have the opportunity to enter the Pre-Nursing BSN program applicant pool for consideration for program re-entry and progression to the sophomore nursing courses.

Freshman year academic progression standards for direct admit students in the BSN program include:

- Maintaining good academic standing
- Completion of all prerequisite coursework with a C- or better prior to the end of the summer term of the freshman year
- Maintaining a 3.0 overall GPA or better at the end of the first semester (higher GPAs are recommended in preparation for the rigorous nursing curriculum)
- Achieving or maintaining a cumulative 3.5 GPA or better at the end of the second semester of the freshman year

## TRADITIONAL BSN ACADEMIC STANDARDS & PROGRESSION POLICIES

From entry into sophomore nursing courses to program completion, students must fulfill the following academic requirements to maintain good academic standing.

1. GPA

- Students must maintain an overall college GPA of at least 3.0.
- Students who do not maintain an overall GPA of at least 3.0 will be placed on academic notice for two semesters.
- Students who do not raise their overall GPA to 3.0, after two semesters on academic notice, will be dismissed from the School of Nursing.

2. Required course grades

- All courses used to earn the BSN degree must be completed with a minimum grade of C -.
- Students who earn a grade of D or F in more than two NSG courses used to earn the BSN degree will be dismissed from the School of Nursing.
- All courses used to earn the BSN degree in which students earn a grade of D, F, W, or WU must be repeated prior to the student's progression to the next semester in the nursing sequence. Nursing courses must be repeated in the next spring or fall semester that the course is offered. There is an exception to this individual standard regarding nursing electives; students who receive a W in a nursing elective are not required to repeat it.

3. Repeats

- Students who receive a D, F, W or WU in a course used to earn the BSN degree must repeat the course and earn a minimum grade of C -. Students may repeat a NSG course only once.
- Students who repeat a NSG course used to earn the BSN degree and earn a grade of D, F, W, or WU will be dismissed from the School of Nursing.

4. Readmission

- Students who have been dismissed from the BSN program are not eligible for readmission. See Undergraduate Readmission Policy.

**Grading Scale**

The grading scale for nursing courses using letter/numerical values is: A= 93-100, B = 85-92, C = 77-84, D = 70-76, F = 69 and below.

## ABSN AND LPN TO BSN ACADEMIC STANDARDS & PROGRESSION POLICIES

From entry into sophomore nursing courses to program completion, students must fulfill the following academic requirements to maintain good academic standing.

1. GPA

- Students must maintain a Nursing GPA of at least 3.0. Nursing GPA includes only NSG courses completed while enrolled in the ABSN or LPN to BSN programs.
- Students who do not maintain a Nursing GPA of at least 3.0 will be placed on academic notice and issued a formal Student Success Plan.
- Students who do not participate in the requirements outlined in the Student Success Plan will be at risk for being dismissed from the WVU SON. Nursing GPAs can be obtained from the Director of Admissions and Enrollment.

2. Required course grades

- All courses used to earn the BSN degree must be completed with a minimum grade of C -.
- Students who earn a grade of D or F in more than two NSG courses used to earn the BSN degree will be dismissed from the School of Nursing.
- All courses used to earn the BSN degree in which students earn a grade of D, F, W, or WU must be repeated prior to the student's progression to the next semester in the nursing sequence. Nursing courses must be repeated in the next spring or fall semester that the course is offered. There is an exception to this individual standard regarding nursing electives; students who receive a W in a nursing elective are not required to repeat it.

3. Repeats

- Students who receive a D, F, W or WU in a course used to earn the BSN degree must repeat the course and earn a minimum grade of C -. Students may repeat a NSG course only once.
- Students who repeat a NSG course used to earn the BSN degree and earn a grade of D, F, W, or WU will be dismissed from the School of Nursing.

4. Readmission

- Students who have been dismissed from the ABSN or LPN to BSN programs are not eligible for readmission. See Undergraduate Readmission Policy.

**Grading Scale**

The grading scale for nursing courses using letter/numerical values is: A= 93-100, B = 85-92, C = 77-84, D = 70-76, F = 69 and below.

## RN TO BSN ACADEMIC STANDARDS & PROGRESSION POLICIES

1. GPA

- Students must maintain a Nursing GPA of at least 2.5. Nursing GPA includes only NSG courses completed while enrolled in the RN to BSN program.
- Students who do not maintain a Nursing GPA of at least 2.5 will be placed on academic notice and issued a formal Student Success Plan.
- Students who do not participate in the requirements outlined in the Student Success Plan will be at risk for being dismissed from the WVU SON. Nursing GPAs can be obtained from the Director of Admissions and Enrollment.

2. Required course grades

- All courses used to earn the BSN degree must be completed with a minimum grade of C -.
- Students who earn a grade of D or F in more than two NSG courses used to earn the BSN degree will be dismissed from the School of Nursing.

3. Repeats

- Students who receive a D, F, W or WU in a course used to earn the BSN degree must repeat the course and earn a minimum grade of C -. Students may repeat a NSG course only once.
- Students who repeat a NSG course used to earn the BSN degree and earn a grade of D, F, W, or WU will be dismissed from the School of Nursing.

4. Readmission

- Students who have been dismissed from the RN to BSN program are not eligible for readmission to the same program. See Undergraduate Readmission Policy.

**Grading Scale**

The grading scale for nursing courses using letter/numerical values is: A= 93-100, B = 85-92, C = 77-84, D = 70-76, F = 69 and below.

## UNDERGRADUATE READMISSION POLICY

Students who have been *dismissed* from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU SON undergraduate programs. However, students who have received degrees or additional credentialing following dismissal from a nursing program are eligible for admission to the ABSN, RN to BSN, or graduate programs provided that they meet all other admission requirements and based upon space available.

Students who have *withdrawn* from the WVU SON may be considered for readmission. Students may apply for readmission in accordance with the following guidelines and criteria, but must follow the standard admission procedures and meet all original admission requirements.

- Students previously enrolled in a WVU nursing program must complete all exit procedures and forms during the semester of withdrawal to be eligible for readmission.
- Readmission to a WVU undergraduate nursing program will be considered one time only.
- Students unable to complete the program within 7 years of the original admission date will be required to restart the program if readmitted.

Readmission is not guaranteed and is dependent upon space available, applicant qualifications, and academic discretion.

# Accelerated Bachelor of Science in Nursing

## Degree Offered

- Bachelor of Science in Nursing

## Nature of the Program

### ACCELERATED BACHELOR OF SCIENCE IN NURSING (ABSN)

The ABSN program is an accelerated program for college graduates who wish to become a registered nurse with a bachelor's degree in nursing. It is designed for full-time study. After 18 months of continuous enrollment, successful students obtain the Bachelor of Science in nursing degree (BSN) and are eligible to take the licensing examination for registered professional nurses (NCLEX-RN). The ABSN program is offered at WVU in Morgantown and Bridgeport.

# Admissions for 2026-2027

## ABSN ADMISSION

Applicants for the ABSN program on the Morgantown or Bridgeport campus must have a baccalaureate degree from a regionally accredited college or university with an overall grade point average of 3.0 on a 4.0 scale, an institutional grade point average of 3.0, and prerequisite GPA of at least 3.0.

Applicants with a GPA of below 3.0 may be considered for provisional admission on a case-by-case basis. Consideration for provisional admission may include the number of seats available in the program and the number of hours completed in previous degree programs. Once admitted, students must maintain a program GPA of at least 3.0. Students who do not maintain a program GPA of at least 3.0 will be placed on academic notice for one semester. Students who do not raise their program GPA to at least 3.0 after one semester on academic notice will be dismissed from the School of Nursing.

The following prerequisite courses must be completed with a grade of C- or better prior to enrollment:

| Code | Title | Hours |
|---|---|---|
| Chemistry with lab or score of 60 or higher on science portion of TEAS | | 3-4 |
| Microbiology | | 3-4 |
| Human Anatomy with lab | | 3-4 |
| Human Physiology with lab | | 3-4 |
| Introductory Psychology or Developmental Psychology Across the Lifespan | | 3 |
| Statistics | | 3 |
| Human Nutrition (not required, but strongly recommended) | | 3 |

Complete applications and Course Equivalency Forms to the ABSN program must received by July 1 for admission to the program the following spring semester. Transcripts must be received by July 15. Acceptance and placement in the program are dependent upon space available in the program. There are limited spaces available, and the most qualified applicants are accepted. Application forms are available online after March 1 from the admissions website. Students in the ABSN program must meet the same academic standards as basic (traditional) BSN students and must complete the graduation requirements as specified for second-degree students. Applicants must choose which campus they would like to attend and will be considered for the chosen campus.

**Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN programs; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the ABSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.**

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria (http://nursing.hsc.wvu.edu/).

Major Code: 8630 (Morgantown); 8647 (Bridgeport)

Click here to view the Suggested Plan of Study (p. 875)

# The Accelerated BSN Curriculum

Students must have earned a previous baccalaureate degree prior to enrollment in the Accelerated BSN program. Students must have a cumulative GPA of 3.0 or higher, a cumulative GPA of 3.0 or higher in required pre-requisite courses, and an overall GPA of 3.0 or higher in all college level work ever attempted.

Applications with a GPA below 3.0 may be considered for provisional admission on a case-by-case basis. Consideration for provisional admission may include the number of seats available in the program and the number of hours completed in previous degree programs. Once admitted, students must maintain a program GPA or at least 3.0. Students who do not maintain a program GPA of at least 3.0 will be placed on academic notice for one semester. Students who do not raise their program GPA to at least 3.0 after one semester on academic notice will be dismissed from the WVU SON.

Students must maintain a program GPA of 3.0 or higher through completion of degree.

| Code | Title | Hours |
|---|---|---|
| All courses must be completed with a grade of a C- or better | | |
| NSG 211 | Health Assessment & Communication | 6 |
| NSG 212 | Fundamentals of Nursing | 6 |
| NSG 250 | Principles of Pharmacology | 3 |
| NSG 311 | Alterations in Adult Health 1 | 6 |
| NSG 312 | Alterations in Adult Health 2 | 6 |
| NSG 320 | Pediatrics and Family-Centered Care | 4 |

| | | |
|---|---|---|
| NSG 330 | Alterations in Mental Health and Wellbeing | 4 |
| NSG 350 | Evidence-Based Practice and Nursing Scholarship | 3 |
| NSG 360 | Professional Standards of Nursing Care | 3 |
| NSG 410 | Women's Health and Newborn Nursing Care | 4 |
| NSG 411 | Population Health and Healthcare Policy | 6 |
| NSG 412 | Personal and Professional Leadership Development | 7 |
| NSG 460 | Alterations in Adult Health 3 | 4 |
| NSG 486 | Comprehensive NCLEX Review | 2 |
| **Select one of the following** | | **2** |
| NSG 402 | Nutrition for Nursing | |
| NSG 404 | Tobacco Treatment | |
| NSG 435 | Cardiology for Nursing | |
| NSG 470 | Advanced Life-Saving Technologies | |
| NSG 478 | The Role of the Nurse in the Patient Experience | |
| NSG 480 | Core Concepts in Gerontological Nursing | |
| NSG 482 | Palliative Care Nursing | |
| NSG 485 | Children With Complex Health Needs | |
| NSG 487 | Movies and Mental Health | |
| Total Hours | | 66 |

## Suggested Plan of Study for Accelerated BSN

| **First Semester** | **Hours** |
|---|---|
| NSG 211 | 6 |
| NSG 212 | 6 |
| NSG 250 | 3 |
| | 15 |
| **Second Semester** | **Hours** |
| NSG 311 | 6 |
| NSG 330 | 4 |
| NSG 350 | 3 |
| | 13 |
| **Third Semester** | **Hours** |
| NSG 312 | 6 |
| NSG 320 | 4 |
| NSG 360 | 3 |
| | 13 |
| **Fourth Semester** | **Hours** |
| NSG 410 | 4 |
| NSG 411 | 6 |
| Nursing Elective | 2 |
| | 12 |
| **Fifth Semester** | **Hours** |
| NSG 412 | 7 |
| NSG 460 | 4 |
| NSG 486 | 2 |
| | 13 |

Total credit hours: 66

## Major Learning Outcomes

### BACHELOR OF SCIENCE IN NURSING

1. Integrate knowledgeand theories fromnursing and other disciplines to form the basis for clinical judgement and innovation in nursing practice.
2. Evaluate evidence-based, inclusive, equitable,and compassionate nursing care for diverse individuals, families,and communities.
3. Engage in collaborative partnerships with communities, public health, and other industries to address social determinants of health and improve health outcomes.
4. Utilize evidence-based nursing interventions, information, and communication technologies to drive decisions that enhance quality of care, reduce risk potential, and improve health outcomes in accordance with regulatory standards and health policy.
5. Collaborate with interprofessional teams, families, and communities to support the acquisition of shared knowledge and expertise to optimize communication and the healthcare experience to strengthen health outcomes.
6. Coordinate nursing resources within complex systems to promote safe, quality, and equitable care to diverse populations.
7. Model behaviors that reflect accountability, integrity, and characteristics that align with professional and ethical nursing standards.
8. Participate in activities and self-reflection that foster personal health and resilience to support well-being, the acquisition of nursing expertise, leadership development, and lifelong learning.

# RN to BSN, B.S.N.

## Degree Offered

- RN to Bachelor of Science in Nursing

## Nature of the Program

### RN TO BACHELOR OF SCIENCE

Registered nurses can complete the BSN requirements online through a completely web-based RN to BSN program. Advising for the program can occur at WVU in Morgantown or Charleston. Nursing courses for RN to BSN students are offered every semester to provide opportunity for individualized progression plans and completion of degree requirements in two to three semesters of full-time study if non-nursing courses are already completed. Part-time options are also available. The School offers in-state tuition for all students enrolled in the RN to BSN program, regardless of residency.

## Admissions for 2026-2027

### RN TO BSN PROGRAM ADMISSION

Registered nurses that graduated from nationally accredited associate degree or diploma nursing programs are admitted directly to the School of Nursing and RN to BSN Program. Acceptance and placement in the program are dependent upon the individual's academic record and upon the number of spaces available. An active, unencumbered RN license and a grade point average of 2.5 or better on all college work attempted are required to be eligible for consideration. Applicants with a grade point average of 2.0-2.49 on all college work attempted may be eligible for provisional admission.

New graduates from nationally accredited associate degree or diploma nursing programs that have not yet taken the NCELX-RN can be provisionally admitted with the condition that an active, unencumbered RN license is obtained prior to the day that midterm grades are due during their first semester in the program. If the provision is not satisfied by the deadline, the student will be withdrawn from the program. Students entering the two-semester accelerated RN to BSN option must have an active RN license prior to the first day of classes.

The School of Nursing offers in-state tuition for all students enrolled in the RN-BSN program, regardless of residency.

All registered nurses will transfer 50 hours of undifferentiated nursing credit based on RN licensure. All RN to BSN students will be required to meet WVU's General Education Foundations (GEF) requirements (the University waives the GEF requirements for those with a previous bachelor's degree, Associate of Arts degree, Associate of Science degree, or Associate of Applied Science degree, but the student is still required to complete nursing general education requirements). Advisors will work with students to identify courses already appearing on the transcript that meet GEF requirements and develop a plan to fulfill any remaining requirements. RN to BSN general education requirements, regarding of University GEF credit requirements, include ENGL 101, ENGL 102, and STAT 211.

For example:

120 credits (minimum required to graduate)
-50 undifferentiated nursing credits for RN license
70 credits remaining

-30 credits RN-BSN nursing courses (See program of study)
40 general education credits remaining*

*General education credits may be fulfilled by course work from associate degrees or other college work completed at regionally accredited colleges or universities. For more information about General Education Foundations; see link GEF Requirements (https://registrar.wvu.edu/curriculum-catalog/general-education-foundations-gef/). For more information about course equivalence please see the following website: Transfer Course Equivalency System (http://admissions.wvu.edu/admissions/university-requirements/transfer_equivalency/).

**PLEASE NOTE**: **The last consecutive 30 enrolled credits must be taken at WVU in order to meet residency requirements for graduation.**

**Students who have been dismissed from any nursing program (WVU or otherwise) are ineligible for admission to any of the WVU BSN program; however, students who have received degrees or additional credentialing post-academic dismissal from a nursing program are eligible for admission to the BS/BA to BSN, RN-BSN, or graduate programs, provided they meet all other admission requirements and based on space available.**

Note: Admission criteria are subject to change. Please see the School of Nursing website for the most up-to-date criteria (http://nursing.hsc.wvu.edu/).

Major Code: 8650

Click here to view the Suggested Plan of Study (p. 878)

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## RN to BSN Curriculum

All Registered Nurses will transfer 50 hours of undifferentiated nursing credit. All RN to BSN students will be required to meet WVU's General Education Foundations Curriculum (GEF). If a student already holds a bachelor's degree in another discipline, you will be required to complete ENGL 101, ENGL 102, and STAT 211 (if not already completed at a regionally accredited college or university) to fulfill nursing requirements. Advisors will work with students to identify courses already appearing on the transcript that meet GEF requirements, and then develop a plan to fulfill any remaining requirements. Note that the last 30 credit hours taken for the degree MUST come from WVU in order to meet residency requirements.

| Code | Title | Hours |
|---|---|---|
| All students need to maintain a 2.5 overall GPA in Nursing major requirements. | | |
| **Transfer Credits** | | |
| Undifferentiated nursing transfer credit | | 50 |
| GEF 2, 4, 5, 6, 7, 8 | | 25 |
| Additional elective transfer credit [*] | | 6 |
| **Required Courses** | | |
| Must be completed with a grade of C- or better | | |
| ENGL 101 | Introduction to Composition and Rhetoric (GEF 1) | 3 |
| ENGL 102 | Composition, Rhetoric, and Research (GEF 1) [**] | 3 |

| | | |
|---|---|---|
| STAT 211 | Elementary Statistical Inference (GEF 3) ** | 3 |
| NSG 333 | Ethics in Nursing | 3 |
| NSG 361 | Health Assessment Across the Lifespan | 4 |
| NSG 362 | Health Promotion Across the Lifespan | 4 |
| NSG 373 | Professional Leadership in Nursing | 3 |
| NSG 461 | Healthcare Policy and Finance for Professional Nursing Practice | 3 |
| NSG 475 | Applied Research and Evidence-Based Practice | 5 |
| NSG 465 | Foundations of Evidence-Based Practice | 3 |
| NSG 471 | Population Health Nursing: Theory and Interventions | 5 |
| Total Hours | | 120 |

*****

Used to meet minimum total credits of 120 for the degree.

******

Transfer credit equivalent to the specific course is allowed.

*******

120 credit hours are required by WVU for awarding of an undergraduate degree

## Suggested Plan of Study for Full Time RN-BSN: 3 Semesters

| **First Semester** | **Hours** |
|---|---|
| Transfer credit* | |
| GEF | |
| NSG 333 | 3 |
| NSG 361 | 4 |
| NSG 362 | 4 |
| | 11 |
| **Second Semester** | **Hours** |
| NSG 461 | 3 |
| NSG 465 | 3 |
| NSG 373 | 3 |
| | 9 |
| **Third Semester** | **Hours** |
| NSG 471 | 5 |
| NSG 475 | 5 |
| | 10 |

Total credit hours: 30

*****

Completion of transfer credit or courses to fulfill GEF requirement and reach a total of 120 credits is required.

## Suggested Plan of Study for Part-Time RN-BSN:  2 Years/5 Semesters

| **First Year** | | | | | |
|---|---|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** | **Summer** | **Hours** |
| Transfer credit.* | | NSG 373 | | 3 GEF | 3 |
| NSG 333 | | 3 GEF | | | |
| NSG 361 | | 4 | | | |
| | | 7 | | 3 | 3 |
| **Second Year** | | | | | |
| **Fall** | **Hours** | **Spring** | **Hours** | **Summer** | **Hours** |
| NSG 362 | | 4 NSG 465 | | 3 NSG 475 | 5 |
| GEF | | 3 NSG 461 | | 3 NSG 471 | 5 |

| | | | |
|---|---|---|---|
| GEF | 3 | | |
| | 10 | 6 | 10 |

Total credit hours: 39

*

Completion of transfer credit or courses to fulfill GEF requirement and reach a total of 120 credits is required.

# Major Learning Outcomes

## BACHELOR OF SCIENCE IN NURSING

1. Integrate knowledgeand theories fromnursing and other disciplines to form the basis for clinical judgement and innovation in nursing practice.
2. Evaluate evidence-based, inclusive, equitable,and compassionate nursing care for diverse individuals, families,and communities.
3. Engage in collaborative partnerships with communities, public health, and other industries to address social determinants of health and improve health outcomes.
4. Utilize evidence-based nursing interventions, information, and communication technologies to drive decisions that enhance quality of care, reduce risk potential, and improve health outcomes in accordance with regulatory standards and health policy.
5. Collaborate with interprofessional teams, families, and communities to support the acquisition of shared knowledge and expertise to optimize communication and the healthcare experience to strengthen health outcomes.
6. Coordinate nursing resources within complex systems to promote safe, quality, and equitable care to diverse populations.
7. Model behaviors that reflect accountability, integrity, and characteristics that align with professional and ethical nursing standards.
8. Participate in activities and self-reflection that foster personal health and resilience to support well-being, the acquisition of nursing expertise, leadership development, and lifelong learning.

# Pharmacy

## Degree Offered

- Doctor of Pharmacy (PharmD)

## Introduction

The mission of the West Virginia University (WVU) School of Pharmacy is to improve the health of West Virginians and our global community by developing exemplary pharmacists and scientists; conducting meaningful research; and advancing pharmacy practice.

Pharmacy was first offered at West Virginia University as a department in the School of Medicine in 1914. The College of Pharmacy emerged as a separate entity in 1936 and became the School of Pharmacy in 1958. In 1960, the School of Pharmacy changed from a four-year to a five-year program and in 1998 to a six-year program. The doctor of pharmacy (PharmD) program comprises four years of professional study preceded by a minimum of two years of pre-pharmacy study at an accredited U.S. or foreign college/university of arts and sciences.

Many pharmacy graduates enter practice in community or institutional pharmacies; postgraduate pharmacy residency programs offer the opportunity for additional training and experience in general pharmacy practice and in several areas of specialty practice. Additionally, positions are available in various government agencies, the pharmaceutical industry, long-term care, nuclear pharmacy, home health-care organizations and numerous other areas. Pharmacists are eligible for commissions in the armed forces and the U.S. Public Health Service. Furthermore, pharmacists may prepare for careers in teaching and research.

The WVU School of Pharmacy also offers two PhD programs in Pharmaceutical and Pharmacological Sciences and Health Services and Outcomes Research.

## Accreditation

The School of Pharmacy is fully accredited by the Accreditation Council for Pharmacy Education, the national agency for the accreditation of professional degree programs in pharmacy. The Council is composed of members from the American Pharmacists Association, the National Association of Boards of Pharmacy, the American Association of Colleges of Pharmacy, and the American Council on Education.

The School of Pharmacy holds membership in the American Association of Colleges of Pharmacy whose mission is to lead and partner with member institutions in advancing pharmacy education, research, scholarship, practice, and service to improve societal health.

## ADMINISTRATION

### DEAN

- William P. Petros - PharmD (Philadelphia College of Pharmacy and Science)

### SENIOR ASSOCIATE DEAN FOR ACADEMIC AFFAIRS AND EDUCATIONAL INNOVATION

- Mary K. Stamatakis - PharmD (The Ohio State University)

### SENIOR ASSOCIATE DEAN FOR RESEARCH AND STRATEGIC INITIATIVES

- Paul R. Lockman - PhD (Texas Tech University Health Sciences Center)

### ASSOCIATE DEAN FOR ADMISSIONS AND STUDENT AFFAIRS

- Ashleigh L. Barrickman - PharmD (West Virginia University)

### ASSISTANT DEAN FOR ASSESSMENT AND STRATEGIC PLANNING

- Marie A. Abate - PharmD (University of Michigan)

### ASSISTANT DEAN FOR STUDENT SUCCESS

- Lena M. Maynor - PharmD (West Virginia University)

### ASSISTANT DEAN FOR COMMUNITY ENGAGEMENT

- Thomas E. Menighan - BS Pharm (West Virginia University)

# Pre-Pharmacy

## Nature of the Program

The primary objective of the Doctor of Pharmacy (PharmD) program is to educate practitioners for current and future roles in the profession of pharmacy. The PharmD program comprises four years of professional study preceded by a minimum of two years of pre-pharmacy coursework in a U.S. or foreign accredited college/university of arts and sciences. To prepare for the professional curriculum, students must complete a pre-pharmacy curriculum that emphasizes the biological and chemical sciences. Additionally, pre-pharmacy students must complete a variety of courses of their choosing in the arts, humanities, and social sciences. An early assurance program, the Direct Admit Pathway (https://pharmacy.wvu.edu/student-services/pre-pharmacy/direct-admit-pathway-pre-pharmacy-program/) (DAP) program, is available for high-achieving first-time freshmen who wish to pursue a PharmD degree. Students enter a competitive application process in the year prior to intended matriculation to the four-year professional curriculum. Details regarding the pre-pharmacy course requirements are found on the major tab.

## Admissions for 2026-2027

## Undergraduate Admissions

First-time freshmen and undergraduate transfer students may apply through the main WVU application. Applicants should note "pharmacy" as their major of choice. Upon application evaluation, the applicant is automatically admitted to the D (https://pharmacy.wvu.edu/student-services/pre-pharmacy/direct-admit-pathway-pre-pharmacy-program/)irect Admit Pathway (https://pharmacy.hsc.wvu.edu/student-services/pre-pharmacy/direct-admit-pathway-pre-pharmacy-program/) (DAP) program if they meet the criteria. If the applicant does not meet the requirements for the DAP program, they are admitted to the Healthcare Pathways with Pharmacy Interest major. Students may continue to update test scores, GPA and other means of meeting the math requirement for the DAP program through August 1 of the admissions year.

## PharmD Admissions

Admissions are competitive. Criteria used to evaluate candidates include academic performance, as measured by the grade point averages (GPA) for all the above-noted prerequisite courses and the cumulative GPA achieved in all prior college-level coursework, a personal statement, evaluations (letters of reference), and a personal interview. Prerequisite courses may be taken at an accredited U.S. or foreign institution of higher education and completed with a grade of C or better. Personal qualifications that relate to the suitability of applicants for the study and practice of pharmacy are given careful consideration.

All applicants must first file an initial electronic application with the Pharmacy College Application Service (PharmCAS). Instructions for completing the application are found on the PharmCAS website: http://pharmcas.cas.myliaison.com. Application deadlines are subject to change; check PharmCAS, the School of Pharmacy website at http://pharmacy.wvu.edu, or contact the School to verify current deadlines. It is recommended students apply early as the PharmD Program operates on a rolling admissions basis.

Each applicant recommended for acceptance is required to pay a deposit of $100 before their name is added to the official list of those accepted by the School of Pharmacy. If the applicant enrolls, this sum is applied to the first semester tuition. If the applicant fails to enroll, this deposit is forfeited.

WVU participates in PharmCAS's mediated criminal background check process conducted by Certiphi Screening Inc. You must follow the instructions provided by PharmCAS. The search agency will share results with you before releasing them to WVU. Results indicating that you would not qualify for a West Virginia Board of Pharmacy intern license will terminate your admission and all previous offers. You must keep an electronic copy of the background check for your records. Students are responsible for the fee associated with this screening.

With enrollment in the School of Pharmacy, all students must comply with the immunization and diagnostic procedures required by the WVU Board of Governors, WVU, the WVU Health Sciences Center, and the School of Pharmacy.

Complete information may be obtained from http://pharmacy.wvu.edu/students/

## Personal Interview

The Admissions Committee requires a personal interview with selected candidates. Interviews are held during the fall and spring semesters at the WVU Health Sciences Center in Morgantown.

## Evaluations (Letters of Reference)

A total of three evaluations (letters of reference) are required. One academic letter of reference is required and must be provided by a course instructor in any of the pre-pharmacy course requirements. The second and third letters may be provided by a variety of individuals including a second faculty member or advisor, employer, etc. Please refer to the PharmCAS or the School's PharmD Admissions page (https://pharmacy.wvu.edu/student-services/pharmd-admissions/) for a list of appropriate letter sources.

## Admission to Advanced Standing for Transfer Students

If space is available, students from other accredited schools of pharmacy may be admitted provided they meet the prerequisite course requirements of the WVU School of Pharmacy, have at least a 2.5 professional grade point average, are in good academic and professional standing at the school of origin, and are eligible for continuation toward a degree in pharmacy at the school initially attended. Grades of D in professional courses cannot be transferred.

## Provisional Admission

An applicant accepted into the first year or an advanced standing transfer student is expected to have met all entrance requirements and satisfactorily completed all pre-pharmacy in progress coursework prior to matriculation. A satisfactory performance in the completion of such coursework is defined as one that is consistent with the student's previous academic record and must include no grades of D or lower in prerequisite courses. While it is preferred that all prerequisite coursework be completed by the end of the spring term prior to matriculation, it is possible to complete up to two non-sequential prerequisite courses in the summer before the start of pharmacy student orientation. Failure to do so will result in revocation of the acceptance by the Admissions Committee.

Admitted students must remain free of any violations of local, state, or federal law that would prohibit their ability to obtain an intern license from the West Virginia Board of Pharmacy.

Furnishing or causing to furnish false or incorrect information for the purpose of gaining admission to the School of Pharmacy constitutes grounds for disciplinary action including, but not limited to, expulsion or revocation of acceptance.

Students in the School of Pharmacy agree to abide by the provisions of the Student Code of Academic and Professional Integrity. Upon admission, each student is required to return a signed statement to the Office of Admissions and Student Affairs indicating the student has read and understands the Policy on Academic and Professional Standards and the Student Code of Academic and Professional Integrity of the West Virginia University School of Pharmacy. The code and copies of the statement are available in the Office of Admissions and Student Affairs in the School of Pharmacy and on the School of Pharmacy website.

## Academic and Technical Standards and Policies

http://pharmacy.wvu.edu/student-services/pharmd-program/

Direct Admit Major Code: 8948

Healthcare Pathway Major Code: 1160 (Pharmacy Interest Code G011)

Personal qualifications that relate to the suitability of applicants for the study and practice of pharmacy are given careful consideration.

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | | 9 |
| Total Hours | | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

# Healthcare Pathway Pharmacy Interest and Direct Admit Pathway Pre-Pharmacy Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| **Biochemistry Requirement** | | |
| Select one of the following: | | 3-4 |
| AGBI 410 | Introductory Biochemistry | |
| BMM 339 | Introduction to Human Biochemistry | |
| **Biology Requirement** | | |
| BIOL 115<br>& 115L | Principles of Biology<br>and Principles of Biology Laboratory (May fulfill GEF 2) * | 4 |
| or BIOL 101<br>& 101L<br>& BIOL 102<br>& BIOL 102L | General Biology 1<br>and General Biology 1 Laboratory<br>and General Biology 2<br>and General Biology 2 Laboratory | |
| BIOL 117<br>& 117L | Introductory Physiology<br>and Introductory Physiology Laboratory (May fulfill GEF 8) | 4 |
| **Chemistry Requirement** | | |
| CHEM 115<br>& 115L | Fundamentals of Chemistry 1<br>and Fundamentals of Chemistry 1 Laboratory (May fulfill GEF 8) | 4 |
| CHEM 116<br>& 116L | Fundamentals of Chemistry 2<br>and Fundamentals of Chemistry 2 Laboratory (May fulfill GEF 8) | 4 |
| CHEM 233<br>& 233L | Organic Chemistry 1<br>and Organic Chemistry 1 Laboratory | 4 |
| CHEM 234<br>& 234L | Organic Chemistry 2<br>and Organic Chemistry 2 Laboratory | 4 |
| **Economics Requirement** | | |
| ECON 201 | Principles of Microeconomics (May fulfill GEF 4) | 3 |
| **English Requirement** | | |
| ENGL 101<br>& ENGL 102 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research (May fulfill GEF 1) | 3-6 |
| or ENGL 103 | Accelerated Academic Writing | |
| **Math Requirement** | | |
| Select one of the following (May fulfill GEF 3): | | 3-4 |
| MATH 150 | Applied Calculus | |
| MATH 155 | Calculus 1 | |
| **Microbiology Requirement** | | |
| Select one of the following: | | 3 |
| AEM 341 | General Microbiology | |
| AEM 401 | Environmental Microbiology | |
| MICB 200 | Medical Microbiology | |
| **Physiology Requirement** | | |
| Select one of the following: | | 3-4 |
| BIOL 235 | Human Physiology | |
| PSIO 241 | Elementary Physiology | |
| **Public Speaking Requirement** | | |
| COMM 270<br>& 270S | Effective Public Speaking<br>and Effective Public Speaking Studio | 3 |
| or COMM 104 | Fundamentals of Public Communication | |
| **Statistics Requirement** | | |
| STAT 211 | Elementary Statistical Inference | 3 |
| or ECON 225 | Elementary Business and Economics Statistics | |
| **General University Orientation Requirement** | | |
| PHAR 191 | First-Year Seminar ** | 1 |

| | | |
|---|---|---|
| or WVUE 191 | First Year Seminar | |
| PHAR 199 | Orientation to Pharmacy 1-2 Hr *** | 2 |
| **General Education Foundations** | | |
| GEF Requirements 5, 6, 7 | | 9 |
| Total Hours | | 63-66 |

*****

Select BIOL 115 OR BIOL 101, BIOL 101L, BIOL 102 & BIOL 102L. BIOL 115 is preferred.

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PHAR 191 is restricted for Direct Admit Pathway students only. WVUE 191 is restricted for Healthcare Pathway Pharmacy students only.

*******

PHAR 199 is restricted for Direct Admit Pathway students only.

## SUGGESTED PLAN OF STUDY

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| BIOL 115 & 115L | 4 | BIOL 117 & 117L | 4 |
| CHEM 115 & 115L | 4 | CHEM 116 & 116L | 4 |
| ENGL 101 | 3 | Select one of the following: | 3 |
| MATH 150 or 155 | 3-4 | COMM 104 | |
| PHAR 191 or WVUE 191*** | 1 | COMM 270 & 270S | |
| PHAR 191** | | ENGL 102 | 3 |
| | | STAT 211 or ECON 225 | 3 |
| | | PHAR 199** | 2 |
| | 15-16 | | 19 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CHEM 233 & 233L | 4 | Select one of the following: | 3-4 |
| ECON 201 | 3 | AGBI 410 | |
| Select one of the following: | 3 | BMM 339 | |
| MICB 200 | | CHEM 234 & 234L | 4 |
| AEM 341 | | BIOL 235 or PSIO 241 | 3-4 |
| AEM 401 | | GEF #7 | 3 |
| GEF #5 | 3 | | |
| GEF #6 | 3 | | |
| | 16 | | 13-15 |

Total credit hours: 63-66

# Public Health

## Degree Offered

- Bachelor of Science

## Nature of the Program

The School of Public Health offers two majors within the Bachelor of Science program. Both the Public Health Sciences and Health Services Administration majors are typically completed in a four-year period.

### PUBLIC HEALTH SCIENCES MAJOR

Graduates of the Public Health Sciences major are prepared for entry-level positions in a wide array of agencies involved in public and private health, including local, regional and state health departments, consulting and advocacy organizations, healthcare organizations, and government agencies, as well as entry into select graduate and professional programs.

### HEALTH SERVICES ADMINISTRATION MAJOR

Students in this major will acquire the knowledge and skills to become health services managers, who oversee day-to-day operations; set and carry out policies, goals, and procedures; evaluate the quality of the staff's work; and develop reports and budgets for health-related and clinical agencies and departments. The Health Services Administration major will provide students with an understanding of public and population health, as well as specific courses preparing them for entry level positions in health services management and administration, or for further professional education.

### ACCELERATED BACHELOR'S TO MASTER'S (4+1) PROGRAM

The School of Public Health's Accelerated Bachelor's to Master's programs offer highly motivated students with an interest in the Master of Health Administration or Master of Public Health the opportunity to complete their Bachelor of Science and a Master's degree in an accelerated pathway.

## ADMINISTRATION

### DEAN

- Sarah Woodrum - DrPH (University of Illinois, Chicago)

### ASSISTANT DEAN FOR STUDENT AFFAIRS

- Scot McIntosh - MS (Eastern Kentucky University)

### DIRECTOR OF DOCTORIAL PROGRAMS

- Ranjita Misra - PhD (Old Dominion University)

### DIRECTOR OF UNDERGRADUATE STUDIES

- Audra Hamrick - MA (West Virginia University)
  Assistant Professor, Social and Behavioral Sciences

### CHAIRS

- Nicholas Castle - PhD (Pennsylvania State University)
  Professor, Department of Health Policy, Management and Leadership
- Bethany Barone Gibbs - PhD (Johns Hopkins University)
  Associate Professor, Department of Epidemiology and Biostatistics
- Keith Zullig - PhD (University of South Carolina)
  Professor, Department of Social and Behavioral Sciences

## Admissions for 2026-2027

First time student who meet University requirements are directly admitted to the Public Health Sciences major.

Students admitted from other majors within WVU must be in good academic standing (2.0 GPA)

Students transferring from another institution must be in good academic standing (2.0 GPA).

Once in the program, students must maintain a 2.5 GPA

## ADDITIONAL ADMISSIONS REQUIREMENTS FOR THE HEALTH SERVICES ADMINISTRATION MAJOR FOR FALL AND SPRING TERMS

### HEALTH SERVICES ADMINISTRATION

- First time students with Minimum GPA of 2.75, or,
- First time students with Minimum GPA of 2.5 with an accompanying ACT of 21 or higher.
- Students transferring internally or from another institution with Minimum GPA of 2.75

Applicants who are admissible to the university and School but do not meet the minimum requirements for the Health Services Administration major, will be admitted into the Public Health Sciences major to complete the core requirements until they are eligible for admission to the Health Services Administration major.

## ADMISSION REQUIREMENTS FOR THE ACCELERATED BACHELORS TO MASTERS (ABM) PROGRAMS

Students can apply for the accelerated program (4+1) after the completion of a minimum 60 credits, but not more than 75 credits. Only enrolled WVU Public Health Sciences or Health Services Administration majors may be considered for admission to the accelerated program. Transfer students must have completed 24 credit hours as degree-seeking students at WVU before applying. Students applying for the ABM cannot be enrolled in a dual degree or certificate program.  Public Health Sciences students must have a minimum GPA of 3.0 to be considered for the accelerated Master of Public Health program. Health Services Administration students must have a minimum GPA of 3.5 to be considered for the accelerated Master of Health Administration program.

# Degree Designation Learning Outcomes

**Bachelor of Science in Public Health**

Upon completion of the program, students will be able to:

1. Demonstrate a strong foundation of knowledge about the history, philosophy, core values, concepts, and functions of public health in the US and globally.
2. Determine appropriate public health processes, approaches, and interventions needed to address health-related needs and concerns of specific populations.
3. Illustrate how socio-economic, behavioral, biological, and environmental factors impact human health, contribute to health disparities, and can be affected by promotion and protection programs.
4. Communicate public health information to diverse audiences through a variety of mediums.
5. Apply evidence-based and ethical approaches to identifying, collecting, using, analyzing, and disseminating public health data and information.
6. Differentiate the basic concepts of legal, ethical, economic, and regulatory dimensions of health and how they influence the US health system and public health policy.

**Public Health Sciences Major**

In addition to the BS in Public Health program objectives, the Public Health Sciences major, provides knowledge and skills that:

1. Allows for the application of social behavioral, biostatistical and epidemiologic methods to identify and analyze public health issues.

**Health Services Administration Major**

Upon completion of the program, students will be able to:

1. Demonstrate a strong foundational knowledge of the history, principles, theories, frameworks, and current issues in public health.
2. Describe health and health care dynamics, including the structures, policies, processes and institutions that make up the U.S. healthcare system.
3. Manage the basic human, fiscal, and physical resources needed for accomplishing organizational goals.
4. Articulate a personal management philosophy that integrates health services management and leadership concepts, knowledge, and skills.
5. Apply principles and practices of health services management and leadership to identify and solve organizational problems.

# Accreditation

The WVU School of Public Health is fully accredited (http://publichealth.wvu.edu/about/accreditation/) by the Council on Education for Public Health (CEPH (https://ceph.org/)). The only accredited public health program in the state, the School is home to undergraduate and graduate programs in various public health disciplines at the BS, MPH, MS and PhD levels. The school's Master of Science in Industrial Hygiene program is accredited by the Applied Natural Sciences Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET-ANSAC (https://www.abet.org/)). The school is also seeking accreditation for the Master of Health Administration (MHA) program by the Commission on Accreditation of Healthcare

Management Education (CAHME (https://www.cahme.org/)) and certification of the Bachelor of Science in Health Services Management and Leadership by the Association of University Programs in Health Administration (AUPHA (https://www.aupha.org/home/)).

## Minors

- Epidemiology (http://catalog.wvu.edu/undergraduate/minors/epidemiology/)
- Public Health (http://catalog.wvu.edu/undergraduate/minors/pubh/)

# Health Services Administration, B.S.

## Degree Offered

- Bachelor of Science in Public Health, major in Health Services Administration

## Nature of the Program

Health service administrators or managers are typically responsible for planning, coordinating and directing the delivery of quality service to those receiving services in hospitals, clinics, health departments, and other health-related organizations. This includes responsibility for many of the operational duties in these settings, including overseeing the training and recruitment of staff, following and maintaining budgetary and fiscal records, and managing daily operations.

This program aims to be certified by the Association of University Programs in Health Administration (AUPHA) in the future. Certified undergraduate programs are recognized for having withstood the rigors of peer review in which curricula, faculty, and educational outcomes are critically examined by peer review. External stakeholders look at certification as a way to distinguish a program from its peers.

## PREPARING STUDENTS FOR FUTURE OPPORTUNITIES

Graduates of the Bachelor of Science in Public Health, Health Services Administration major can expect to be employed in clinical/administrative healthcare, health services, and population health settings (like health departments) and to be strong candidates for Master of Public Health and Master of Health Administration programs.

Graduates of this major will gain the following:

- An in-depth understanding of the dynamics that make up the U.S. healthcare system.
- Expertise to solve organizational problems and navigate complex health delivery systems.
- A distinctive set of skills that enable you to successfully manage the daily operations of a healthcare facility, including the ability to provide budgetary oversight and recruit, train and retain quality staff.
- Your unique, personal management philosophy and the ability to integrate it with health leadership.

## Admissions for 2026-2027

- First time students with minimum GPA of 2.75
- Students transferring internally or from another institution with minimum GPA of 2.75

Applicants who are admissible to the university but do not meet the minimum requirements for the Health Services Administration major, will be admitted into the Public Health Sciences major to complete the core requirements until they are eligible for admission to the Health Services Administration major.

Major Code: 8423

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101 | Introduction to Composition and Rhetoric | |
| & ENGL 102 | and Composition, Rhetoric, and Research | |
| or ENGL 103 | Accelerated Academic Writing | |

| | |
|---|---|
| F2A/F2B - Science & Technology | 4-6 |
| F3 - Math & Quantitative Reasoning | 3-4 |
| F4 - Society & Connections | 3 |
| F5 - Human Inquiry & the Past | 3 |
| F6 - The Arts & Creativity | 3 |
| F7 - Global Studies & Diversity | 3 |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| A cumulative GPA of 3.0 is required for the degree. | | |
| University Requirements | | 62 |
| College Core Requirements | | 25 |
| Health Services Administration Major Requirements | | 33 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, and 8 | | 28 |
| PUBH 191 | First-Year Seminar | 1 |
| General Electives | | 33 |
| Total Hours | | 62 |

## College Core Requirements

| Code | Title | Hours |
|---|---|---|
| PUBH 101 | Introduction to Public and Community Health (GEF 4) | 3 |
| PUBH 200 | Introduction to Public Health Careers and Information | 1 |
| PUBH 201 | Global Perspectives of Public Health (GEF 7) | 3 |
| PUBH 202 | Social Determinants of Health | 3 |
| PUBH 205 | Writing for Public Health Audiences | 3 |
| PUBH 211 | Biostatistics | 3 |
| PUBH 222 | Epidemiology | 3 |
| PUBH 233 | The US Healthcare System: Structures and Incentives | 3 |
| PUBH 243 | Issues in Environmental Health | 3 |
| Total Hours | | 25 |

## Health Services Administration Major Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 3.0 is required in Health Services Administration Major Requirements. | | |
| PUBH 230 | Introduction to Health Administration (minimum grade of B-) | 3 |
| PUBH 311 | Health Data Management and Visualization | 3 |
| PUBH 331 | Introduction to Health Policy | 3 |
| PUBH 338 | Public Health Project Management | 3 |
| PUBH 438 | Managing Quality Improvement in Healthcare | 3 |
| PUBH 439 | Financials Tools for Health Administration | 3 |
| PUBH 440 | Leading and Managing Health Organizations | 3 |
| PUBH 464 | Ethical, Legal and Financial Issues in Healthcare | 3 |

| **Required Field Experience and Capstone Courses** | | |
|---|---|---|
| Minimum grade of C- is required. | | |
| PUBH 400 | Field Placement Preparation Seminar | 1 |
| PUBH 482 | Health Management Internship | 6 |
| PUBH 489 | School of Public Health Undergraduate Capstone | 2 |
| Total Hours | | 33 |

## Suggested Plan of Study

**First Year**

| **Fall** | **Hours** | **Spring** | **Hours** |
|---|---|---|---|
| PUBH 191 | 1 | PUBH 200 | 1 |
| PUBH 101 | 3 | PUBH 201 | 3 |
| ENGL 101 (GEF 1) | 3 | PUBH 243 | 3 |
| BIOL 101 & 101L (GEF 2) | 4 | GEF 3 | 3 |
| General Education/Minor/General Electives | 3 | GEF 8 | 3 |
| | | General Education/Minor/General Electives | 3 |
| | 14 | | 16 |

**Second Year**

| **Fall** | **Hours** | **Spring** | **Hours** |
|---|---|---|---|
| PUBH 202 | 3 | PUBH 205 | 3 |
| PUBH 211 | 3 | PUBH 222 | 3 |
| PUBH 233 | 3 | PUBH 331 | 3 |
| ENGL 102 (GEF 1) | 3 | GEF 6 | 3 |
| General Education/Minor/General Electives | 3 | General Education/Minor/General Electives | 3 |
| | 15 | | 15 |

**Third Year**

| **Fall** | **Hours** | **Spring** | **Hours** |
|---|---|---|---|
| PUBH 230 | 3 | PUBH 311 | 3 |
| PUBH 338 | 3 | PUBH 439 | 3 |
| GEF 5 | 3 | GEF 8 | 3 |
| GEF 8 | 3 | General Education/Minor/General Electives | 6 |
| General Education/Minor/General Electives | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| **Fall** | **Hours** | **Spring** | **Hours** |
|---|---|---|---|
| PUBH 400 | 1 | PUBH 440 | 3 |
| PUBH 438 | 3 | PUBH 482 | 6 |
| PUBH 464 | 3 | PUBH 489 | 2 |
| General Education/Minor/General Electives | 9 | General Education/Minor/General Electives | 3 |
| | 16 | | 14 |

Total credit hours: 120

## Accelerated Program

- B.S. Health Services Administration and M.H.A. Health Administration (p. 889)

## Accelerated Bachelor's in Health Services Administration/Master's of Health Administration Degree Requirements

The School of Public Health's Accelerated Bachelor's to Master's (ABM) program offers highly motivated Health Services Administration students with an interest in the Master of Health Administration (MHA) the opportunity to complete their Bachelor of Science and earn an MHA degree in an accelerated format.

To be eligible for this program, you must:

- Be enrolled in the Health Services Administration major.
- Have a minimum GPA of 3.5
- Earn a minimum grade of A in PUBH 205 Writing for Public Health Audiences, by the time they start the ABM.
- Have completed a minimum of 60 credits, but not more than 75 credits.
  - Transfer students must have completed 24 credit hours as degree-seeking students at WVU before applying.
- The Qualtrics application will open from October 1-March 1.
- Students applying for the ABM cannot be enrolled in a dual degree program.

Students apply using a Qualtrics application form that requires a resume, personal statement, and two references. Students applying to the ABM cannot have any documented infractions with the WVU Office of Student Conduct or any external law enforcement agencies.

Applications are due by March 1, with program admission decisions communicated by the end of the spring semester. An established ABM admissions work group reviews applications.

Students in this ABM program must maintain a minimum cumulative GPA of 3.0 throughout their enrollment in the undergraduate and graduate programs. Students in this ABM will complete all 35 credits of MHA courses, 14 credits of which will be “shared” by both degree programs. This means the ABM curriculum will allow students to substitute required graduate program courses for required bachelor’s program courses. Unless given specific permission by the Dean's Office, students admitted to this ABM program must maintain full-time continuous enrollment during fall and spring terms. Enrollment requirements in the summer term of year four are completing a 350-hour internship (HPML 626, 1 credit) at the graduate level.

Students' eligibility to remain in this ABM program will be evaluated at the end of each semester. Students failing to meet program or University standards will be placed on program probation for no more than one semester, after which they will be terminated from the ABM program. Terminated students and students who choose not to continue the ABM program will be eligible to receive their bachelor's degree after completing the traditional bachelor's degree requirements.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| BS Health Services Administration Program Requirements | | 106 |
| Shared Bachelor's/Master's Coursework | | 14 |
| MHA Health Administration Program Requirements | | 21 |
| Total Hours | | 141 |

## Shared Coursework Curriculum Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 3.5 is required for students in the Health Services Administration major to be considered for admission to the accelerated bachelors to master’s program. | | |
| HPML 522 | Introduction to Data Analytics for Health Administrators | 3 |
| HPML 555 | Health Services Project Management | 3 |
| HPML 582 | Managing Quality Improvement in Healthcare | 3 |
| HPML 596 | Graduate Seminar | 2 |
| PUBH 540 | Leading and Managing Health Organizations | 3 |
| Total Hours | | 14 |

## Suggested Plan of Study

| First Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| PUBH 191 | 1 | PUBH 200 | 1 |
| PUBH 101 | 3 | PUBH 201 (GEF 7) | 3 |
| ENGL 101 (GEF 1) | 3 | PUBH 243 | 3 |
| GEF 2 (Suggested: BIOL 101/101L) | 4 | GEF 3 | 3 |
| General Education/ Minor/General Electives | 3 | GEF 8 (Suggested: ECON 201) | 3 |

| | | | | | |
|---|---|---|---|---|---|
| | | General Education/ Minor/General Electives | 3 | | |
| | 14 | | 16 | | |

**Second Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| PUBH 205 | 3 | PUBH 202 | 3 | | |
| PUBH 211 | 3 | PUBH 222 | 3 | | |
| PUBH 230 | 3 | PUBH 331 | 3 | | |
| GEF 1 | 3 | GEF 6 | 3 | | |
| General Education/ Minor/General Electives (Suggested: PALM 200) | 3 | General Education/ Minor/General Electives (Suggested: ACCT 201) | 3 | | |
| | 15 | | 15 | | |

**Third Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| PUBH 233 | 3 | PUBH 311 | 3 | | |
| GEF 5 | 3 | PUBH 439 | 3 | | |
| GEF 8 (Suggested: COMM 309) | 3 | GEF 8 (Suggested: ECON 202) | 3 | | |
| General Education/ Minor/General Electives | 6 | General Education/ Minor/General Electives | 3 | | |
| | | General Education/ Minor/General Electives | 3 | | |
| | 15 | | 15 | | |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| PUBH 400 | 1 | PUBH 482 | 6 | HPML 626 | 1 |
| PUBH 464 | 3 | PUBH 489 | 2 | | |
| HPML 582 | 3 | PUBH 540 | 3 | | |
| HPML 596 | 1 | HPML 555 | 3 | | |
| HPML 522 | 3 | HPML 596 | 1 | | |
| General Electives | 4 | | | | |
| | 15 | | 15 | | 1 |

**Fifth Year**

| Fall | Hours | Spring | Hours | | |
|---|---|---|---|---|---|
| HPML 575 | 3 | HPML 523 | 3 | | |
| HPML 656 | 3 | HPML 659 | 3 | | |
| HPML 610 | 3 | HPML 601 | 3 | | |
| HPML 696 | 1 | HPML 696 | 1 | | |
| | 10 | | 10 | | |

Total credit hours: 141

# Major Learning Outcomes

## HEALTH SERVICES ADMINISTRATION

Graduates of the Health Services Management and Leadership program will:

1. Demonstrate a strong foundational knowledge of the history, principles, theories, frameworks, and current issues in public health.
2. Describe health and health care dynamics, including the structures, policies, processes and institutions that make up the U.S. healthcare system.
3. Manage the basic human, fiscal, and physical resources needed for accomplishing organizational goals.
4. Articulate a personal management philosophy that integrates health services management and leadership concepts, knowledge, and skills.
5. Apply principles and practices of health services management and leadership to identify and solve organizational problems.

# Public Health Sciences, B.S.

## Degree Offered

- Bachelor of Science

## Nature of the Program

Public health covers the five core public health disciplines: biostatistics, environmental health sciences, epidemiology, health policy and management, and social and behavioral sciences.

The public health major emphasizes problem solving skills, critical thinking, practical application, career exploration and an understanding of both clinical- and population-based ethics. Early in the program, students will build a strong foundation of knowledge in the natural and social sciences and become familiar with cultural and socioeconomic differences among populations. Further study will provide students with the knowledge and skills needed to identify evidence-based techniques for disease prevention and promotion of health, both in the US and from a global perspective.

Graduates of the public health program are prepared for entry-level public health positions in a wide array of agencies involved in public and private health, including local, regional and state health departments, consulting and advocacy organizations, healthcare organizations, and government agencies. Students can elect to take courses that will prepare them for graduate and professional programs such as public health sciences (specifically epidemiology, environmental and occupational health and biostatics), or other health sciences professional programs [with additional math/science courses].

The public health program allows students the flexibility to choose electives based on their professional goals or public health issues they're most interested in solving. Students can elect to take courses that will prepare them to sit for the Community Health Education Certification (CHES) exam and for entry level positions in program management and community health education, or courses to prepare them to become members of health care teams assisting individuals in reducing and eliminating barriers to health care access and in negotiating complex health delivery systems. The public health program will also prepare students for entry into graduate programs in the social sciences, policy and administration, and public health graduate programs.

## Admissions for 2026-2027

### GUIDELINES FOR THE SCHOOL OF PUBLIC HEALTH'S UNDERGRADUATE PROGRAM

The WVU School of Public Health (SPH) admits students into the Bachelor of Science in Public Health Sciences program for fall and spring semesters.

First time student who meet University requirements are directly admitted to the Public Health Sciences major.

Students admitted from other majors within WVU must be in good academic standing (2.0 GPA)

Students transferring from another institution must be in good academic standing (2.0 GPA).

Once in the program, students must maintain a 2.5 GPA

Major Code: 8422

## General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

| Code | Title | Hours |
|---|---|---|
| **General Education Foundations** | | |
| F1 - Composition & Rhetoric | | 3-6 |
| ENGL 101<br>& ENGL 102<br>or ENGL 103 | Introduction to Composition and Rhetoric<br>and Composition, Rhetoric, and Research<br>Accelerated Academic Writing | |
| F2A/F2B - Science & Technology | | 4-6 |
| F3 - Math & Quantitative Reasoning | | 3-4 |
| F4 - Society & Connections | | 3 |
| F5 - Human Inquiry & the Past | | 3 |
| F6 - The Arts & Creativity | | 3 |
| F7 - Global Studies & Diversity | | 3 |

| | |
|---|---|
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9 |
| Total Hours | 31-37 |

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

## Degree Requirements

| Code | Title | Hours |
|---|---|---|
| A cumulative GPA of 2.5 is required for the Bachelor of Science in Public Health. | | |
| University Requirements | | 63 |
| School Core Requirements | | 25 |
| Public Health Sciences Major Requirements | | 32 |
| Total Hours | | 120 |

## University Requirements

| Code | Title | Hours |
|---|---|---|
| General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits) | | |
| Outstanding GEF Requirements 1, 2, 3, 5, 6, and 8 | | 28 |
| PUBH 191 | First-Year Seminar | 1 |
| General Electives | | 34 |
| Total Hours | | 63 |

## School Core Requirements

| Code | Title | Hours |
|---|---|---|
| PUBH 101 | Introduction to Public and Community Health (GEF 4) | 3 |
| PUBH 200 | Introduction to Public Health Careers and Information | 1 |
| PUBH 201 | Global Perspectives of Public Health (GEF 7) | 3 |
| PUBH 202 | Social Determinants of Health | 3 |
| PUBH 205 | Writing for Public Health Audiences | 3 |
| PUBH 211 | Biostatistics | 3 |
| PUBH 222 | Epidemiology | 3 |
| PUBH 233 | The US Healthcare System: Structures and Incentives | 3 |
| PUBH 243 | Issues in Environmental Health | 3 |
| Total Hours | | 25 |

## Public Health Sciences Major Requirements

| Code | Title | Hours |
|---|---|---|
| **A minimum GPA of 2.5 is required in all Public Health Sciences Major Requirements.** | | |
| PUBH 311 | Health Data Management and Visualization | 3 |
| PUBH 331 | Introduction to Health Policy | 3 |
| PUBH 338 | Public Health Project Management | 3 |
| PUBH 352 | Social and Behavioral Science and Practice | 3 |
| PUBH 454 | Public Health Research Methods | 3 |
| SBHS 521 | Grant Writing for Public Health Practice | 1 |
| PUBH 493 | Special Topics (Public Health in Action) | 3 |
| Upper-Division PUBH or Approved Electives | | 6 |
| **Culminating Experience Coursework** | | |
| PUBH 400 | Field Placement Preparation Seminar | 1 |
| PUBH 489 | School of Public Health Undergraduate Capstone (minimum grade of C-) | 2 |
| PUBH 481 | Public Health Field Experience | 4 |

| | |
|---|---|
| **Community Service Requirement** ** | |
| Total Hours | 32 |

*

A maximum 3-credits of PUBH 491 and PUBH 497 can be used to fulfill this requirement.

**

Undergraduate Public Health majors are required to complete a minimum of 25 hours of community service, documented through iServe in the WVU Office of Service and Learning.

## Suggested Plan of Study

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PUBH 191 | 1 | PUBH 200 | 1 |
| PUBH 101 | 3 | PUBH 201 | 3 |
| ENGL 101 (GEF 1) | 3 | PUBH 243 | 3 |
| BIOL 101 & 101L (GEF 2) | 4 | GEF 3 | 3 |
| General Elective | 3 | General Electives | 6 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PUBH 202 | 3 | PUBH 205 | 3 |
| PUBH 211 | 3 | PUBH 222 | 3 |
| PUBH 233 | 3 | PUBH 331 | 3 |
| ENGL 102 (GEF 1) | 3 | GEF 6 | 3 |
| GEF 5 | 3 | GEF 8 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PUBH 352 | 3 | PUBH 311 | 3 |
| PUBH 338 | 3 | PUBH 454 | 3 |
| PUBH Elective | 3 | GEF 8 | 3 |
| GEF 8 | 3 | General Electives | 6 |
| General Elective | 3 | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PUBH 400 | 1 | PUBH 481 | 4 |
| PUBH Elective | 3 | PUBH 489 | 2 |
| PUBH 493 | 3 | SBHS 521 | 1 |
| General Electives | 9 | General Electives | 7 |
| | 16 | | 14 |

Total credit hours: 120

## Accelerated Program

- B.S. Public Health Sciences and M.P.H. Public Health (p. 894)

## Accelerated Bachelor's/Master's Degree Requirements

In order to be admitted to this ABM program, applicants must:

- be enrolled in the Bachelor of Science in Public Health (BSPH) program.
- have a minimum GPA of 3.5.

- complete a minimum of 60 credit-hours, but not more than 75 credit-hours, as prescribed in the BSPH Plan of Study.
- Transfer students must have completed 24 credit hours as degree-seeking students at WVU before applying.
- earn a minimum grade of "A" in PUBH 205: Writing for Public Health Audiences.
- not be enrolled in a dual degree or certificate program.
- not have any documented infractions with the WVU Office of Student Conduct or any external law enforcement agencies.

Students will apply using a Qualtrics application form that requires a resume, personal statement, and two recommendations. The Qualtrics application will open from October 1-March 1 each academic year. Applications are due March 1, with program admission decisions communicated by the end of the spring semester.

## ABM Requirements

| Code | Title | Hours |
|---|---|---|
| BS Public Health Program Requirements | | 106 |
| Shared Bachelor's/Master's Curriculum Coursework | | 14 |
| MPH Public Health Program Requirements | | 25 |
| Total Hours | | 145 |

## Shared Bachelor's/Master's Coursework Requirements

| Code | Title | Hours |
|---|---|---|
| SBHS 521 | Grant Writing for Public Health Practice * | 1 |
| BIOS 501<br>& BIOS 502 | Applied Biostatistics 1<br>and Applied Biostatistics Lab ** | |
| PUBH 520 | Building and Sustaining Public Health Capacity | 2 |
| PUBH 521 | Public Health Prevention and Intervention | 3 |
| PUBH 540 | Leading and Managing Health Organizations | 3 |
| PUBH 541 | Systems Thinking in Public Health Practice | 2 |
| PUBH 596 | Graduate Seminar | 1 |
| 500-Level Elective | | 3 |
| Total Hours | | 14 |

*****

SBHS 521 is an undergraduate curriculum requirement. It will also fulfill an AOE requirement if chosen.

******

BIOS 501 and BIOS 502 are taken in place of General Elective credits in the undergraduate curriculum.

## MPH Program Requirements

| Code | Title | Hours |
|---|---|---|
| A minimum GPA of 3.0 is required. | | |
| EPID 501 | Epidemiology for Public Health | 3 |
| PUBH 613 | Public Health Program Evaluation | 3 |
| PUBH 629 | MPH Capstone | 1 |
| PUBH 630 | MPH Field Practicum | 3 |
| **Required Area of Emphasis** | | **15** |
| Applied Epidemiology and Biostatistics | | |
| Public Health Practice and Leadership | | |
| Social and Behavioral Sciences | | |
| Total Hours | | 25 |

## Suggested Plan of Study

| First Year | | | | |
|---|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** | |
| PUBH 191 | 1 | PUBH 200 | 1 | |
| PUBH 101 | 3 | PUBH 201 | 3 | |

| | | | |
|---|---|---|---|
| ENGL 101 (GEF 1) | 3 | PUBH 243 | 3 |
| GEF 2 | 4 | GEF 3 | 3 |
| General Elective | 3 | GEF 8 | 3 |
| | | General Elective | 3 |
| | 14 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PUBH 202 | 3 | PUBH 205 | 3 |
| PUBH 211 | 3 | PUBH 222 | 3 |
| PUBH 233 | 3 | PUBH 331 | 3 |
| ENGL 101 (GEF 1) | 3 | PUBH 311 | 3 |
| GEF 5 | 3 | GEF 6 | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PUBH 352 | 3 | PUBH 454 | 3 |
| PUBH 338 | 3 | PUBH 481 | 4 |
| PUBH 493 | 3 | PUBH 489 | 2 |
| PUBH 400 | 1 | GEF 8 | 3 |
| GEF 8 | 3 | General Elective | 3 |
| General Electives | 3 | | |
| | 16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours | Summer | Hours |
|---|---|---|---|---|---|
| PUBH 521 | 3 | SBHS 521 | 1 | PUBH 630 | 3 |
| PUBH 541 | 2 | PUBH 520 | 2 | | |
| BIOS 501 & BIOS 502 | 4 | PUBH 596 | 1 | | |
| General Elective | 3 | PUBH 540 | 3 | | |
| General Elective | 3 | 500-Level Elective | 3 | | |
| | | General Elective | 4 | | |
| | 15 | | 14 | | 3 |

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| AOE Course | 3 | PUBH 613 | 3 |
| AOE Course | 3 | PUBH 629 | 1 |
| AOE Course | 3 | AOE Course | 3 |
| EPID 501 | 3 | AOE Course | 3 |
| | 12 | | 10 |

Total credit hours: 145

[1]

Note: Students enrolled in the ABM program do not take PUBH 510.

# Major Learning Outcomes

## PUBLIC HEALTH SCIENCES MAJOR

Upon completion of the program, students will be able to:

1. Demonstrate a strong foundation of knowledge about the history, philosophy, core values, concepts, and functions of public health in the US and globally. (*overview)*
2. Determine appropriate public health processes, approaches, and interventions needed to address health-related needs and concerns of specific populations. *(population health)*

3. Illustrate how socio-economic, behavioral, biological, and environmental factors impact human health, contribute to health disparities, and can be affected by promotion and protection programs. (d*eterminants of health*)
4. Communicate public health information to diverse audiences through a variety of mediums. *(communication)*
5. Apply evidence-based and ethical approaches to identifying, collecting, using, analyzing, and disseminating public health data and information. *(information)*
6. Differentiate the basic concepts of legal, ethical, economic, and regulatory dimensions of health and how they influence the US health system and public health policy. *(policy and US government)*
7. Allows for the application of social behavioral, biostatistical and epidemiological methods to identify and analyze public health issues.

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