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# WVU Institute of Technology

# **General Information - WVU Tech**

West Virginia University Institute of Technology (https://www.wvutech.edu/) (WVU Tech) was established in February 1895 under the name, Montgomery Preparatory School in Montgomery, WV. In its earliest years, the school provided academic preparation for students from southern West Virginia who were bound for West Virginia University. With the passing of time, as new community needs emerged the school changed in response to these needs. In 1917, the curriculum became vocational in nature and the school was renamed the West Virginia Trade School. In 1921, the school became a junior college, the New River State School. Ten years later, the school name was changed to New River State College reflecting its mandate to provide baccalaureate education. Then, in 1941, when technical and business programs were added to serve regional businesses and industries, the college became the West Virginia Institute of Technology. In 1952, baccalaureate degrees in engineering were added. In 1996, the college was named West Virginia University Institute of Technology, when it became a regional campus of West Virginia University. Subsequently, in 2006, WVU Tech became a full division of West Virginia University. WVU Tech offered classes on both the Montgomery and Beckley campuses for one academic year after the acquisition of a campus in Beckley, WV in fall 2016. WVU Tech moved in its entirety to Beckley in the summer of 2017. WVU Tech offers a broad array of degree programs including Bachelor's degrees in business, science, the humanities and social sciences, and nine degrees in engineering, computer science and engineering technology that are ABET accredited and have received national rankings. Degree requirements include general education content that fosters educational breadth and career skills, and students engage in a wide range of service learning, athletic and extracurricular activities. A four-year WVU Nursing degree and a two-year West Virginia University Potomac State College Hospitality (Culinary) degree is offered on the Beckley Campus, and the campus is also home to the Raleigh County Co-operative Extension Service and the LaunchLab to promote regional economic success.

West Virginia University is a member of the Higher Learning Commission. The University's educational programs, including all of those offered at WVU Tech, are accredited by the Higher Learning Commission (https://www.hlcommission.org/).

# Location BECKLEY CAMPUS

WVU Tech is located in Beckley, West Virginia. Situated in scenic Raleigh County in southern West Virginia, Beckley has a population of about 17,500. Beckley is a vibrant and growing community in proximity to many of West Virginia's "wild and wonderful" outdoor recreation areas.

Major U.S. highways serving WVU Tech include Interstate Routes 64 and 77 and US Route 19, a four-lane highway. Within 11 miles of Beckley is Amtrak's Prince Station. Air services are provided through Yeager Airport in Charleston, WV or Beckley Raleigh County Memorial Airport.

Within sixty minutes of the Beckley campus are some of the best "wild and wonderful" recreational opportunities in the eastern United States. Hawks Nest State Park, with its aerial tram to the bottom of the New River Canyon, is within 30 miles. The New River Gorge Bridge, the longest arch bridge east of the Mississippi River and third longest in the world, is 20 miles away, and is the site of the extreme adventure event, Bridge Day. Other nearby parks, Kanawha State Forest, Coonskin Park, Babcock State Park, Summersville Lake and Stephen's Lake, are between one and two hours away and afford abundant opportunities to picnic, swim, boat, and fish. Adventure enthusiasts have next-door access to such highly desirable sports as zip lining, whitewater rafting, rock climbing, hiking, mountain biking, off-road riding and driving, disc golf and the exhilarating winter sports of snowboarding, snowshoeing, snow tubing, and both cross-country and downhill skiing. Adjacent to Beckley is the Summit Bechtel Reserve, national high adventure base of the Boy Scouts and host to national and international jamborees.

# Tech Golden Bear Alumni Association

The goals of the Tech Golden Bear Alumni Association are twofold: to promote the interests of the University and to establish mutually beneficial relationships between the University, its alumni, and other appropriate constituent groups. All former students who completed academic courses at New River State College, West Virginia Institute of Technology, the Community and Technical College of West Virginia Institute of Technology and West Virginia University Institute of Technology qualify for active membership. Members of the faculty, both current and emeritus, hold honorary memberships, and friends of the University may be named to associate membership. Details about the Tech Golden Bear Alumni Association are available online at http://alumni.wvutech.edu/, by email at tech-alumni@mail.wvu.edu, by telephone at 304.929.1254, or by writing WVU Tech Alumni Relations, 410 Neville Street, Beckley, WV 25801.

### In this section:

- WVU Mission (p. 4)
- Mission of WVU Institute of Technology (p. 4)
- WVU Vision (p. 4)
- Vision of WVU Institute of Technology (p. 4)
- WVU Values (p. 4)
- WVU Extension Service (p. 4)

- · Commitment to Diversity, Equity, and Inclusion (p. 4)
- Office of Accessibility Services (p. 5)

#### 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.

# **Mission of WVU Institute of Technology**

West Virginia University Institute of Technology provides an accessible and supportive environment in which students are guided to be active and contributing members of society by fostering intellectual and personal growth through comprehensive educational experiences.

### **WVU** Vision

As on 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.

### Vision of WVU Institute of Technology

To be a nationally-recognized and preeminent regional undergraduate STEM (Science, Technology, Engineering, and Mathematics) teaching institution with well-balanced curricula across diverse academic disciplines.

#### **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.

#### 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.

The Raleigh County Extension Office is located in the Neville Street Building on the WVU Institute of Technology campus in Beckley.

#### COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION

West Virginia University is committed to fostering a diverse and inclusive culture by promoting diversity, inclusion, equality, and intercultural and intercommunity outreach. Accordingly, the 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 Diversity, Equity, and Inclusion (https://diversity.wvu.edu/).

# OFFICE OF ACCESSIBILITY SERVICES

The Office of Accessibility Services (http://accessibilityservices.wvu.edu/) is dedicated to enhancing educational opportunities for students with temporary or permanent disabilities at West Virginia University and all of its campuses. Our team works individually with students to ensure access to University programs and to help them achieve academic success.

# **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 Office of Curriculum and Assessment members collaborate 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 conduct assessment of the general education program. The Office works to strengthen the effectiveness of assessment across all programs by:

- Serving as an institutional-level resource for assessment best practices.
- Providing sustained attention on centralized, consistent, and systematic processes and policies across the University to reduce variability in assessment quality and engagement.
- · Overseeing, reviewing, and commenting upon program review policies, processes, and reports.
- · Facilitating faculty professional development in assessment.
- Providing consulting to departments to enhance their assessment planning and reporting.
- Compiling supporting documentation and evidence of the assessment work at WVU.

# Accreditation

West Virginia University Institute of Technology is accredited by The Higher Learning Commission as an additional location of West Virginia University.

Information regarding specialized program accreditation may be directed to the following accrediting agencies:

Engineering Programs: Engineering Accreditation Commission of ABET, http://www.abet.org/.

Engineering Technology Programs: Engineering Technology Accreditation Commission of ABET, http://www.abet.org/.

Computer Science Programs: Computing Accreditation Commission of ABET, http://www.abet.org/.

Nursing BSN Program: The Baccalaureate degree program in Nursing, Master's degree program in Nursing, and 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, 202-887-67921, https://www.aacnnursing.org/CCNE (https://www.aacnnursing.org/CCNE/).

### In this section:

- Governor of West Virginia (p. 5)
- West Virginia University Board of Governors (p. 5)
- West Virginia University Administration (p. 6)
- Equal Opportunity/Affirmative Action Institution (p. 6)
- West Virginia University Institute of Technology Administration (p. 6)
- Deans (p. 6)

### Governor of West Virginia

• Jim Justice, Governor

# West Virginia University Board of Governors

- Taunja Willis Miller, Chair, Morgantown
- Richard A. Pill, Vice Chair, Martinsburg
- Dr. Patrice Harris, Secretary, Atlanta, GA
- Charles L. Capito, Jr., Charleston
- Albert Bray Cary, Jr., Charleston
- Elmer F. Coppoolse, Bethesda, MD
- Kevin J. Craig, Huntington, WV

- Michael D'Annunzio, Bridgeport, WV
- J. Thomas Jones, Chair, Boynton Beach, FL
- Alan Larrick, Daniels, WV
- Susan Lavenski, Hurricane, WV
- Paul Mattox, Hurricane, WV
- Robert Reynolds, Concord, MA
- Dr. Stanley Hileman, Faculty Representative, Morgantown
- Frances "Frankie" Tack, Faculty Representative, Chairperson of the Faculty Senate, Morgantown
- Shirley D. Robinson, Classified Staff Representative, Morgantown
- Madison Santmyer, Student Representative, Morgantown

\*Committee list is effective through July 1, 2024

The West Virginia University Board of Governors (the "Board") was created by the West Virginia Legislature as the governing body of the West Virginia University System, including West Virginia University, West Virginia University Potomac State College, and West Virginia University Institute of Technology (collectively the "University"). The Board has the mission of general supervision and control over the academic and business affairs of the University.

# **Equal Opportunity/Affirmative Action Institution**

West Virginia University is an Equal Opportunity/Affirmative Action Institution. The 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, services in the uniformed services (as defined in state and federal law), religion, creed, sex, sexual orientation, genetic information, gender identity, or gender expression by the University's non-discrimination policy (BOG Governance Rule 1.6 (https://policies.wvu.edu/finalized-bog-rules/bog-governance-rule-1-6-rule/)) in the administration of any of its educational programs or activities or with respect to admission or employment. Further, faculty, staff, students, and applicants are protected from retaliation for filing complaints or assisting in an investigation under the University's Equal Opportunity/Affirmative Action Plan. Inquiries regarding the University's non-discrimination policy may be sent to the Division of Diversity, Equity, and Inclusion (https://diversity.wvu.edu/).

### West Virginia University Administration

- E. Gordon Gee, President
- Maryanne Reed, Provost and Vice President for Academic Affairs

### West Virginia University Institute of Technology Administration

• Carolyn Long, Campus President (provides leadership for WVU Tech as a divisional campus of WVU)

#### Deans

- College of Business, Humanities, and Social Sciences Dean, Scott Fleming, PhD, CPA, CMA
- Leonard C. Nelson College of Engineering and Sciences Dean, Dr. Tamara Floyd Smith, Ph.D., P.E.
- Department of Nursing Chairperson, Hillary Parcell, MSN, RN

# 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-bogrules/) Academics Rule 2.5):

- 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.
- 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 syllabile 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.
- <u>Cheating</u> 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. <u>Fabrication or Falsification</u> 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/studentacademic-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. 8)
- Penalties for Academic Dishonesty (p. 8)

#### 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.
- 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/campusstudent-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. 9)
- The Appeal Process for Failure to Meet Academic Requirements or Standards (p. 10)
- The Appeal Process for Academic Dishonesty (p. 11)

### **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 email to the Level 2 appeal reviewer named on the Academic Standards Resources (https://provost.wvu.edu/governance/academic-standardsresources/) 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. 12)
- Probation Procedures (p. 13)
- Suspension Procedures (p. 13)
- Duration of Suspension (p. 12)
- Appeal of Suspension (p. 12)
- Summer Enrollment for Students Suspended for Fall (p. 13)
- Winter Enrollment (p. 13)
- Immediate Reinstatement after Suspension (p. 13)
- Readmission after Serving Suspension (p. 13)

# Undergraduate Academic Probation and Suspension Policy DEFINITIONS

Fall and Spring are regular terms. Winter and Summer 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/).

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

Suspension: The accumulation of 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 late December 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 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 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 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 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 automatically reinstated from suspension to good academic standing. Only summer or winter courses taken in the WVU system (i.e. WVU Morgantown, WVU Online, 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 a 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 probation effective for the end of the current term. Students on academic 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 and by post to their permanent address. 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.

# Admissions

WVU Tech seeks to recruit and admit students who aspire to careers in engineering, sciences, business, humanities, social sciences, and nursing. It is important that the abilities and interests of students are appropriately matched to the rigor of Tech's academic programs. Each candidate's application, transcripts, and test results are carefully reviewed for compliance with admission standards. We assure equal educational opportunity to all and are committed to ensuring that all persons, including women, people of color, persons with disabilities, veterans, and persons of different religions, sexual orientations, ages, and international, ethnic, and economic backgrounds have the opportunity to benefit from the programs and services the University offers.

WVU Tech is subject to the undergraduate admissions policies and procedures of the West Virginia Higher Education Policy Commission (HEPC). These are described in detail in Series 23: Standards and Procedures for Undergraduate Admissions at Four-Year Colleges and Universities.

WVU Tech's online application for admission and additional general information is available through the Admissions website (https:// admissions.wvutech.edu/). All applicants may contact the WVU TECH Office of Admissions at 400 S. Kanawha St., Beckley, WV 25801, by calling 304.929.0311, or by email at tech-admissions@mail.wvu.edu.

Applications are processed on a rolling decision basis. Students are encouraged to apply at their earliest opportunity because applicants are considered on a first-come, first-served basis.

Because some degree programs have standards that exceed baseline requirements for admission to the University, admission to WVU Tech does not necessarily constitute admission into a specific degree program.

#### In this section:

- Freshman Students (p. 14)
- Transfer Students: Intra-University (p. 15)
- Transfer Students from Other Accredited Institutions (p. 15)
- Evaluation of Transfer Credits (p. 15)
- International Students (p. 15)
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- Non-Degree Seeking Students (p. 16)
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- GED and HiSET Students (p. 17)
- Home-schooled Applicants (p. 17)
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- Veterans (p. 18)

### **Freshman Students**

Freshman applicants should submit the WVU Tech application, their official final high school transcript (sent directly from the high school) and their ACT or SAT test scores. The graduation date shown on the final high school transcript must precede the first day of classes of the term the student first enrolls at WVU Tech.

Courses that freshman applicants are expected to have successfully completed in high school include:

- 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 Maht 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.

In addition to a 2.0 high school GPA and an 18 ACT composite or 870 SAT (combined Critical Reading and Math scores taken prior to March 2016) or a 960 SAT composite (combined evidence-based Reading/Writing and Math scores taken March 2016 and after.)

In addition to the general requirements for admission, applicants to Engineering, Engineering Technology, Chemistry and Mathematics must also obtain an ACT math score of at least 19 or an SAT math score of 460 taken prior to March 2016 or an SAT Math score of 510 taken March 2016 and after.)

Students who wish to pursue a career in engineering, but do not meet the above criteria for admission to the Leonard C. Nelson College of Engineering & Sciences can be admitted to the pre-engineering program. A pre-engineering student could be allowed to transfer to an engineering major after completing MATH 126 College Algebra and MATH 128 Plane Trigonometry, both with a 'C' or better grade.

# **Transfer Students: Intra-University**

Students enrolled at WVU Morgantown or Potomac State College - WVU Keyser who wish to transfer to WVU Tech must: (1) submit the Change of Campus form that can be accessed at the WVU Tech Admissions (https://admissions.wvutech.edu/) page or the WVU Tech Registrar's Forms (http:// techregistrar.wvutech.edu/forms/) page; and (2) fulfill all general admission requirements and all stipulated program admission requirements. If the transfer will take place before two full semesters has been completed, the student must also fulfill all freshman admission requirements.

# **Transfer Students from Other Accredited Institutions**

Students wishing to transfer from a regionally accredited institution must be academically eligible to return to that institution and must have earned at least a 2.0 GPA for the academic work being transferred. The official acceptance of transfer students must take place at least one month prior to the registration date for the term of their admission.

Applicants should submit the WVU Tech application, official transcript(s) directly from each college attended, and for applicants with fewer than 24 transferable credit hours (excluding developmental courses), ACT or SAT test scores <u>and</u> an official copy of the high school transcript.

Transfer students in engineering programs must take at least 24 credit hours of upper division engineering courses in residence at WVU Tech, and these must include the capstone design course(s) for the particular program.

# **Evaluation of Transfer Credits**

All credits, grades and quality points shall be entered on the permanent record card of transfer students. Courses from non-accredited colleges will be shown on the transcript but will not be accepted for credit. An exception is that such courses may be accepted for the Regents Bachelor of Arts degree program with the approval of the program coordinator. Evaluation of transfer credits will be approved by the Registrar.

Transfer students must fulfill the graduation requirements of the college, including 40 hours of 300-400 level courses. Credits earned at a junior or community college may not be used to satisfy this requirement.

# **International Students**

International students are encouraged to visit the WVU Tech international admissions website (https://admissions.wvutech.edu/apply/internationalstudent/). The application process and the scholarship program, that WVU Tech provides to academically qualified international students, are explained in depth. The following checklists indicate materials and documents that are required of international applicants:

- Application for Admission
- Official High School Transcripts Equivalent of cumulative 2.0 or better secondary/high school GPA on a 4.0 scale
- Original Language of Issue (Translated)
- Evaluated High School Transcripts
  - To ensure proper calculation of GPA and credit for courses taken, it is the responsibility of the Applicant to submit their academic records to an independent academic evaluator. While WVU Tech does not endorse a specific company or program, we suggest using World Education Services (www.wes.org (http://www.wes.org)). The required evaluation to have completed on your transcript s is the WES Basic with GPA. WVU Tech does not accept evaluations from any organization or program that is not a member of NACES.
- Proof of English Proficiency TOEFL 61 or IELTS 6.0 required
  - Students who are citizens of Canada, United Kingdom, Australia, Trinidad and Tobago, the British Virgin Islands or any other native English-speaking countries are exempt from the TOEFL and IELTS requirements.
- ACT or SAT Scores ACT composite score of 18 or SAT composite score of 870, (combined Critical Reading and Math scores taken prior to March 2016) or a 960 SAT composite (combined evidence-based Reading/Writing and Math scores taken March 2016 or after) not including the writing portion
- ACT or SAT scores are only needed for those applying to selected academic majors in the College of Engineering and Sciences and the School of Nursing
- Copy of Current Passport and/or Visa
- Financial Documentation
  - Financial Documentation is not required for admission purposes. However, before documentation can be issued to the student that is need for VISA application, financial documentation must be submitted to the WVU Tech Office of Admissions. Applicants must prove they can provide adequate financial support to cover the estimated expense of studies at WVU Tech for one full year (tuition/fees, living expenses, books & supplies, personal expenses, etc.). Criteria for acceptable financial documentation is:
    - Applicant must submit official bank statement showing availability of the required amount. The statement can be no older than six months, must be translated in English and show all amounts in U.S. dollars (\$).
    - If student is being supported by a private sponsor, the sponsor must complete and sign the 'Declaration of Support by Financial Sponsor' form in addition to the official bank statement.
    - If student is being sponsored by a government agency, the agency must provide official certification that the appropriate costs will be forwarded at the required level.

# **Transfer Applicants**

- Applicants with less than 24 hours of college credit are also required to meet Freshman applicant requirements in addition to the Transfer requirements.
- Application for Admission
- Official College Transcripts 24 or more earned credit hours (equivalent to U.S. system) with a cumulative 2.0 or better college GPA on 4.0 scale Original Language of Issue, if International University Translated
- Evaluated College Transcripts
  - For international applicants from non-US schools, the required supporting documentation must include:
    - To ensure proper calculation of GPA and credit for courses taken, it is the responsibility of the Applicant to submit their academic records to an independent academic evaluator. While WVU Tech does not endorse a specific company or program, we suggest using World Education Services (www.wes.org (http://www.wes.org)). The required evaluation to have completed on your transcripts is the WES Basic Course By Course (with GPA & course levels). WVU Tech does not accept evaluations from any organization or program that is not a member of NACES.
    - The original documents or certified (attested) copies of original documents in the original language of issue, and the official English translations of these documents
  - If applicant attended a domestic university, translation and evaluation are not required.
- Proof of English Proficiency TOEFL 61 or IELTS 6.0 required
  - Students who are citizens of Canada, United Kingdom, Australia, Trinidad and Tobago, the British Virgin Islands or any other native English-speaking countries are exempt from the TOEFL and IELTS requirements.
- ACT or SAT Scores ACT composite score of 18 or SAT composite score of 870, (combined Critical Reading and Math scores taken prior to March 216) or 960 SAT composite (combined evidence-based Reading/Writing and Math scores taken March 2016 or after) not including the writing portion
- Copy of Current Passport and/or Visa

### **Non-Degree Seeking Students**

Students with one or more bachelor's degrees from accredited colleges or universities (including the WVU System) 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 the WVU System must submit an undergraduate application. The application can be found under Non-Degree on the Apply tab on the WVU Tech Admissions webpage (https://admissions.wvutech.edu/apply/non-degree/).

WVU Tech 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 WVU Tech 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. Visiting students may provide a Statement of Good Standing in lieu of transcripts.

# **Financial Documentation**

- Financial Documentation is not required for admission purposes. However, before documentation can be issued to the student that is needed for VISA application, financial documentation must be submitted to WVU Tech Office of Admissions.
- Applicant must prove they can provide adequate financial support to cover the estimated expense of studies at WVU Tech for one single term and for one full year of study (including tuition, fees, living expenses, books & supplies, personal expenses, etc.).
- Applicant must submit an official bank statement showing availability of the required amount. The statement can be no older than six months, must be translated in English and show all Amounts in U.S. dollars (\$).
- If applicant is being supported by a private sponsor, the sponsor must complete and sign the 'Declaration of Support by Financial Sponsor' form in addition to the official bank statement.
- If applicant is being sponsored by a government agency, the agency must provide official certification that the appropriate costs will be forwarded at the required level.

# **Application Deadlines**

- Spring Term–December 1
- Fall Term-July 1

# GED (General Equivalency Diploma) and HiSET (High School Equivalency Test) Students

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<sup>®</sup> exam became the state approved HSE assessment for West Virginia. Examinees who successfully pass the HiSET<sup>®</sup> 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 Tech 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 Tech Office of Admissions. In addition, a high school transcript must also be mailed to the WVU Tech 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 Tech Office of Admissions. More information about the TASC exam can be found on the Test Accessing Secondary Completion webpage.

# **Home-schooled Applicants**

WVU Tech will accept admission applications from home-schooled students and those graduating from non-accredited high schools. If students are home-schooled or attended a non-accredited high school, they must submit a complete undergraduate application and SAT or ACT test scores. Home-schooled students must also submit course documentation as well as complete required courses to be eligible for admission.

Home-schooled students must submit typed documentation (a manuscript or description) of their coursework. Minimally, this must include:

- The student's name.
- A list and description of courses completed. Descriptions should include duration of study and content of the course.
- · Grades earned for the courses completed.
- The number of credits earned for each course.
- Graduation date.

The courses must be broken down by 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grade years. The transcripts must bear the signature of the person who administered the curriculum.

Home-schooled applicants and applicants who attended non-accredited high schools must furnish documentation to validate learning in the academic core areas shown below. If the student completed units at an accredited high school or college, then transcripts of the units taken must be provided to WVU Tech.

The following high school unit requirements must be met for freshman admission:

- Four units of English (including grammar, composition and literature)
- Three 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)
- Four 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)
- Three units of science (recommended units include biology, chemistry, physics, anatomy and environmental science)
- Two units of the same world language (American Sign Language is acceptable)

Upon completion of an application file with the required documentation, WVU Tech will review the entire application file of an individual who has been home-schooled or attended a non - accredited high school.

# **Advanced Admission of High School Seniors**

High school students who wish to spend their senior year at WVU Tech may apply for advanced admission as a full-time student. To be eligible for full-time advanced admission, the high school senior must:

- · Complete an application for advanced admission as a full-time student
- Submit a high school transcript and ACT or SAT test scores
- Submit a letter of permission from your parent(s) or guardian(s)

- · Submit a letter of recommendation from the guidance counselor or principal of the high school attended
- · Have completed all requirements for graduation from high school except senior English
- Have earned a minimum average of 3.5 GPA or higher and a 26 ACT composite or 1170 SAT (combined Critical Reading and Math scores taken prior to March 2016) or a 1240 SAT Composite (combined evidence-based Reading/Writing and Math scores taken March 2016 and after.)

Accepted students are admitted as full-time students with all of the rights and privileges offered other students. Cost of tuition and fees will be the same as those for all other full-time students.

## **Early Enrollment Students**

WVU Tech offers Early Enrollment courses to high school juniors and seniors. The Early Enrollment courses allow students to earn college credit while still in high school. A limited number of courses such as English, Math, and Psychology are available online each school year at a discounted tuition rate. Additionally, some high schools offer Dual Credit for the Early Enrollment courses. For the latest information on courses, schedules and participating high schools, please visit the WVU Tech Early Enrollment (https://www.wvutech.edu/techee/) website.

#### Veterans

WVU Tech is approved by the WV Higher Education Policy Commission's State Approving Agency for enrollment of veterans and dependents of deceased or 100% disabled veterans eligible for education benefits under current regulations. Those serving in the Army or Air National Guard or those on Active Duty or serving in a Reserve Unit may also qualify for educational assistance. The Office of the Registrar serves as the official institutional contact point for military and veterans' programs and services.

New students who have not used their VA educational benefits must apply to the U.S. Department of Veterans Affairs and/or their National Guard or Reserve Unit to establish their eligibility for educational benefits. Those receiving funding through the U.S Department of Veterans Affairs must submit a Certificate of Eligibility and those funded under WV National Guard programs must submit a Notice of Basic Eligibility to the Registrar's office certifying official in order to be certified for educational benefits. Those receiving funding through the U.S. Department of Veterans Affairs must submit a Certificate of Eligibility, DD214, WVU Tech Veterans & Military Service Educational Benefits Data & Agreement form, and the Veterans Enrollment Certification form in order to be certified for educational benefits. Transfer students who have used educational benefits at another school must contact the Veterans Affairs Office and submit a Change of Program or Place of Training Form to receive benefits. All transfer credits must be reported to the Registrar's Office and official transcripts must be submitted to the Office of Admissions. The student must also officially apply for WVU Tech admission and select a VA approved academic program before being certified to receive educational benefits. These guidelines also apply to students who are only enrolled in Extended Education courses. Continuing students need only verify their continued enrollment with the Registrar's Office to continue their educational benefits. For additional information and forms please see the Registrar Office (https://techregistrar.wvutech.edu/home/) website.

It is the student's responsibility to ensure that all tuition and fees are paid, unless they are enrolled under the Post 9/11 GI Bill (Chapter 33). Educational benefits checks should start arriving within 6 to 8 weeks after certification.

Any changes in approved course schedules including adding, dropping, and withdrawing from a course or courses MUST receive prior approval from the Registrar's Office. Failure to obtain prior approval may jeopardize continued funding and may result in a significant overpayment of educational benefits that must be repaid to the VA. Students withdrawing from the institution must also contact the Registrar's Office to avoid any overpayment. Any overpayment of education benefits will be calculated within the pay period in which the change occurred. Changes of academic program major MUST receive prior approval from the Registrar's certifying official and appropriate Guard or Reserve Unit.

Students receiving educational benefits are expected to make satisfactory progress in attaining their educational goals and to attend their classes on a regular basis. The Registrar's Office will closely monitor academic progress and class attendance. Any student not following these requirements may lose their benefits.

All forms necessary for educational benefits are available in the Registrar's Office (https://techregistrar.wvutech.edu/): Phone 304.929.1450 (Beckley) – E-mail: Tech-Registrar-Records@mail.wvu.edu. (Tech-Veterans-Affairs@mail.wvu.edu)

#### In this section:

- Regents Bachelor of Arts (RBA) (p. 18)
- Transient Students (p. 19)
- Special Students (p. 19)
- Readmission of Students in Good Standing (p. 19)
- Readmission of Suspended Students (p. 19)

# **Regents Bachelor of Arts (RBA)**

RBA Students need to complete the general WVU Tech admissions application. For details and additional information, please see WVU Tech Regents Bachelor of Arts (https://techregistrar.wvutech.edu/home/) website.

WVU Tech's Regents Bachelor of Arts (RBA) degree program is designed for adults who want to complete their college studies and obtain a Regents Bachelor of Arts degree. The program is affordable, flexible, and offers an opportunity to gain credits for work and life experience. Students tailor their academic course of study to meet individual needs.

# **Transient Students**

A student wishing to take WVU Tech courses for transfer to another college may do so but, when registering, must present an official transient student permit from the college accepting the credits. This permit should include the number of semester hours permissible for transfer. The total cost of tuition and fees for the transient student is the same as that paid by regular WVU Tech students. Students from the WVU Morgantown campus or Potomac State College - WVU Keyser must complete a Dual Campus form if they will also be taking classes at their home institution, or a Change of Campus form if all courses during the term will be taken at WVU Tech. Forms can be found at the WVU Tech Registrar's (https://techregistrar.wvutech.edu/ forms/) website.

WVU Tech students who wish to take courses at another institution for credit toward a WVU Tech program must meet with their advisor, complete a Transient Student Form, and follow the Rules Governing Transient Work outlined in the Coursework Done Out of Residence Policy in the Degree Regulations section of this catalog (p. 32).

# **Special Students**

An individual who wishes to take courses, but not for a degree or certificate, is classified as a special student and may register for part-time studies, taking fewer than 12 hours of course credit in any semester. A special student who attempts 12 or more credit hours must apply for admission as a degree candidate by filing full credentials with the Office of Admissions. An overall grade point average of 2.00 or higher is required for admission. The tuition and fees for the special student is the same as those paid by regular college students.

# **Readmission of Students in Good Standing**

Students who left WVU Tech in good standing and who return to college after an absence of one or more terms, excluding summer, must apply for readmission.

# **Readmission of Suspended Students**

See the Probation, Suspension and Dismissal (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/academicstandards/ #probationandsuspensiontext) tab for more information.

### In this section:

- Pre-Collegiate Examinations Advanced Placement Program (AP)/College Level Examination Program (CLEP)/International Baccalaureate (IB) (p. 19)
- Academic Forgiveness (p. 20)
- Developmental Courses (p. 21)

# 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 (https://admissions.wvu.edu/how-to-apply/firsttime-freshmen/frequently-asked-questions/ap-clep-and-ib-equivalency/) 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.

#### **Academic Forgiveness**

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.

- 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.

# **Developmental Courses**

Developmental courses do not count toward Tech's degree requirements or GPA calculations.

# Advising, Enrollment & Grades

### In this section:

- Academic Advising (p. 21)
- Changing Majors (p. 21)
- Change of Schedule and Course Withdrawals (p. 21)
- Degree Works (p. 21)

# **Academic Advising**

New students will be advised initially in the Student Success Center. As the student transitions into their chosen academic program, an advisor from the major's department will be assigned. Advisors assist students in understanding major and university requirements; major matriculation processes; course registration planning and processes; prerequisites; the General Education Foundation (GEF); probation and suspension; and academic options. WVU Tech students are required to meet with their academic advisors prior to registering for classes each term.

It is the student's responsibility to understand their degree requirements. Students are expected to become familiar with the Undergraduate Catalog and Degree Works, as they relate to their academic goals and standing. Students should be able to articulate the requirements of their major and of WVU Tech, the matriculation process for their major, plan for their scheduling and registration, use the WVU Tech website, and make full use of academic advising.

# **Changing Majors**

A student indicates a major at the time of application for admission and remains in that major until graduation or until receiving approval to change to another major. Such approval is granted when the student completes an Academic Status Update form; available in the Registrar's Office (https:// techregistrar.wvutech.edu/). Changes in major must be processed by the end of the first week of each term in order to be in effect for the current term.

Some majors-pre-professional, pre-engineering, general engineering-are not associated with degrees. It will be necessary for any student admitted under one of these majors to change to a degree program once they have earned 30 credit hours of college-level credit.

# **Change of Schedule and Course Withdrawals**

No additions to a student's schedule may be made after the late enrollment period without the approval of an academic dean.

For specific information regarding Course Withdrawals and University Withdrawals, please review the Withdraw Policy (p. 22) under the Enrollment tab of this section.

# **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.

#### In this section:

- Attendance Policy (p. 22)
- Emergency Leave Policy (p. 23)
- Military Leave Policy (p. 24)
- Auditors (p. 24)
- Registration (p. 24)
- Course Withdrawal and University Withdrawal Policy (p. 25)

#### **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. 23).

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, 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. 23).

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<sup>th</sup> 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<sup>th</sup> 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<sup>th</sup> 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 13<sup>th</sup> week of instruction. Students who withdraw before the end of the 13<sup>th</sup> 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 13<sup>th</sup> 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 13<sup>th</sup> week of instruction.
  - a. Students who withdraw before the end of the 13<sup>th</sup> 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 13<sup>th</sup> 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 13<sup>th</sup> 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.

West Virginia University offers priority registration to veterans as part of the Forever GI Bill - Harry W. Colmery Veterans Educational Assistance Act. Registration dates for other students are posted on the Office of the University Registrar's (https://registrar.wvu.edu/calendars/pre-registration-prioritydates/) website.

# **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 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. 26)
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- Repeat Policy (p. 29)
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# **Grading System**

Grade	Description
А	Excellent (Given only to students of superior ability and attainment)
В	Good (Given only to students who are well above average but not in the highest group)
С	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.
Р	Pass (See Pass/Fail grading below)
Х	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

Н	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.

# **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.

# **Evaluation of Student Progress**

WVU Tech discourages evaluation by final examination only. Student progress should be measured and evaluated by a variety of methods that are consistent with the objectives of the course. The student is responsible for all materials presented or assigned in scheduled instructional sections. Students who do not complete all assigned work may earn an incomplete "I" or a failing grade "F". Please review the Incomplete Grades (p. 27) section for more information in regard to earning a grade of "I".

# **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:

- 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, and disappear from the institution's record system after the semester is completed. 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), NR (not reported), or W (withdrawal). 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. 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. Transcript requests are processed immediately on the Morgantown Campus. All financial obligations to West Virginia University must be cleared before transcripts can be released.

# Academic Calendar

https://techregistrar.wvutech.edu/academic-calendar (https://techregistrar.wvutech.edu/academic-calendar/)

# 2023-2024 Academic Calendar

Please visit the WVU Institute of Technology's Registrar's website (https://techregistrar.wvutech.edu/) for more information regarding the WVU Institute of Technology's Academic Calendar (https://techregistrar.wvutech.edu/academic-calendar/).

# **Degree Regulations**

#### In this section:

- General Requirements for Graduation (p. 30)
- First Year Seminar (FYS) Waiver and Exemption Policy (p. 31)
- General Education Foundation (p. 31)
- Credit Residence Requirements (p. 32)
- Coursework Done Out of Residence (p. 32)
- Credit Validation (p. 33)

# **General Requirements for Graduation**

A student becomes eligible to graduate when the student completes the requirements of the University and major degree program according to the catalog in effect at the time the student first entered WVU Tech. With the consent of the student's advisor and department chair, a student may choose to meet the conditions published in a later catalog. However, degree programs reserve the right to change requirements for graduation. If such changes

are made, they may, at the discretion of the program, be applied to students already enrolled, provided the new requirements do not impose extension of time for completion of a degree.

As a general rule, a student has seven years to complete degree requirements in a baccalaureate program. The student may become subject to additional requirements if this period is exceeded. If the student interrupts their program for a period greater than one academic year, then the student will be subject to the requirements of the catalog that is in effect when the student returns. The student may petition the Classification and Grades Committee to continue under their original catalog in that event. The student has the option to follow a program as outlined in any catalog issued after their initial enrollment or readmission, but the student must satisfy all requirements of the program as outlined in the selected catalog. Combining and/or selecting program requirements from several catalogs is not permitted.

Degree requirements vary from program to program. The minimum total of semester hours for a B.A. or a B.S. degree is 120. The student is responsible for completing all course requirements including any required core requirements listed in the pattern sheet and should schedule a graduation check with the Registrar during **both** of the last **two** semesters preceding graduation. If a substitution or waiver is approved by the advisor and dean, a signed waiver form must be on file in the Registrar's Office. Candidates for graduation taking courses under the transient student status must see that a transcript is received in the Office of the Registrar no later than ten (10) calendar days after the Commencement date.

Graduation requirements for baccalaureate degrees from WVU Tech include the following:

- 1. Thirty of the last 36 hours taken in residence at WVU Tech. (exception will be made for students admitted to medical, dental, and law schools prior to meeting degree requirements provided they have completed a minimum of 92 undergraduate hours at Tech.
- 2. A minimum of 40 semester hours in upper-division courses.
- 3. Minimum 2.0 average in all courses attempted.
- 4. Minimum 2.0 average in all courses attempted at WVU Tech
- 5. Minimum 2.0 average in all courses attempted at WVU Tech, in major and minor, as indicated below:

a.) Engineering professional courses-all biology (for Chemical Engineering), chemistry, engineering, math, and physics

b.) Engineering Technology/Industrial Technology professional courses-all engineering technology, industrial technology, restricted technical electives, and required math and science

c.) Business and Accounting professional courses-all business, accounting, finance and economics. All Business Management and Accounting majors must sit for the Business Program Assessment Examination

d.) Biology professional courses-all science, math (including statistics), nursing, and psychology

e.) All other Baccalaureate Majors and Minors-all courses in major area and all courses within any elected minor area

Students admitted to professional schools may apply for graduation after successful completion of their first year providing that all other degree requirements have been met except for their major. A minimum of 120 semester hours, including professional school, is required.

# **First Year Seminar**

First-Year Seminar is required of all first-time, full-time freshman students and full-time transfer students enrolling with fewer than 24 credit hours. This course is designed to assist new students in transitioning smoothly to the Tech community. Students who do not pass this course must continue to reenroll until they pass the course.

#### FIRST YEAR SEMINAR (FYS) WAIVER AND 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 Tech 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.

# **General Education Foundation**

Every undergraduate degree program at WVU Tech requires that students satisfactorily complete the General Education Foundations. For General Education Foundations, please see the list of approved <u>GEF courses (http://registrar.wvu.edu/gef/)</u>.

# **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 <u>WVU Undergraduate Admissions website (https://admissions.wvu.edu/)</u>.
- 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.) or Associate of Science (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 <u>Credit Residency Requirement (http://catalog.wvu.edu/undergraduate/degree\_regulations/</u> <u>#Residency\_Requirements</u>) 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:

- Double Majors (p. 33)
- Dual Degrees (p. 34)
- Second Degrees (p. 34)

### **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 college/schools will be awarded dual degrees (http://catalog.wvu.edu/undergraduate/degree\_regulations/#Dual\_Degrees). 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 (http://catalog.wvu.edu/undergraduate/degree\_regulations/#Double\_Majors) 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.

### In this section:

- Application for Graduation (p. 34)
- Honorary Diplomas Awarded Posthumously (p. 34)
- Graduation with Honors (p. 34)

# **Application for Graduation**

A formal application for graduation must be filed in the Registrar's Office (https://techregistrar.wvutech.edu/) by the date listed in the academic calendar. A degree will not be awarded until an application is filed. The application should specify all degrees, minors, and areas of emphasis that the applicant expects to be awarded.

Beginning in Spring 2023, students who wish to participate in the spring commencement ceremonies may only carry over 8 or fewer credit hours to be completed in summer of fall term of the same year. These exceptions will require advance confirmation and approval from the office of the Registrar and the office of the student's academic dean(s), respectively. For Spring 2022, exceptions will be considered by academic deans on a case-by-case basis.

# 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.

# **Graduation with Honors**

WVU Tech 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 WVUIT baccalaureate-level college work attempted through the final semester. This calculation includes baccalaureate-level college work transferred to WVUIT 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 WVUIT 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 WVUIT 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. 35)
- Designation of Directory Information (p. 35)
- Designation of Limited Use Directory Information (p. 35)
- Withholding Directory Information (p. 35)
- Parent/Guest Access to Online Student Records (p. 36)

#### Notice to Students Regarding FERPA

Students at West Virginia University (WVU) have rights according to 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 the 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. 36)
- Aid Offer Notification (p. 36)
- Employment Opportunities (p. 36)

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 taken in preparation, see our Preparing for the FAFSA (https://financialaid.wvu.edu/applying-for-aid/preparing-for-fafsa/). See our Complete the FAFSA (https://financialaid.wvu.edu/applying-for-aid/preparing-for-fafsa/). See our Complete the FAFSA (https://financialaid.wvu.edu/applying-for-aid/preparing-for-fafsa/). See our Complete the FAFSA (https://financialaid.wvu.edu/applying-for-aid/preparing-for-fafsa/) webpage for information on how to submit 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 also where financial aid offers 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 employment opportunities.

#### In this section:

- Satisfactory Academic Progress (p. 36)
- Consequences of Withdrawal (p. 37)

### 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/) webpage 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. 37)
- Requirements (p. 37)
- Process to Declare a Minor (p. 37)

#### **General Statement**

Minors are offered in various disciplines at West Virginia University Institute of Technology. This section contains general information concerning course requirements, the process to declare a minor, and a list of disciplines in which minors are offered by each college. 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 academic minors are set by the department 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.

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

### **Process to Declare a Minor**

To assure that completion of the minor is appropriately recognized and posted to the transcript, students' should:

1. Formally declare the intent to complete a minor by submitting an Academic Status Update for General Student form, located under record forms on the Registrar's website under the forms section (https://techregistrar.wvutech.edu/forms/), with the appropriate minor code entered.

- 2. Consult with the academic advisor to incorporate course requirements for the minor into schedule planning.
- 3. When applying to graduate and receiving a diploma, indicate the minor for which certification is requested.

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.

### Minors offered, by college:

- College of Business, Humanities and Social Sciences (p. 37)
- Leonard C. Nelson College of Engineering and Sciences (p. 38)

### **College of Business, Humanities and Social Sciences**

- · Accounting (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/accounting/)
- Adventure Recreation Management (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/adventurerecreationmanagement/)
- Business Administration (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/businessadministration/)
- Criminal Justice (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/criminaljustice/)
- · Economics (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/economics/)

- English (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/english/)
- Entrepreneurship (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/entrepreneurship/)
- · Finance (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/finance/)
- · Forensic Investigation (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/forensic\_investigation/)
- Fraud Examination (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/fraudexamination/)
- Healthcare Administration (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/hlth\_services\_admin/)
- · History and Government (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/historyandgovernment/)
- Human Resource Management (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/hradministration/)
- Marketing (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/marketing/)
- · Political Science (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/politicalscience/)
- Psychology (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/psychology/)
- · Sociology (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/sociology/)
- Sport Management (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/sportmanagement/)

#### Leonard C. Nelson College of Engineering and Sciences

- · Biology (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/biology/)
- · Chemistry (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/chemistry/)
- Computer Science (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/computerscience/)
- Cybersecurity (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/cybersecurity/)
- Mathematics (http://catalog.wvu.edu/westvirginiauniversityinstituteoftechnology/minors/mathematics/)

# **Programs, Courses & Credits**

#### In this section:

- Academic Definitions (p. 38)
- Rules for Attaining Multiple Credentials (p. 39)
- Modality Definitions (p. 40)

#### **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. 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

A track serves the purpose of allowing students to select among different pathways to complete their major. Tracks are not included on the transcript or on the students' diplomas.

### 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.

### 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.

#### 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. 39) 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:

• Cooperative Education (p. 41)

#### **Cooperative Education**

#### **GENERAL DESCRIPTION**

The Cooperative Education Program (Co-Op) alternates terms of on-campus study with terms of full-time employment. As an elective program, Co-Op presents students an opportunity to receive both practical and theoretical training in their chosen field of study over a five-year period. There are several advantages for students who elect to participate in this unique program. The Co-Op experience helps students decide early in their college career whether they wish to pursue their chosen academic major and helps students academically by adding new dimensions of understanding to their academic studies. The Co-Op Program also helps students establish contacts in their field, gain 12 to 20 months of practical work experience, and earn the funds to defray college education expenses.

#### **CO-OP ELIGIBILITY REQUIREMENTS**

- Be in the process of completing the first year of a declared BA/BS academic curriculum as outlined in the college catalog
- Earn and maintain at least a 2.2 grade point average, although specific employers may require a higher grade point average
- · Be enrolled as a full-time student
- · Must be available for 3 work terms

A. FRESHMEN Students may apply to the program during their second semester of study. Upon successful completion of their freshmen year, students are eligible to accept a Co-Op assignment.

B. UPPERCLASSMEN (30 credit hours) Students who have completed more than 30 credit hours may apply to the program if grade point average, student status, and availability requirements are met.

C. TRANSFER STUDENTS may apply to the program during their first semester on campus. Upon successful completion of the first on-campus semester, transfer students are eligible to accept a Co-Op assignment.

#### **CO-OP AVAILABILITY**

Co-Op work assignments are available to students enrolled in all BA/BS academic programs, depending upon the needs of potential employers.

#### **CO-OP EMPLOYMENT**

Cooperative Education participants, while on work assignments, are considered to be enrolled as full-time students at WVU Tech. Therefore, student status and financial aid, while not disbursed during Co-Op terms, are maintained. Participants will enroll in a Co-Op course for each work term and this enrollment will be documented on the student's academic transcript.

Housing arrangements, while the responsibility of the student, are often coordinated by the employer. Each employer establishes his or her own policy on wage and benefit packages. Participants will receive term performance evaluations. There is no obligation on the part of the student or employer to continue employment upon graduation.

#### **INTERNSHIP PROGRAM**

The Internship Program was created to better serve both employers and students when career related employment opportunities develop that do not meet the three-term cooperative education work requirement. To be eligible, students must meet the same academic requirements as stated for the Cooperative Education program.

#### **DEPARTMENTAL PRACTICUMS/INTERNSHIPS**

A number of programs require supervised Practicum/Internships. The Practicum/ Internship is designed to combine theory and practice in a field integrated with the academic program. Examples include the Department of Social Sciences in the College of Business, Humanities and Social Sciences which require the Practicum Internship and Practicum Seminar for B.S. degree programs in Criminal Justice, Forensic Investigation, Health Services Administration, and Public Service Administration. The Practicum/ Internship and Practicum Seminar are arranged with cooperating sponsors during the student's senior year for up to 12 credit hours.

#### In this section:

- Abbreviations Used in Course Listings (p. 42)
- Schedule Type Definitions (p. 42)
- Courses (p. 43)
- Course Number Guide (p. 43)
- Undergraduate Common Course Numbers & Descriptions (p. 43)
- Independent and Directed Study Classes (p. 44)
- Finals and Last Week of Classes (p. 44)
- Summer Term (p. 46)

### 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.

#### Courses

Most courses taught at WVU Tech extend over one full term, although there are some courses that are exceptions to this norm (e.g., four-week or eightweek courses). Courses are considered successfully completed and credit for successful completion is awarded only when the student attends a class over its entire scheduled time frame and submits the necessary work to meet all requirements. Any exceptions to this practice must be approved by the Classification and Grades Committee.

#### **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 100** Freshmen/Underclassmen: Intended primarily for freshmen, although upper-division students may take them 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 within a particular major or degree program.

### **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.

### Independent and Directed Study Classes

#### 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. 44)
- Final Examination Policy (p. 44)
- Multiple Examinations on the Same Day (p. 45)
- Evening Classes (p. 45)
- Two-Semester Courses (p. 45)
- Examinations (p. 45)
- Common Examinations (p. 45)
- Last Week of Classes and Preparation Days (p. 46)

#### 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. Back To Top (p. 44)

#### **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. Back To Top (p. 44)

#### **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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#### Summer Term

WVU Tech has one summer term, which begins mid-May and ends in early August. Requirements for admission and work performance for the summer term are the same as for fall and spring terms. Courses are offered in a variety of time frames, e.g., one week, three weeks, six weeks, eight weeks, and 12 weeks. Summer offerings vary from year to year. For complete information concerning course offerings during the summer term, please visit courses.wvu.edu. Most summer courses are offered through an on-line format.

#### In this section:

- Classification of Students (p. 46)
- Course Overload (p. 46)
- Credit Hours (p. 46)
- Academic Credit for Military Training (p. 47)
- Credit by Examination (p. 47)

#### **Classification of Students**

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**

The maximum credit-hour load for fall and spring terms is 20 credit hours, and the maximum allowable for summer is 14. Exceptions may be permitted after consultation with the student's advisor. Registration for loads in excess of these maxima must be accompanied by a properly executed waiver form signed by the student's advisor, department chair, and dean of the college.

### **Credit Hours**

Academic advancement is measured by credit hours. Earning one credit hour generally means attending a 50-minute lecture class (one clock hour) each week of the full term. Laboratory credit of one credit hour generally means laboratory work of two to three clock hours per week. Course descriptions in the catalog show the number of credit hours for the course and the number of hours of lecture and/or laboratory per week. Credit hours for web-based courses are determined by comparison of the amount of material presented to that covered in an equivalent face-to-face course. Students are expected to devote additional hours to study outside of the classroom or laboratory for academic success.

- 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 coursework
- 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

#### Academic Credit for Military Training

Academic credit may be granted to veterans or National Guard or Reserve members for successful completion of formal service-school training programs on the basis of evaluations made by the Commission on Accreditation of Service Experiences and published in the American Council on Education's (ACE) "Guide to the Evaluation of Educational Experiences in the Armed Services." Students who apply for such credit are required to submit official records such as the DD-214, transcript of in-service training, certificates or diplomas, or in-service training certified on DD Form 295 (Application for Evaluation of Educational Experiences during Military Service). Students may also request a record of their educational experiences (course work and occupational) associated with the Army, Marine Corps, Navy, and Coast Guard by submitting a request through the Joint Services Transcript Portal. Active duty National Guard and Reserve in listed Air Force personnel may request an official transcript of their education experiences through the Community College of the Air Force (CCAF).

#### **Credit by Examination**

A current student with sufficient proficiency in material covered by a specific course may apply for credit for this course by examination. A student who desires to obtain credit by examination must petition the chair of the program that provides the course to be allowed permission to attempt an examination for credit. The chair of the concerned department shall determine the general proficiency of the student by preliminary examination. Assuming strong performance by the student, the chair may recommend to the committee on Classification and Grades that the student be given the opportunity to attempt examination for credit. If approved, the student will then sit for a comprehensive departmental examination that is administered by an examining board of one or more faculty, who are appointed by the department in which credit is being sought. Credit will be granted if a minimum grade of "C" is attained. The test and results shall be presented to the Classification and Grades Committee for final review (a fee of \$20 per credit hour will be assessed). A student who fails a departmental examination may not apply to retake it. Nor may a student request an examination on the basis of an audit course or one in which a grade less than "C" was earned.

# **Tuition, Fees & Residency**

#### In this section:

- Cost of an Academic Year's Work (p. 47)
- Identification Card (p. 47)

#### **Cost of an Academic Year's Work**

The Office of Enrollment Services provides an estimate of the total cost of attendance (http://admissions.wvutech.edu/cost-and-aid/tuition-fees-andother-costs/) for an academic year at WVU Institute of Technology. This estimate includes University tuition and fees and estimated campus room and board.

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

Tuition and fee structures vary by residency classification and academic program at WVU locations. Students are charged for University tuition, college/ school tuition, and University fees. In some cases, students are 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.

#### **Identification Card**

Student Identification Cards are required of all students and are used for library privileges, admission to athletic events and facilities, social activities, student health services, and other college functions.

Student ID (https://studentaccounts.wvutech.edu/student-id/) Cards may be obtained free of charge. WVU reserves the right to refuse issuance of an identification card and 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 BOG (https://policies.wvu.edu/finalized-bog-rules/) Academics Rule 2.4, Residency Status for Admission, Tuition, and Fee Purposes. The West Virginia University Institute of Technology's Admission Office assigns a residency classification 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.

The Residency Reclassification Appeal form can be found on the Forms Page (https://techregistrar.wvutech.edu/forms/) on the Registrar's website. It is important that petitioners include all requested documentation with the appeal form.

### **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).

### Veterans

#### In this section:

- Center for Veteran, Military and Family Programs (p. 48)
- Credit Hours for Full Time Status (p. 49)
- Registration for Veterans (p. 49)
- Student Account Policies (p. 49)

### 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 safe and 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 start your VA benefits:

- U.S. Department of Veteran Affairs (https://www.va.gov/)
- WV Educational Encouragement Program (https://apps.wv.gov/WVEEP/)

### FEDERAL TUITION ASSISTANCE

#### VETERANS

All students receiving VA benefits for the first time will need to apply by going to U.S. Department of Veteran Affairs (https://www.va.gov/). 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. Visit the Center for Veteran, Military and Family Programs (https://wvuveterans.wvu.edu/home/) to view additional documentation needed for benefit certification.

Undergraduate students who wish to receive the full stipend of VA Educational benefits in the fall and spring semesters, must maintain a minimum of 12degree 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/). Students must request to be certified for terms other than fall/spring by contacting the Center for Veteran, Military and Family Programs (https://wvuveterans.wvu.edu/).

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

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.

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 online. 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).

### **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 Web site 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 Twitter: @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).

# College of Business, Humanities and Social

### **General Information**

**Sciences** 

The College of Business, Humanities and Social Sciences is one of two academic colleges at West Virginia University Institute of Technology. It includes many of the liberal and humanistic programs and courses commonly found in American colleges. These programs and courses make important contributions to the broad purposes of the institution, which endeavors to provide students with a knowledge of society, human experiences past and present, and the world in which we live; to foster an understanding and appreciation of the human, cultural, economic, political, environmental, ecological, and technological factors that have shaped human history and current concerns; and to develop the interests and creative capacities of students to their fullest extent.

The college offers courses necessary for the General Education Foundation (GEF). All four-year programs require between thirty-one and thirty-seven semester hours in GEF courses designed to meet the broad functions of the university and to assure students the breadth of knowledge deemed essential to an educated person. They include courses from the humanities, sciences, natural sciences, and mathematics.

The College of Business, Humanities and Social Sciences also has an important part in fulfilling the career-oriented functions of the institution, as well as preparing students for graduate/professional study. It provides a variety of programs, training persons to serve the business, industrial, and governmental needs of the state and nation and for service to the community through a wide range of online courses designed to meet the changing needs and interests of the region and the state.

### **Degree Options**

The College of Business, Humanities and Social Sciences offers the following degrees:

- Bachelor of Art (B.A.) (p. 51)
- Bachelor of Science (B.S.) (p. 51)
- Regents Bachelor of Arts (R.B.A.)

#### **Bachelor of Art Degree Programs**

- History and Government
- Interdisciplinary Studies
- Psychology

### **Bachelor of Science Degree Programs**

- Accounting
- Athletic Coaching Education
- Aviation Management
- Business Management
- Criminal Justice
- Forensic Investigation
- Health Services Administration
- Interdisciplinary Studies
- Public Service Administration
- Sport Management

#### Minors

- Accounting
- Business Administration
- Criminal Justice
- Economics
- Finance
- Fraud Examination
- · History and Government
- Human Resources Administration

- Marketing
- Political Science
- Psychology
- Risk and Insurance
- Sociology
- Sport Management

#### Certificates

• Fraud Examination

#### **Department of Accounting and Business Management**

- Accounting (p. 53)
- Business Administration (p. 53)
- Entrepreneurship (p. 53)
- Finance (p. 54)
- Fraud Examination (p. 54)
- Human Resource Management (p. 54)
- Marketing (p. 54)

#### Department of History, English, and Creative Arts

- English (p. 55)
- History and Government (p. 55)

#### **Department of Psychology**

• Psychology (p. 55)

### **Department of Social Sciences and Public Administration**

- Criminal Justice (p. 55)
- Economics (p. 56)
- Forensic Investigation (p. 56)
- Healthcare Administration (p. 56)
- Political Science (p. 57)
- Sociology (p. 57)

#### **Department of Sport and Recreation Management**

- Sport Management (p. 57)
- Adventure Recreation Management (p. 52)

#### ADVENTURE RECREATION MANAGEMENT

#### Minor Code - UT25

Code	Title	Hours
Required Courses		
ADRC 101	Essential Skills in Adventure Recreation	3
ADRC 303	Management of Adventure Resources	3
ADRC 305	Adaptive & Inclusive Recreation	3
ADRC 401	Risk Management and Legal Issues	3
RPTR 251	Leadership in Experiential Education	3
Select one of the following:		1
ADRC 111	Introduction to Whitewater Rafting	
ADRC 112	Whitewater Rafting Techniques	
ADRC 121	Introduction to Rock Climbing	
ADRC 122	Rock Climbing Techniques	

16

ADRC 131

**Total Hours** 

### **Department of Accounting and Business Management** ACCOUNTING Minor Code - UT01

Code	Title	Hours
Required Courses		
ACCT 201	Principles of Accounting 1	3
ACCT 202	Principles of Accounting 2	3
ACCT 311	Intermediate Accounting	3
Select two of the following courses:		6
ACCT 312	Intermediate Accounting	
ACCT 323	Accounting Systems	
ACCT 348	Financial Statement Analysis	
ACCT 432	Advanced Cost Management	
ACCT 441	Individual Income Tax Accounting	
Total Hours		15

Total Hours

#### **BUSINESS ADMINISTRATION**

#### Minor Code - UT03

Code	Title	Hours
Required Courses		
ACCT 201	Principles of Accounting 1	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Principles of Management	3
Select one of the following	courses:	3
ECON 401	Managerial Economics	
FIN 325	Financial Management 1	
Total Hours		15

### **ENTREPRENEURSHIP** Minor Code - UT27

Code	Title	Hours
Required Courses		6
MANG 310	Management of Small Business	
ENTR 400	Advanced Concepts in Entrepreneurship	
Select three of the following:		9
ENTR 101	New Venture Creation	
ENTR 405	Entrepreneurial Creativity & Innovation	
ENTR 420	Entrepreneurial Finance	
ENTR 421	Entrepreneurial Accounting	
ENTR 450	Entrepreneurial Marketing	
Total Hours		15

**Total Hours** 

It is recommended that interested students begin the minor the Spring of their sophomore or junior year.

### **FINANCE** Minor Code - UT06

Code	Title	Hours
Required Courses		
ECON 331	Money and Banking	3
FIN 310	Investments	3
FIN 321	Personal Finance	3
FIN 325	Financial Management 1	3
FIN 326	Financial Management 2	3
Total Hours		15

### **FRAUD EXAMINATION** Minor Code - UT07

Code	Title	Hours
Required Courses		
ACCT 201	Principles of Accounting 1	3
ACCT 348	Financial Statement Analysis	3
ACCT 420	Fraud Examination	3
ACCT 421	Fraud Management: Legal/Ethical Issues	3
ACCT 423	Information Security and Controls	3
Total Hours		15

### HUMAN RESOURCE MANAGEMENT

#### Minor Code - UT31

Code	Title	Hours
Required Courses		
MANG 330	Human Resource Management Fundamentals	3
MANG 350	Leadership In Business	3
MANG 422	Organizational Behavior	3
Select two of the following:		6
HRMG 440	Training and Development	
HRMG 450	Staffing and Selection	
HRMG 460	Compensation and Benefits	
Total Hours		15

Total Hours

# MARKETING

### Minor Code - UT13

Code	Title	Hours
Required Courses		
BCOR 350	Principles of Marketing (minimum grade of C- required)	3
MKTG 315	Buyer Behavior	3
MKTG 325	Marketing Research	3
MKTG 380	Integrated Promotions	3
Select one of the following	g courses:	3
MKTG 410	Retail Management	
MKTG 420	Sales Management	
MKTG 485	Global Marketing	

**Total Hours** 

### Department of History, English, and Creative Arts **ENGLISH**

### Minor Code - UT29

The minor in English consists of any fifteen hours of English (any ENGL courses) beyond ENGL 100, ENGL 101, ENGL 102, and ENGL 103 in which the student earns a C or better. Students need a minimum of nine hours at the upper-division (300-level or above).

#### HISTORY AND GOVERNMENT

#### Minor Code - UT09

Code	Title	Hours
POLS 102	Introduction to American Government	3
HIST 100- or 200- level courses		3
HIST 300- level courses		9
Total Hours		15

Other POLS courses with departmental approval.

# **Department of Psychology PSYCHOLOGY**

### **Minor Code - UT17**

Code	Title	Hours
A minimum grade of C- is required	for all courses in the minor.	
Required Courses		
PSYC 101	Introduction to Psychology	3
PSYC 304	Critical Thinking in Psychology	3
Select 9 additional PSYC credit hours	including 6 at the 300-400 level	9

**Total Hours** 

### **Department of Social Sciences and Public Administration CRIMINAL JUSTICE**

### Minor Code - UT21

Code	Title	Hours
A 2.0 GPA is required for a	all courses counted toward the minor.	
Required Courses		
CJ 101	Introduction to Criminal Justice	3
CJ 233	Juvenile Justice	3
Select three of the following	g courses:	9
ACCT 421	Fraud Management: Legal/Ethical Issues	
CJ 310	Law Enforcement Administration	
CJ 320	Courts and Judicial Systems	
CJ 410	Criminal Investigations	
CRIM 302	Deviant Behavior	
HUMS 320	Public Administration	
POLS 313	American Constitutional Law	
POLS 400	Terrorism and National Security	
SOC 311	Social Research Methods	
Total Hours		15

15

#### **ECONOMICS**

### Minor Code - UT05

Code	Title	Hours
Must have 15 credit hours and 9	hours must be 300 or 400 level courses	
Required Courses		
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
ECON 301	Intermediate Micro-Economic Theory	3
Economics Electives: Any ECO	V course at the 300 or 400 level not previously required (other ECON courses may be accepted with	6
advisor approval).		
Total Hours		15

#### FORENSIC INVESTIGATION

#### Minor Code - UT26

Code	Title	Hours
Must maintain an over	all 2.0 GPA in minor coursework.	
Required Coursework		
FRNX 101	Introduction to Forensic Investigation	3
Electives (At least thre	ee (3) courses must be 300 level and above)	12
FRNX 210	Fingerprint Evidence Analysis	
FRNX 224	Automated Fingerprint Identification Systems	
FRNX 301	Investigative Photography	
FRNX 310	Firearms and Tool Marks	
FRNX 311	Trace and Blood Spatter	
FRNX 312	Digital Evidence Protocols	
FRNX 314	Questioned Documents	
FRNX 315	Interviewing Theory	
FRNX 316	Death Investigation	
FRNX 318	Crime Scenes	
FRNX 324	Forensic Anthropology and Osteology	
FRNX 326	Investigative Intelligence	
FRNX 327	Sexual Assault Investigations	
FRNX 422	Cold Case Investigations	
Total Hours		15

#### **HEALTHCARE ADMINISTRATION**

### Minor Code - UT32

Code	Title	Hours
HUMS 300	Introduction to Health Care Organizations	3
HUMS 330	Health Insurance	3
HUMS 410	Fundamentals of Health Care Administration	3
HUMS 470	Health Services Planning	3
Select one of the following:		3
HUMS 340	Health Policy	
HUMS 400	Health Services Law and Legislation	
HUMS 420	Principle of Microhealthcare Finance	
HUMS 440	Long Term Care Administration	

### **POLITICAL SCIENCE**

### **Minor Code - UT16**

Code	Title	Hours
Must have 15 credit hours a	nd 9 hours must be 300 or 400 level courses.	
Required Courses		
POLS 102	Introduction to American Government	3
POLS 260	Introduction to International Relations	3
POLS 319	Comparative Government	3
Select two of the following:		6
POLS 313	American Constitutional Law	
POLS 400	Terrorism and National Security	
HUMS 320	Public Administration	
Advisor Approved POLS ar	nd HUMS Courses	
Total Hours		15

**Total Hours** 

# SOCIOLOGY

### Minor Code - UT19

Code	Title		Hours
Must have 15 hours of	sociology courses and	9 hours must be in 300 or 400 level sociology courses.	
An overall 2.0 GPA is r	equired for all courses	counted toward the minor.	
Required Courses			
SOC 101	Introduction	n to Sociology	3
Sociology, Anthropolo	gy, or Criminology (SO	C, ANTH, CRIM) Electives	12
(must include at least 9 d	credit hours of upper divis	sion courses)	
WGST 225	Women in A	Appalachia (may be included as part of the Sociology minor)	
Total Hours			15

#### Total Hours

### **Department of Sport and Recreation Management**

# SPORT MANAGEMENT

### Minor Code - UT20

Code	Title	Hours
A minimum grade of C- is	s required for all courses in this minor.	
Required Courses		
BCOR 350	Principles of Marketing	3
BCOR 370	Principles of Management	3
SM 425	Sport Facility Management	3
SM 485	Management of Sport Organizations	3
SM 486	Sport Marketing & Sales	3
Select one of the following:		3
SM 370	Sport Finance and Economics	
SM 380	History and Philosophy of Sport	
Total Hours		18

**Total Hours** 

# **Undergraduate Certificate Program in Fraud Examination CERTIFICATE CODE - CM01**

The undergraduate Certificate Program in Fraud Examination is offered online and designed to prepare entry-level public accountants, governmental accountants, law enforcement officers, other business and finance professionals for positions in fraud analysis, fraud investigation, and compliance in business, government and nonprofit organizations. The program provides skills necessary to prevent, detect, investigate, and deter perpetration of fraud and help enhance their opportunity for advancement in several career fields.

Code	Title	Hours
A minimum overall GP	A of 2.0 is required for this certificate.	
Required Courses		
ACCT 348	Financial Statement Analysis	3
ACCT 420	Fraud Examination *	3
ACCT 421	Fraud Management: Legal/Ethical Issues	3
ACCT 422	Advanced Fraud Investigation & Analysis	3
ACCT 423	Information Security and Controls	3
ACCT 449	Case Studies in Fraud Examination and Management	3
Total Hours		18

\*

Must have completed the pre-requisite course ACCT 201 in order to enroll in ACCT 420.

First Semester	Hours
Fall	
ACCT 420	3
ACCT 423	3
	6
Second Semester	Hours
Spring	
ACCT 348	3
ACCT 421	3
ACCT 422	3
	9
Third Semester	Hours
Summer or Fall	
ACCT 449	3
	3

Total credit hours: 18

# Accounting, B.S.

### Degree Offered

• Bachelor of Science (B.S) in Accounting

### Nature of the Program

The accountant is concerned with all phases of business or government operation and, through the application of accurate cost analysis and accounting techniques, provides management with the facts and figures necessary to the management decision-making process. The accountant's decisions will determine the ultimate accuracy and validity of future management decisions.

The accounting curriculum at WVU Tech prepares the student for a broad range of positions in business and government. The program provides the student with strong accounting, business, and technical skills to be competitive in the modern technology-oriented job market. Graduates may seek various accounting positions, graduate studies, and such professional certifications as Certified Management Accountant (CMA), Certified Internal Auditor (CIA), Certified Fraud Examiners (CFE), and IRS Enrolled Agent (EA). The graduates are also qualified to sit for the Certified Public Accountant (CPA) Exam. However, to get CPA certified, they need to take extra 30 undergraduate/graduate credit hours. Contact the department chair for the details.

Our B.S. Accounting Program is a candidate for the ACBSP (Accreditation Council for Business Schools & Programs) accreditation.

# FACULTY

#### CHAIR

 Md. Nurul Amin - ABD (Univ. of Illinois at Urbana Champaign);MBA & MAcct. (Western Illinois Univ.), CPA, CMA, CFE Financial Accounting, Cost Accounting, & Fraud Examination. Research interest: Fraud Exam & Bank Asset-Liability Mgmt.

#### **ASSISTANT PROFESSORS**

- Angela Peterson Ph.D. (NCU), Med, MAcc., MBA, CMA, CFE Financial Accounting, Managerial Accounting, & Finance; Research interest: BSC, managerial acct, & accounting education
- Tahseen Hasan Ph.D. in Accounting (Rensselaer Polytechnic Institute) Financial Accounting, Managerial Accounting, Accounting Information 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 comp	pletion 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		32
Program Requirements		10
Business Core Requirements		36
Accounting Major Requirements		42
Total Hours		120

### **University Requirements**

Code	Title	Hours
General Education Foundations (G	EF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1,	2, 5, 6, 7, and 8	24
WVUE 191	First Year Seminar	1
General Electives		7
Total Hours		32

### **Program Requirements**

Code	Title	Hours
CS 101	Intro to Computer Applications (GEF 2A)	4
MATH 124	Algebra with Applications (GEF 3)	3
WRIT 305	Technical Writing	3
Total Hours		10

### **Business Core Requirements**

Code	Title	Hours
BCOR 320	Legal Environment of Business	3
BCOR 350	Principles of Marketing	3
BCOR 360	Supply Chain Management	3
BCOR 370	Principles of Management	3
BLAW 420	Law for the Certified Public Accountant	3
BUSA 101	Introduction to Business	3
ECON 201	Principles of Microeconomics (GEF 4)	3
ECON 202	Principles of Macroeconomics (GEF 8)	3
ECON 331	Money and Banking	3
FIN 325	Financial Management 1	3
FIN 326	Financial Management 2	3
MANG 386	Business Statistics	3
Total Hours		36

Total Hours

### **Accounting Major Requirements**

Code	Title	Hours		
An overall GPA of 2.0 is required in	An overall GPA of 2.0 is required in all ACCT courses.			
ACCT 201	Principles of Accounting 1 (minimum grade of C-)	3		
ACCT 202	Principles of Accounting 2 (minimum grade of C-)	3		
ACCT 311	Intermediate Accounting (minimum grade of C-)	3		
ACCT 312	Intermediate Accounting (minimum grade of C-)	3		
ACCT 323	Accounting Systems	3		
ACCT 348	Financial Statement Analysis	3		
ACCT 415	Advanced Accounting	3		
ACCT 432	Advanced Cost Management	3		
ACCT 441	Individual Income Tax Accounting	3		
ACCT 442	Entity Income Tax Accounting	3		
ACCT 450	Accounting Technology	3		
ACCT 451	Auditing Theory	3		
Minor* in Fraud Examination or Restricted Electives (Select two of the following): **		6		
ACCT 420	Fraud Examination			
ACCT 421	Fraud Management: Legal/Ethical Issues			
ACCT 461	Accounting for Nonbusiness Entities			
ACCT 491	Professional Field Experience			
15 contact hours community servi	15 contact hours community service			
ake ETS Business Test which is offered once a year in April.				

**Total Hours** 

Note: Students are not able to choose to minor in Business Administration. Students choosing to minor in either Economics or Finance will have to choose an additional ECON or FIN course respectively at the 300 level or above.

\*\*

Students who select to Minor in Fraud Examination will be required to complete ACCT 420 and ACCT 421 in addition to the other required minor courses.

### **Suggested Plan of Study**

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	
MATH 124 (GEF 3)		3 ACCT 202	

42

3 3

ACCT 201		3 CS 101 (GEF 2A)	4
BUSA 101		3 GEF 5	3
WVUE 191		1 GEF 8	3
GEF 2		3	
		16	16
Second Year			
Fall	Hours	Spring	Hours
ACCT 311		3 ACCT 312	3
BCOR 320		3 BLAW 420	3
ECON 201 (GEF 4)		3 ECON 202 (GEF 8)	3
MANG 386		3 GEF 6	3
GEF 8		3 GEF 7	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
ACCT 415		3 ACCT 323	3
ACCT 432		3 ACCT 348	3
BCOR 370		3 BCOR 350	3
FIN 325		3 FIN 326	3
Restricted Elective or Approved Minor		3 Restricted Elective or Approved Minor	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
ACCT 441		3 ACCT 442	3
ACCT 451		3 ACCT 450	3
WRIT 305		3 BCOR 360	3
Elective		3 ECON 331	3
Elective		1 Elective	3
		13	15

Total credit hours: 120

### Major Learning Outcomes ACCOUNTING

On completion of the program, students will be able to:

- Explain and apply the Generally Accepted Accounting Principles
- Demonstrate proficiency in manual and computerized accounting systems.
- Prepare, interpret, and analyze financial statements.
- Incorporate critical thinking and problem-solving skills.
- Demonstrate written communication skills.
- Discuss and apply the code of professional ethics for accountants.
- Integrate Federal income tax rules into accounting practices.

# **Adventure Recreation Management, B.S.**

### **Degree Offered**

• Bachelor of Science

### Nature of the Program

The Bachelor of Science degree in Adventure Recreation Management will prepare students for employment and/or future study in the management of public and private enterprises that deliver adventure recreation activities and related services. Operations management of paddle sports, rock climbing, mountain biking and aerial venues are emphasized in the coursework. Examples of career opportunities include county or city adventure programmer,

challenge course manager, scouting council program manager, therapeutic adventure counselor, rafting river manager, ski school director, climbing guide service manager, outdoor retail store manager and other positions. Each student will be required to achieve an instructor or guide certification in at least one field skill area as an important foundation for understanding program design and delivery. To reinforce coursework, students will complete a professional field experience to gain first-hand experience in the application of management practice in the field of adventure recreation.

This program will leverage partnerships with private tourism businesses, land management agencies, recreational service organizations and the Summit Bechtel Family National Scout Reserve in the New River Gorge and Central Appalachian Region to offer hands on learning opportunities for both technical skill development and management practice. This region is known nationally and internationally for its world class venues and adventure tourism offerings including the New and Gauley whitewater rivers, extensive rock climbing sites, miles of recreational trails and the 12,000 acre Boy Scouts of America high-adventure base.

#### **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	5	
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 Reasoni	ng	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		48
Adventure Recreation Management Major Requirements		72
Total Hours		120

### **University Requirements**

Code	Title	Hours
General Education Foundations (GE	F) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 2	2, 3, 4, 6, 7, and 8	31
WVUE 191	First Year Seminar	1
General Electives		16
Total Hours		48

#### **Adventure Recreation Management Major Requirements**

Code	Title	Hours
An overall GPA of 2.0 is required in all major coursework.		
ADRC 102	Adventure in Society	3
Theoretical Foundations Coursework		
ADRC 103	Introduction to Adventure Recreation	3

5

ADRC 301	Adventure Recreation Program Management	3
ADRC 303	Management of Adventure Resources	3
ADRC 305	Adaptive & Inclusive Recreation	3
ADRC 401	Risk Management and Legal Issues	3
ADRC 403	Senior Project - Capstone	3
ADRC 405	Ethical Issues in Recreation	3
ADRC 491	Professional Field Experience	6
ADRC 494	Seminar	3
RPTR 242	Environmental and Cultural Interpretation	3
RPTR 251	Leadership in Experiential Education	3
Field Skills Coursework		
ADRC 101	Essential Skills in Adventure Recreation	3
ADRC 304	Adventure Guiding and Instruction	1
RPTR 148	Wilderness First Responder	3
Students are required to complete or	a primary skill area track to the Instructor Dovelopment/Pessue level and at least one additional secondary	

Students are required to complete one primary skill area track to the Instructor Development/Rescue level and at least one additional secondary skill course to the Techniques level.

#### Primary Track

•		
Select one of the following:		
Whitewater Rafting Primary Trac	:k	
ADRC 111	Introduction to Whitewater Rafting	
ADRC 112	Whitewater Rafting Techniques	
ADRC 212	Swiftwater Rescue	
ADRC 311	Whitewater Raft Trip Leadership	
Rock Climbing Primary Track		
ADRC 121	Introduction to Rock Climbing	
ADRC 122	Rock Climbing Techniques	
ADRC 221	Lead Climbing	
ADRC 222	Climbing Rescue Techniques	
ADRC 321	Rock Climbing Instructor Development	
Mountain Biking Primary Track *		
ADRC 131	Introduction to Mountain Biking	
Aerials Primary Track		
RPTR 325	Challenge Course Facilitation	
RPTR 326S	Canopy Tour Facilitation	
Secondary Track		3
Select one of the following:		
Whitewater Rafting Secondary T	irack	
ADRC 111	Introduction to Whitewater Rafting	
ADRC 112	Whitewater Rafting Techniques	
ADRC 311	Whitewater Raft Trip Leadership	
Rock Climbing Secondary Track		
ADRC 121	Introduction to Rock Climbing	
ADRC 122	Rock Climbing Techniques	
ADRC 221	Lead Climbing	
Mountain Biking Secondary Trac	ck <sup>*</sup>	
ADRC 131	Introduction to Mountain Biking	
Aerials Secondary Track		
RPTR 325	Challenge Course Facilitation	
or RPTR 326S	Canopy Tour Facilitation	
Restricted Electives or Minor		18

Select coursework from ACCT, BUSA, BCOR, CJ, ECON, FIN, HUMS, MANG, MKTG, PSYC, SM, or SOC. Nine (9) credits must be at the 300 level or above.

Students may select a minor in a supporting field in consultation with their advisor.

#### Co-Curricular Requirements

1 Instructor or Guide Certification

Total Hours

\*

Additional coursework will be chosen in consultation with advisor.

#### \*\*

To improve employment potential of each student they will be required to complete two co-curricular requirements outside of the required coursework in the program. Students will be required to document 60 days of personal experience participating in adventure field activities. In addition, students will be required to provide documentation of certification in an approved instructor or guide certification. Acceptable certifications include: American Mountain Guide Association Single Pitch Instructor, American Canoe Association Level 2 Kayak Instructor, West Virginia State Whitewater Guide License, International Mountain Bike Association Level 2 Mountain Bike Guide, Association of Challenge Course Technology Ropes Course Facilitator and other certifications completed with prior approval of program chair.

### **Suggested Plan of Study**

First Year			
Fall	Hours	Spring	Hours
ADRC 102 (GEF 5)		3 ADRC 103	3
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
WVUE 191		1 ADRC Intro Skill Course	1
GEF 3		3 ADRC Development Skill Course	2
GEF 6 or 7		3 GEF 6 or 7	3
General Elective		3 Restricted Elective	3
		16	15
Second Year			
Fall	Hours	Spring	Hours
ADRC 101		3 RPTR 148	3
ADRC Intro Skill Course		1 RPTR 242	3
ADRC Development Skill Course		2 RPTR 251	3
ADRC Rescue Course		1 ADRC 494	1
GEF 2		4 GEF 4	3
Restricted Elective		3 GEF 8	3
		14	16
Third Year			
Fall	Hours	Spring	Hours
ADRC 301		3 ADRC 303	3
ADRC 302		3 ADRC 401	3
ADRC 304		1 GEF 8	3
ADRC Intro Skill Course		1 Restricted Elective	3
ADRC Instructor/Guide Development Course		1 General Elective	3
GEF 8		3	
Restricted Elective		3	
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
ADRC 402		3 ADRC 403	3
ADRC 491		6 ADRC 494	1
Restricted Electives		3 Restricted Electives	3

72

General Electives	4 General Electives	6
	16	13

Total credit hours: 120

### Major Learning Outcomes ADVENTURE RECREATION MANAGEMENT

Upon completion of the program, the student will be able to:

- Demonstrate a broad-based understanding of the dynamics of the adventure recreation industry, including familiarity with a variety of program delivery models, adventure skill areas, programmatic risk management systems and fiscal operations.
- Apply theoretical knowledge, personal experience and management principles to the design of an adventure program, business or product.
- · Apply critical thinking and higher level analytical skills to problems and issues in the management of adventure recreations activities and facilities.
- · Communicate effectively in oral and written form and have the specialized vocabulary utilized in the adventure recreation industry.

# Aviation Management, B.S.A.M.

#### **Degree Offered**

• Bachelor of Science in Aviation Management

#### Nature of the Program

The Bachelor of Science in Aviation Management (BSAM) program will prepare graduates for employment in the aviation industry with emphasis on positions at regional airlines, including line pilots, instructor pilots, check airmen, and managerial roles. The degree allows students to obtain rigorous flight training in conjunction with the personal and intellectual growth afforded by a college program. These outcomes are achieved through successful completion of a solid foundation in business and management classes, in-depth aviation coursework, and the university's comprehensive general education foundation (GEF).

Airline hiring standards and Federal Aviation Administration (FAA) regulations require professional pilots to have significant flight experience prior to employment. The BSAM program allows students to receive flight training early in the program and subsequently build additional flight experience as instructor pilots while completing the remainder of the flight degree online. It is possible for BSAM students to complete 1500 flight hours by graduation.

Flight training for the BSAM program is conducted by off-campus training providers, including JAX Aero flight operations at the Jacksonville Executive Airport (KCRG) in Jacksonville, FL.

The program also awards credit for Federal Aviation Administration pilot certificates and ratings.

For information, contact:

Dawn Surbaugh, Program Coordinator West Virginia University Institute of Technology Interdisciplinary Science Building, Room 112 Beckley, WV 25801 (304) 929-1685

Dawn.Surbaugh@mail.wvu.edu

#### ADMINISTRATION PROGRAM COORDINATOR

• Dawn Surbaugh

# FACULTY

#### ADJUNCT PROFESSORS

John Sabel - Juris Doctor, Duquesne University School of Law; Bachelor of Science - Aeronautical Science, Embry Riddle University; American Airlines Airbus Captain

AVIA 484 - Aviation Safety, AVIA 489 - Aviation Law

 John Billet - Master of Science in Engineering Management, Marshal University Science and Operations Officer, National Weather Service (Ret.), AVIA 380 - Aviation Weather

- Henry (Hank) Luke Master of Business Administration, Embry Riddle University Chief, Helicopter Tactics, HQ Air Force Global Strike Command (Ret.), AVIA 385 - Air Traffic Control and Airspace
- David Yost Master of Aeronautical Science, Embry Riddle University AVIA 480 - Human Factors in Flight, AVIA 483 - Air Transportation
- Sharon L. Frisinger Doctorate of Executive Leadership, University of Charleston; Master of Aeronautical Science, Embry Riddle University AVIA 486 Aviation Management and Leadership

#### Admissions

In addition to the normal WVU Tech admissions requirements students in the aviation management degree program (BSAM) must have a Federal Aviation Administration First or Second class medical certificate to qualify for flight training. For more information on FAA medical requirements please go to: https://www.faa.gov/licenses\_certificates/medical\_certification/.

Common disqualifying conditions as defined by the Federal Aviation Administration are:

- Angina pectoris
- Bipolar disease
- · Cardiac valve replacement
- · Coronary heart disease that has been treated or, if untreated, that has been symptomatic or clinically significant
- · Diabetes mellitus requiring hypoglycemic medications
- · Disturbance of consciousness without satisfactory explanation of cause
- Epilepsy
- · Heart replacement
- Myocardial infarction
- Permanent cardiac pacemaker
- · Personality disorder that is severe enough to have repeatedly manifested itself by overt acts
- Psychosis
- Substance abuse
- Substance dependence
- Transient loss of control of nervous system function(s) without satisfactory explanation of cause.

### **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 comp	pletion 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
Program Requirements		15
Aviation Management Major Requir	ments	66
Total Hours		120

# **University Requirements**

Code	Title	Hours
General Education Foundations (GB	EF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 2	2, 3, 4, 5, 6, 7, and 8	36
General Electives		3
Total Hours		39

# **Program Requirements**

Code	Title	Hours
BCOR 350	Principles of Marketing	3
BCOR 370	Principles of Management	3
MANG 330	Human Resource Management Fundamentals	3
MANG 350	Leadership In Business	3
MANG 422	Organizational Behavior	3
Total Hours		15

Total Hours

# **Aviation Management Major Requirements**

Code	Title	Hours
A overall GPA of 2.0 is required in	the following major courses.	
AVIA 101	Private Pilot	3
AVIA 181	Professional Field Experience	3
AVIA 201	Instrument Rating	4
AVIA 231	Commercial Pilot	4
AVIA 241	Multi-Engine Rating	2
AVIA 281	Professional Field Experience 2	8
AVIA 380	Aviation Weather	3
AVIA 382	Aerodynamic and Aircraft Performance	3
AVIA 383	Aircraft Systems	3
AVIA 385	Air Traffic Control and Airspace	3
AVIA 480	Human Factors in Flight	3
AVIA 484	Aviation Safety	3
AVIA 486	Aviation Management and Leadership	3
or AVIA 351	Crew Resource Management	
AVIA 489	Aviation Law	3
Restricted AVIA Electives		12
AVIA 301	Principles of Aviation Instruction	
AVIA 302	Initial Flight Instructor	
AVIA 304	Instrument Flight Instructor	
AVIA 306	Advanced Flight Instructor	
AVIA 352	ATP/Turbine Aircraft Operations	
AVIA 381	Professional Field Experience 3	
AVIA 483	Air Transportation	
AVIA 485	Aviation Economics	
AVIA 487	Aviation Security	

AVIA 488	Aviation Stories: Aviation and the Humanities	
Restricted Electives (ACC	CT, AVIA, BCOR, ECON, MANG, MKTG at 300-400 level), AVIA 150, BUSA 101 $^{\star}$	6
Total Hours		66

#### \*

Students pursing a minor in Business Administration, Human Resource Management, or Marketing are not required to complete the Restricted Electives.

#### Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
AVIA 101		3 AVIA 201	4
AVIA 181		3 AVIA 231	4
AVIA 241		2 AVIA 281	3
AVIA 281		1 AVIA 385	3
AVIA 383		3 ENGL 102 (GEF 1)	3
ENGL 101 (GEF 1)		3	
		15	17
Second Year			
Fall	Hours	Spring	Hours
AVIA 281		4 AVIA 380	3
AVIA 382		3 AVIA 484	3
Restricted AVIA Elective		6 Restricted AVIA Elective	3
		Elective	3
		GEF 2	3
		13	15
Third Year			
Fall	Hours	Spring	Hours
AVIA 480		3 BCOR 350	3
BCOR 370		3 Restricted Elective	3
GEF 2		3 GEF 5	3
GEF 3		3 GEF 6	3
GEF 4		3 GEF 7	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
AVIA 489		3 AVIA 486	3
MANG 330		3 MANG 422	3
MANG 350		3 Restricted AVIA Elective	3
GEF 8		3 Restricted Elective	3
GEF 8		3 GEF 8	3
		15	15

Total credit hours: 120

### **Major Learning Outcomes**

#### **AVIATION MANAGEMENT**

- Graduates will obtain the FAA certifications as outlined in the program in a timely manner.
- Graduates will have a cumulative pass rate on FAA practical tests (flight tests) of 80% or above. Individual students will repeat no more than two FAA practical tests during the course of the program.
- Graduates will develop a thorough knowledge of aeronautical theories, practices, regulations, and procedures.
- Graduates will develop the ability to think critically and communicate effectively.

# **Business Management, B.S.**

### **Degree Offered**

• Bachelor of Science (B.S.) in Business Management

#### Nature of the Program

Our program provides a broad understanding of management and leadership through a variety of courses in human resource management, marketing, organizational behavior, operations management, statistics and business strategy. Students develop excellent communication skills, learn to integrate and analyze information, and develop their leadership skills. Students have the flexibility to take a variety of electives to customize their major focusing on accounting, economics, finance, human resource administration, entrepreneurship, and/or marketing. Students are prepared for seeking various management positions and graduate studies.

Our B.S. Business Management Program is a candidate for the ACBSP (Accreditation Council for Business Schools & Programs) accreditation.

#### FACULTY

#### CHAIR

 Md. Nurul Amin - ABD (Univ. of Illinois at Urbana Champaign);MBA & MAcct. (Western Illinois Univ.), CPA, CMA, CFE Financial Accounting, Cost Accounting, & Fraud Examination. Research interest: Fraud Exam & Bank Asset-Liability Mgmt.

#### ASSOCIATE PROFESSOR

 KyungMoon Kim - DBA (Louisiana Tech) Marketing, Business Strategy, Business Simulation, & Entrepreneurship

#### **TEACHING ASSISTANT PROFESSOR**

 Marjorie Smith - Ph.D. (North Central University), MBA Human Resource Management, Teams Management, Supply Chain Management, & Global Marketing

### 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 comp	pletion 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
Program Requirements	10

Business Core Requirements	33
Business Management Major Requirements	48
Total Hours	120

### **University Requirements**

Code	Title	Hours
General Education Fou	Indations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requ	uirements 1, 2, 5, 6, and 7	19
WVUE 191	First Year Seminar	1
General Electives		9
Total Hours		29

### **Program Requirements**

Code	Title	Hours
MATH 124	Algebra with Applications (GEF 3)	3
CS 101	Intro to Computer Applications (GEF 2A)	4
PSYC 101	Introduction to Psychology (GEF 4)	3
Total Hours		10

### **Business Core Requirements**

Code	Title	Hours
A minimum grade of C- is	s required in BCOR 350.	
ACCT 201	Principles of Accounting 1	3
ACCT 202	Principles of Accounting 2	3
ACCT 331	Managerial Accounting	3
BCOR 320	Legal Environment of Business	3
BCOR 350	Principles of Marketing	3
BUSA 101	Introduction to Business	3
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
ENTR 400	Advanced Concepts in Entrepreneurship	3
FIN 325	Financial Management 1	3
MKTG 315	Buyer Behavior	3
Total Hours		33

### **Business Management Major Requirements**

Code	Title	Hours
A minimum grade of C- is required in BCOR 360, BCOR 370, and MANG 386.		
BCOR 299	Business Communication	3
BCOR 360	Supply Chain Management	3
BCOR 370	Principles of Management	3
BCOR 460	Contemporary Business Strategy	3
MANG 310	Management of Small Business	3
MANG 330	Human Resource Management Fundamentals	3
MANG 360	International Business	3
MANG 375	Business Simulation	3
MANG 386	Business Statistics	3
MANG 420	Business Information Systems	3
MANG 422	Organizational Behavior	3
MANG 434	Business Research Methods	3
Approved Minor or Restricted Electives *		

48

#### 15 hours of community service

#### Take ETS Business Test which is offered once a year in April.

Total Hours

\*

Students may choose between a Minor in either Accounting, Economics, Entrepreneurship, Finance, Human Resources Administration, or Marketing. Students not electing a specific Minor will fulfill a set of Restricted Electives including coursework in ACCT, BCOR, BLAW, ECON, ENTR, FIN, MANG, MKTG at the 300 level or above.

#### Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 124 (GEF 3)		3 PSYC 101 (GEF 4)	3
BUSA 101		3 ECON 201 (GEF 8)	3
WVUE 191		1 CS 101 (GEF 8)	4
GEF 2		4 GEF 5	3
		14	16
Second Year			
Fall	Hours	Spring	Hours
ACCT 201		3 ACCT 202	3
ECON 202 (GEF 8)		3 BCOR 350	3
BCOR 299		3 MANG 330	3
BCOR 370		3 Elective	3
GEF 6		3 GEF 7	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
ACCT 331		3 BCOR 360	3
BCOR 320		3 ENTR 400	3
FIN 325		3 MANG 360	3
MANG 310		3 MKTG 315	3
MANG 386		3 Approved Minor or Restricted Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
MANG 420		3 BCOR 460	3
MANG 422		3 MANG 434	3
Approved Minor or Restricted Elective		6 MANG 375	3
Elective		3 Approved Minor or Restricted Elective	3
		Elective	3
		15	15

Total credit hours: 120

### Major Learning Outcomes BUSINESS MANAGEMENT

Upon successful completion of the program, students will be able to:

- · Relate principles of management to complex business problems and managerial decision-making
- · Assess organizational structures
- Integrate principles of leadership into team projects
- · Apply current technologies business management problems
- · Incorporate legal and ethical reasoning in problem solving and decision making

- · Employ critical and analytical thinking skills
- Demonstrate written communication skills
- · Demonstrate oral communication skills

# **Career-Technical Education, B.S.**

#### **Degree Offered**

• Bachelor of Science

#### Nature of the Program

The Department of Career-Technical Education provides opportunities for Industrial, Technical, Occupational Foods and Health Occupations teachers to meet State Department of Education certification requirements and pursue advanced professional development. These opportunities are provided through special summer sessions on campus and classes throughout West Virginia during the fall and spring semesters. Students, who meet the state requirements, take advantage of advanced professional development opportunities, and meet General Education Foundation requirements, will be awarded the Bachelor's Degree in Career-Technical Education. Enrollment is limited to those currently employed as teachers in a career-technical program area.

#### **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 comp	pletion 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
GEF Elective Requirements (2, 3, 4	, 5, 6, 7, and 8)	28
ENGL 101	Introduction to Composition and Rhetoric	6
& ENGL 102	and Composition, Rhetoric, and Research	
PSYC 241	Introduction to Human Development	3
CTED 201	Introduction to Career Technical Education	3
CTED 301	Occupational Analysis	3
CTED 302	Course Construction and Planning in Career Technical Education	3
CTED 303	Organization and Management of School Shops and Laboratories	3
CTED 304	Safety in Career Technical Education	3
CTED 305	Methods of Examination in Career Technical Education	3
CTED 306	Coordination of Cooperative Career Technical Education	3
CTED 308	Application of Basic Skills in Career Technical Education	3
Total Hours		121
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Occupational Competency	Exam	30
CTED 425	Industrial Processes	
CTED 424	Industrial Processes	
CTED 423	Industrial Processes	
CTED 422	Back to Industry Experience	
Industrial Processes Course	es (Occupational Update) *	15
or CTED 307	Computer Applications in Career Technical Education	
CTED 493	Special Topics (Advanced Computer Applications)	3
CTED 485	Teaching Methods in Career Technical Education	3
CTED 421	Teaching Special Students in Career Technical Education	3
CTED 409	Coordination of Career Technical Youth Activities	3
CTED 402	History and Philosophy of Career Technical Education	3

\*

Occupational Updating can be satisfied with a combination of CTED 422, 423 424, and/or 425.

## Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
CTED 485		3 PSYC 241	3
GEF 5		3 CTED 201	3
GEF 8		3 CTED 307 or 493 (Advanced Computer Applications)	3
GEF 8		3 GEF 4	3
		GEF 8	3
		15	18
Second Year			
Fall	Hours	Spring	Hours
CTED 304		3 CTED 301	3
CTED 308		3 CTED 303	3
GEF 2		4 CTED 409	3
GEF 6		3 GEF 3	3
GEF 7		3	
		16	12
Third Year			
Fall	Hours	Spring	Hours
CTED 302		3 CTED 305	3
CTED 306		3 CTED 402	3
CTED 423		3 CTED 421	3
CTED 423		3 CTED 423	3
		12	12
Fourth Year			
Fall	Hours	Spring	Hours
CTED 423		3 CTED 423	3
Occupational Competency Exam		15 Occupational Competency Exam	15
		18	18

Total credit hours: 121

## Major Learning Outcomes CAREER-TECHNICAL EDUCATION

Teachers completing the Career-Technical Education program will be able to:

- · Incorporate learning goals into instructional plans
- · Incorporate pending learning outcomes and learning objectives into instructional plans
- · Incorporate student characteristics into instructional plans for purposes of instructional design
- · Incorporate teacher characteristics into instructional plans
- Apply a personal framework for teaching in development of an instructional plan
- · Plan instructional strategies that are consistent with intended learning outcomes and objectives
- · Select, develop, and modify instructional materials to meet intended learning outcomes and objectives
- · Determine appropriate classroom procedures and organizational strategies to support the instructional environment
- · Incorporate information from various sources in planning for instruction
- · Select assessment or evaluation strategies to measure learning outcomes, objectives, and instructional effectiveness
- · Maintain a positive learning environment to support mastery of learning outcomes and objectives
- · Communicate with students to provide a context for learning that is consistent with instructional plans
- · Manage the instructional environment to enhance student learning and development consistent with instructional plans
- · Implement a variety of instructional strategies and materials consistent with instructional plans
- · Utilize questioning strategies consistent with instructional plans
- Provide verbal and/or nonverbal feedback to students
- · Evaluate the effectiveness of the instructional process
- · Evaluate student progress toward mastery of learning outcomes and objectives
- · Organize, interpret, and summarize evaluation data for instructional planning and delivery and management
- · Report student evaluation results to students, parents, and appropriate school administrative personnel
- · Use available evaluation results
- · Establish and implement a continuing education plan to meet personal and professional goals
- · Demonstrate management skills to carry out non-teaching responsibilities
- · Follow school policies, rules, and regulations
- · Demonstrate skills necessary to work with school committees and community groups

## Criminal Justice, B.S.

### **Degree Offered**

Bachelor of Science

### Nature of the Program

The Criminal Justice program is designed to provide a multidisciplinary understanding of crime and the criminal justice system, while increasing the student's ability to critically analyze issues associated with the field of criminal justice. The program prepares students for local, state, and federal law enforcement, corrections, courts, homeland security, investigation, and related careers. The program also offers an excellent background for those wishing to pursue graduate studies or law school. Among its notable features are courses in criminal law, law enforcement administration, criminal investigations, corrections, juvenile justice, research methodology, and a semester-long capstone practicum internship.

### FACULTY

#### CHAIR

• Andi Kent - Ph.D. - Political Science

#### ASSISTANT PROFESSORS

- Dr. George Coroian JD & PhD Criminology
- Crosby Hipes Ph.D. Social Psychology, Military Sociology

 Joshua Price - PhD Applied Microeconomics

## **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 com	pletion 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		26
Program Requirements		36
Criminal Justice Major Requirements		58
Total Hours		120

### **University Requirements**

Code	Title	Hours
General Education Foundation	ons (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requireme	ents 1, 2, 5, and 6	16
WVUE 191	First Year Seminar	1
General Electives *		9
Total Hours		26

### **Program Requirements**

Code	Title	Hours
ECON 225	Elementary Business and Economics Statistics	3
MATH 124	Algebra with Applications	3
POLS 220	State and Local Government	3
POLS 313	American Constitutional Law	3
PSYC 101	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
SOC 221	Families and Society	3
SOC 235	Race and Ethnic Relations	3
SOC 311	Social Research Methods	3
SOC 360	Women and Men in Society	3

SOC 430	World Religions	3
WRIT 305	Technical Writing	3
Total Hours		36

### **Criminal Justice Major Requirements**

Code	Title	Hours
CRIM 232	Criminology	3
CRIM 302	Deviant Behavior	3
CJ 101	Introduction to Criminal Justice	3
CJ 202	Principles of Criminal Law	3
CJ 310	Law Enforcement Administration	3
CJ 320	Courts and Judicial Systems	3
CJ 475	Seminar in Criminal Justice-Capstone	3
HUMS 100	Community Service	1
HUMS 210	Introduction to Welfare	3
HUMS 320	Public Administration	3
HUMS 489	Practicum Capstone Internship	6
<b>Restricted Electives (6 credits must</b>	st be 300-400 level)	24
ACCT 421	Fraud Management: Legal/Ethical Issues	
ANTH 105	Introduction to Anthropology	
CJ 233	Juvenile Justice	
CJ 240	Correctional Counseling	
CJ 301	White Collar and Economic Crime	
CJ 316	Community Based Corrections	
CJ 324	Drugs, Crime and Society	
CJ 410	Criminal Investigations	
CRIM 324	Gender and Crime	
CRIM 415	Mass Media, Crime and Deviance	
CRIM 493	Special Topics	
FRNX 315	Interviewing Theory	
FRNX 318	Crime Scenes	
POLS 102	Introduction to American Government	
POLS 400	Terrorism and National Security	
PSYC 281	Introduction to Abnormal Psychology	
SOC 207	Social Problems in Contemporary America	
SOC 305	Social Stratification and Power in American Society	
Total Hours		58

**Total Hours** 

\*

Students choosing to minor in Political Science or Sociology will need to take extra coursework in order to earn 9 unique credit hours toward each respective minor, exclusive from coursework toward Program Requirements or Major Requirements including Restricted Electives.

### **Suggested Plan of Study**

First Year			
Fall	Hours	Spring	Hours
WVUE 191		1 SOC 101 (GEF 8)	3
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
CJ 101		3 HUMS 210	3
MATH 124 (GEF 3)		3 CRIM 232	3
GEF 2B		4 Elective	3
GEF 5		3	
		17	15

Second Year			
Fall	Hours	Spring	Hours
PSYC 101 (GEF 4)		3 HUMS 100	1
CJ 202		3 POLS 220 (GEF 8)	3
WRIT 305		3 SOC 221	3
Restricted Elective		3 ECON 225 (GEF 8)	3
Elective		3 Restricted Elective	6
		15	16
Third Year			
Fall	Hours	Spring	Hours
CRIM 302		3 SOC 235 (GEF 7)	3
SOC 311		3 CJ 310	3
SOC 360		3 CJ 320	3
HUMS 320		3 SOC 430	3
Restricted Elective		3 Restricted Elective (300-400)	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
POLS 313		3 HUMS 489	6
CJ 475		3 Restricted Electives	6
GEF 6		3	
Restricted Elective (300-400)		3	
Elective		3	
		15	12

Total credit hours: 120

### Areas of Emphasis Offered:

- Corrections (p. 77)
- Law Enforcement (p. 77)

## **Corrections Area of Emphasis**

Code	Title	Hours
CJ 233	Juvenile Justice	3
CJ 240	Correctional Counseling	3
CJ 316	Community Based Corrections	3
SOC 207	Social Problems in Contemporary America	3
Total Hours		12

### Law Enforcement Area of Emphasis

Code	Title	Hours
CJ 233	Juvenile Justice	3
CJ 324	Drugs, Crime and Society	3
CJ 410	Criminal Investigations	3
POLS 400	Terrorism and National Security	3
Total Hours		12

Total Hours

## Major Learning Outcomes CRIMINAL JUSTICE

The Criminal Justice program has the following learning outcomes:

- The student will be able to critically analyze decision points and outcome potentials at each stage of the criminal justice process.
- The student will be able to apply scientific methods to criminal justice research issues.
- The student will be able to effectively communicate in written and verbal form.
- The student will become culturally competent and know the importance of diversity within the criminal justice system and the community.

## Forensic Investigation, B.S.

### **Degree Offered**

Bachelor of Science

### Nature of the Program

The curriculum of the program emphasizes breadth of knowledge and the development of analytical skills. Familiarity with fundamental theories and practices within the social and natural sciences, enhanced communication skills, and an understanding of the limits and uses of forensic techniques form a base from which the student develops either a plan for entry into a graduate program or a career path. The program emphasizes the historical evolution of investigative techniques and terminology and the use of scientific methods to reconstruct the recent past. The program's primary focus is on investigation, although lab techniques and analyses are incorporated into the course work. The program is appropriate for those planning a career as investigators, as well as, current practitioners. Students also have the flexibility to select specific courses to prepare them for future work in a forensic laboratory or graduate school admission. The curriculum combines class instruction, hands-on laboratory and practical field applications. Among the program's notable features are a course in research methods, a senior thesis, and a capstone practicum internship that places the student in a supervised setting for professional competence development.

While WVU Institute of Technology is a division of West Virginia University, WVU Tech offers some programs that are separate and distinct from WVU main campus in Morgantown. The WVU main campus offers a B.S. program in Forensic and Investigative Science (FIS). The WVU Tech campus offers a B.S. program in Forensic Investigation (FRNX). These are separate and distinct programs. The WVU-Morgantown FIS program's accreditation is through the American Academy of Forensic Sciences (AAFS) does not encompass the WVU Tech FRNX program. WVU Tech courses labeled FRNX will not transfer into the WVU-Morgantown FIS program.

### FACULTY

#### CHAIR

• Andi Kent - Ph.D. - Political Science

#### ASSOCIATE PROFESSOR

 Andrew Wheeler - Masters of Forensic Science Forensic Investigation

#### ASSISTANT PROFESSOR

• Mark Vecellio - Masters of Forensic Science; Masters of Public Administration- Criminal Justice

### **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		16
Program Requirements		40
Forensic Investigation Major Red	uirements	64
Total Hours		120

## **University Requirements**

Code	Title	Hours
General Education Fou	ndations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (	1-37 Credits)
Outstanding GEF Requ	irements 1, 5, 6, and 7	15
WVUE 191	First Year Seminar	1
Total Hours		16

## **Program Requirements**

Code	Title	Hours
WRIT 305	Technical Writing	3
MATH 126	College Algebra (or higher, GEF 3)	3
ECON 225	Elementary Business and Economics Statistics (GEF 8)	3
or STAT 211	Elementary Statistical Inference	
Select one of the following groups (G	3EF 2):	4
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory	
Select one of the following groups:		4
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 Laboratory	
CHEM 116 & 116L	Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory	
PHSC 101	Introductory Physical Science 1 (or higher, GEF 8)	4
or PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory	
CS 101	Intro to Computer Applications	4
POLS 102	Introduction to American Government	3
or POLS 220	State and Local Government	
POLS 313	American Constitutional Law	3
PSYC 101	Introduction to Psychology (GEF 8)	3
SOC 101	Introduction to Sociology (GEF 4)	3
Select one of the following:		3
PSYC 203	Research Methods and Analysis 1	
PSYC 204	Research Methods and Analysis 2	
SOC 311	Social Research Methods	

### **Forensic Investigation Major Requirements**

Code	Title		
An overall GPA of 2.0 across all co	purses applied to the major.		
CJ 101	Introduction to Criminal Justice (minimum grade of C)	3	
CJ 202	Principles of Criminal Law (minimum grade of C)	3	
CJ 320	Courts and Judicial Systems (minimum grade of C)	3	
FRNX 101	Introduction to Forensic Investigation (minimum grade of C)	3	
FRNX 210	Fingerprint Evidence Analysis (minimum grade of C)	4	
FRNX 301	Investigative Photography (minimum grade of C)	3	
FRNX 310	Firearms and Tool Marks (minimum grade of C)	3	
FRNX 311	Trace and Blood Spatter (minimum grade of C)	3	
FRNX 315	Interviewing Theory (minimum grade of C)	3	
FRNX 316	Death Investigation (minimum grade of C)	3	
FRNX 318	Crime Scenes (minimum grade of C)	3	
FRNX 484	Senior Seminar in Forensic Investigation (minimum grade of C)	3	
FRNX 496	Senior Thesis (minimum grade of C)	3	
HUMS 489	Practicum Capstone Internship (minimum grade of C-)	6	
Minor or Restricted Electives **		18	
ACCT 420	Fraud Examination		
ACCT 422	Advanced Fraud Investigation & Analysis		
POLS 400	Terrorism and National Security		
WVUE 270	Effective Public Speaking		
FRNX, CJ, CRIM, POLS, BIOL, C fulfilling a major requirement)	HEM, PHYS, PHSC course or MATH greater than 126 (must be approved by an advisor and must not be		
Any CHEM, BIOL, MATH 126 or h requisite requirements for each co	igher, PHYS course, PSYC 281, and PSYC 365 (must be approved by an advisor and must meet the pre- urse)		
HUMS 489	Practicum Capstone Internship (Practicum Capstone Internship (may include up to 6 additional hours with advisor approval))		
Total Hours		64	

**Total Hours** 

#### \* Elective Courses with sufficient credits to meet the 120 hour minimum may be required.

\*\*

Students must complete either a minor for 15 credit hours plus three hours of restricted electives, or 18 credit hours of restricted electives with a required six credit hours at the 300- or 400-level.

### **Suggested Plan of Study**

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 126 (or higher; GEF 3)		3 Select one of the following groups:	4
Select one of the following groups (GEF 2):		4 CHEM 112 & 112L	
CHEM 111		CHEM 116	
& 111L		& 116L	
CHEM 115 & 115L		CS 101	4
CJ 101		3 SOC 101 (GEF 4)	3
FRNX 101		3 GEF 5	3
WVUE 191		1	
		47	47

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Second Year			
Fall	Hours	Spring	Hours
WRIT 305		3 ECON 225 or STAT 211 (GEF 8)	3
PHSC 101 (GEF 8)		4 POLS 102 or 220	3
PSYC 101 (GEF 8)		3 GEF 6	3
CJ 202		3 GEF 7	3
FRNX 210		4 Restricted Elective or Minor	3
		17	15
Third Year			
Fall	Hours	Spring	Hours
FRNX 311		3 CJ 320	3
FRNX 315		3 FRNX 301	3
POLS 313		3 FRNX 310	3
Restricted Elective or Minor		3 FRNX 316	3
Restricted Elective or Minor		3 FRNX 318	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
SOC 311, PSYC 203, or PSYC 204		3 FRNX 496	3
FRNX 484		3 HUMS 489	6
Restricted Elective or Minor		3 Restricted Elective or Minor	3
Restricted Elective or Minor		3 Elective (if needed)	
		12	12

Total credit hours: 120

# Major Learning Outcomes

### FORENSIC INVESTIGATION

This program has the following specific outcomes:

- The student will be able to demonstrate knowledge of the language, history, and traditions of the forensic discipline and the investigative professions.
- The student will be able to use critical thinking and problem solving in an investigative situation.
- The student will be able to effectively communicate in interviewing, investigative, and legal settings.
- Students will have an appreciation of the ethical, legal, and regulatory issues impacting the decision making process.
- Students will be able to apply the technical skills necessary to conduct investigative work.

## Health Services Administration, B.S.

### **Degree Offered**

· Bachelor of Science

### Nature of the Program

The Department of Social Sciences and Public Administration offers an interdisciplinary major in Health Services Administration leading to the Bachelor of Science degree. The program recognizes that many agencies and organizations require personnel with a strong background in both the sciences and management for research, service, and administrative positions.

A wide variety of career opportunities exist in a wide variety of organizations because health care broadly impacts society. Potential employment settings include: hospitals, clinics or ambulatory care centers; mental health agencies; prepaid health maintenance organizations; health insurance companies; federal, state, and local governmental health agencies; and health specialty vendors.

The program promotes an interdisciplinary perspective in health services administration that encompasses sciences with a public health emphasis and an orientation in business principles. With careful planning, a student may minor in one or more of the following: history and government, economics, business administration, political science, or sociology.

Distinctive features of the program in Health Services Administration include a wide assortment of classes in business, political science, economics, and other applied areas. Program courses include Introduction to Health Care Organizations, Health Services Planning, Health Services Law and Legislation, and Introduction to Public Health. In addition, each student must complete a semester-long supervised capstone experience in which the student gains academic credit for administrative exposure in a cooperating health related organization

For students holding an associate degree or a diploma from a three-year nursing program, the program participates in articulation agreements providing credit for coursework taken at the community college level toward achievement of the B.S. degree.

### FACULTY

#### CHAIR

• Andi Kent - Ph.D. - Political Science

#### ASSOCIATE PROFESSOR

• Thomas McGraw - MHA

#### ASSISTANT PROFESSOR

Amanda E. McCarty - MS, MS-HCA, MBA

#### **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 comp	letion 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		23
Program Requirements		45
Health Services Administration Requ	ements	52
Total Hours		120

### **University Requirements**

Code	Title	Hours
General Education Fou	ndations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (	31-37 Credits)
Outstanding GEF Requ	irements 1, 2, 5, and 6	11
WVUE 191	First Year Seminar	

General Electives	4
Total Hours	23

## **Program Requirements**

Code	Title	Hours
BCOR 350	Principles of Marketing	3
BUSA 101	Introduction to Business	3
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
ECON 225	Elementary Business and Economics Statistics	3
ECON 441	Public Economics	3
MATH 124	Algebra with Applications	3
POLS 220	State and Local Government	3
POLS 480	Seminar in Non-Profit Administration	3
PSYC 101	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
SOC 207	Social Problems in Contemporary America	3
or SOC 235	Race and Ethnic Relations	
SOC 325	Illness and Health Care	3
SOC 333	Sociology of Work and Work Places	3
WRIT 305	Technical Writing	3
Total Hours		45

## Health Services Administration Major Requirements

Code	Title	Hours
HUMS 100	Community Service	1
HUMS 210	Introduction to Welfare	3
HUMS 300	Introduction to Health Care Organizations	3
HUMS 320	Public Administration	3
HUMS 330	Health Insurance	3
HUMS 400	Health Services Law and Legislation	3
HUMS 410	Fundamentals of Health Care Administration	3
HUMS 420	Principle of Microhealthcare Finance	3
HUMS 421	Principles of Macrohealth Care Finance	3
HUMS 430	Medical Ethics	3
HUMS 440	Long Term Care Administration	3
HUMS 470	Health Services Planning	3
HUMS 489	Practicum Capstone Internship	6
Minor or Restricted Electives: (AC ACCT 202	CT, ANTH, ECON, POLS, SOC, HUMS, all at the 300 or 400 level), PUBH at any level, or ACCT 201,	12
Total Hours		52

Total Hours

## Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 124 (GEF 3)		3 PSYC 101 (GEF 8)	3
SOC 101 (GEF 4)		3 HUMS 100	1
WVUE 191		1 HUMS 210	3
GEF 2		3 GEF 6	3

#### 84 College of Business, Humanities and Social Sciences

General Elective		1 General Elective	3
		14	16
Second Year			
Fall	Hours	Spring	Hours
BUSA 101		3 ECON 202	3
ECON 201		3 ECON 225 (GEF 8)	3
HUMS 300		3 POLS 220 (GEF 8)	3
SOC 207 or 235 (GEF 7)		3 GEF 2	3
WRIT 305		3 GEF 5	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
HUMS 320		3 HUMS 400	3
HUMS 330		3 HUMS 410	3
HUMS 420		3 HUMS 421	3
HUMS 430		3 HUMS 440	3
SOC 325		3 Restricted Elective or Minor	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
BCOR 350		3 HUMS 489	6
ECON 441		3 SOC 333	3
HUMS 470		3 Restricted Elective or Minor	3
POLS 480		3 Restricted Elective or Minor	3
Restricted Elective or Minor		3	
		15	15

Total credit hours: 120

## Major Learning Outcomes HEALTH SERVICES ADMINISTRATION

This program has the following specific outcomes:

- The student will demonstrate a broad based understanding of the dynamics of the health care industry, including familiarity with a variety of care delivery organizations, types of care delivery methods, and fiscal responsibilities.
- The student will be able to apply critical thinking and higher level analytical skills to problems and issues in their career fields.
- The student will be able to communicate effectively in oral and written form and use specialized vocabulary utilized in the health care industry in the appropriate context.
- The student will become culturally competent and know about the importance of diversity in the work environment

## History and Government, B.A.

### **Degree Offered**

Bachelor of Arts

### Nature of the Program

The History and Government program has three essential purposes. First, it is designed to provide the student with insights into historical time periods of the nation and the world, with special emphasis upon political, social, economic, and technological changes. Secondly, it provides a strong background for graduate study in history and related fields, careers in government, services, and some areas of business, and positions with historical societies and museums. Thirdly, for students interested in attending law school, the program meets and exceeds the criteria for pre-law curricula established by the American Association of Law Schools.

### FACULTY

#### CHAIR

• Paul H. Rakes - Ph.D. (West Virginia University)

#### **ASSISTANT PROFESSOR**

• Patrick Brown - Ph.D. (Brandeis University)

### **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 Reasonin	ng	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 co	mpletion 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
Program Requirements		15
History and Government Major Requi	ements	69
Total Hours		120

### **University Requirements**

Code	Title	Hours
General Education Foundations (GE	F) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 2	, 3, and 6	18
WVUE 191	First Year Seminar	1
General Electives		17
Total Hours		36

### **Program Requirements**

Code	Title	Hours
HUMS 480	Grant Writing and Documentation	3
SOC 101	Introduction to Sociology (GEF 4)	3
MDS 270	Effective Public Speaking (GEF 8)	3
Literature or Foreign Language Elective		3

#### **Total Hours**

### **History and Government Major Requirements**

Code	Title	Hours
HIST 106	East Asia: An Introduction (GEF 7)	3
HIST 152	Growth of the American Nation to 1865 (GEF 5)	3
HIST 153	Making of Modern America: 1865 to the Present (GEF 8)	3
HIST 179	World History to 1500	3
HIST 180	World History Since 1500	3
HIST 209	Twentieth Century Europe	3
HIST 261	Recent America: The United States since 1918	3
HIST 277	Revolutions in Science and Technology	3
HIST 484	Historical Research-Capstone	3
POLS 102	Introduction to American Government (GEF 8)	3
POLS 260	Introduction to International Relations	3
Economics Elective (must be	e 300 or 400 level)	3
English Elective (must be 30	0 or 400 level)	3
History Elective (must be 300 or 400 level)		
Political Science Elective (must be 300 or 400 level) *		
Restricted Electives from the	e College of Business, Humanities and Social Sciences (must be at the 300 or 400 level) $^{^{\star\star}}$	9
Total Hours		69

\*

Students pursing a minor in Political Science are not required to fulfill these hours and must only complete 6 or the 9 hours of Restricted Electives.

Students pursing a minor from the College of Business, or in Humanities or Social Sciences are not required to fulfill this requirement. This includes minors in Accounting, Business Administration, Entrepreneurship, Finance, Fraud Examination, Human Resources Administration, Marketing, English, Political Science, Psychology, Criminal Justice, Economics, Forensic Investigation, Health Services Administration, Sociology, and Sport Management.

### Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
History Program Entrance Exam		ENGL 102 (GEF 1)	3
ENGL 101 (GEF 1)		3 HIST 153 (GEF 8)	3
HIST 152 (GEF 5)		3 POLS 102 (GEF 8)	3
WVUE 191		1 GEF 2 or General Elective	3
General Elective		1 GEF 6	3
GEF 2		4	
GEF 3		3	
		15	15
Second Year			
Fall	Hours	Spring	Hours
HIST 106 (GEF 7)		3 HIST 180	3
HIST 179		3 HIST 277	3
General Elective		3 POLS 260	3
General Elective		3 SOC 101 (GEF 4)	3
General Elective		3 General Elective	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
HIST 209		3 HIST 261	3

MDS 270 (GEF 8)		3 English Elective (must be 300 or 400 level)	3
Literature or Foreign Language Elective		3 Political Science Elective (must be 300 or 400 level)*	3
Political Science Elective (must be 300 or 400 level)*		3 PSYC or SOCA Elective (must be 300 or 400 level)	3
Minor or Restricted Elective (must be 300 or 400 level)		3 Minor or Restricted Elective (must be 300 or 400 level)	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
Economics Elective (must be 300 or 400 level)		3 HIST 484**	3
History Electives (must be 300 or 400 level)		6 HUMS 480	3
History Elective (must be 400 level)		3 History Elective (must be 300 or 400 level)	6
General Elective or Minor		3 Minor or Restricted Elective (must be 300 or 400 level) Assessment Exam ***	3
		15	15

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Total credit hours: 120

Student's minoring in Political Science are not required to take the Political Science Elective. They will replace this requirement with courses used toward their Political Science Minor.

\*\*

Courses such as History 484 are offered once every four-semester cycle.

#### \*\*\*

The Assessment Exam must be taken in the student's last semester prior to graduation.

## Major Learning Outcomes HISTORY AND GOVERNMENT

Graduates of this program should be able to:

- Demonstrate a general knowledge of the facts, concepts, and approaches of history
- Critically analyze and assess primary sources
- · Critically analyze and assess secondary sources
- · Conduct original historical research and report results orally and in writing
- · Produce historical essays that are coherent, grammatically correct, and use proper historical documentation

## Psychology, B.A.

### **Degree Offered**

Bachelor of Arts

#### Nature of the Program

The Bachelor of Arts degree in Psychology has an emphasis in human behavior and counseling. It is broadly conceived and designed to prepare students for a variety of careers. Among the notable features of the program are a course in research methods with an emphasis in behavior analysis and adjustment in a laboratory setting, a field experience option that allows students to earn credits for placement in a public or private enterprise for professional competence development, and a capstone course that integrates methodology, research, and writing in the discipline. The combination of coursework and field experience will permit students to achieve professional certification necessary to work with special needs children.

Graduates of the program will be prepared to enter careers in applied mental health or organizational settings. Some examples of career options include education, children and youth behavioral services, adult behavioral services, counseling, corrections, health-care related occupations, and other fields. Psychology majors may also pursue advanced degrees in graduate or professional schools.

## FACULTY ASSOCIATE PROFESSOR

• Cynthia R. Hall - Ph.D. Psychology

<sup>\*</sup> 

#### ASSISTANT PROFESSOR

• Jemma E. Cook - Ph.D. Psychology

### **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 com	pletion 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
Program Requirements		20
Psychology 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 Cree	lits)
Outstanding GEF Requirements 1	, 5, and 6	12
WVUE 191	First Year Seminar	1
General Electives		17
Total Hours		30

### **Program Requirements**

Code	Title	Hours
BIOL 111	General Biology (GEF 2)	4
BIOL 112	General Biology (GEF 8)	4
MATH 126	College Algebra (or higher, GEF 3)	3
MDS 270	Effective Public Speaking (GEF 8)	3
SOC 101	Introduction to Sociology (GEF 8)	3
WRIT 305	Technical Writing	3
Total Hours		20

## **Psychology Major Requirements**

Code	Title	Hours	
A minimum grade of C- is required	in each of the following: PSYC 101, 203, 204, 241, 301, 302, and 474.		
An overall 2.0 GPA in PSYC course	S.		
PSYC 101	Introduction to Psychology (GEF 4)	3	
PSYC 201	Psychology as a Profession	1	
PSYC 203 & 203L	Research Methods and Analysis 1 and Research Methods and Analysis 1 Laboratory	3	
PSYC 204 & 204L	Research Methods and Analysis 2 and Research Methods and Analysis 2 Laboratory	3	
PSYC 234	Drugs and Behavior	3	
PSYC 241	Introduction to Human Development	3	
PSYC 281	Introduction to Abnormal Psychology (GEF 7)	3	
PSYC 301 & 301L	Biological Foundations of Behavior and Biological Foundations of Behavior Laboratory	4	
PSYC 302	Behavior Principles	4	
PSYC 350	Topics in Social Psychology	3	
PSYC 362	Psychological Assessment	3	
PSYC 363	Personality Theory	3	
PSYC 382	Exceptional Children	3	
PSYC 401	Psychology Capstone Experience	1	
PSYC 424	Learning and Behavior Theory	3	
PSYC 474	Applied Behavior Analysis	3	
Select one of the following:		3	
PSYC 491	Professional Field Experience		
PSYC 493	Special Topics		
PSYC 495	Independent Study		
Science Electives: BIOL, CHEM, CS	Science Electives: BIOL, CHEM, CS, GEOL, MATH, PHSC, PHYS, STAT courses		
Minor or Restricted Electives (six credit hours must be at 300-400 level): ANTH, ARHS, ART, BIOL, CHEM, CRIM, CS, CJ, ECON, HIST, MATH, MUSC, PHSC, PHYS, POLS, PSYC, SOC, FRNX, Foreign Language courses *			
Total Hours		70	

\*

Students must either take a minor or 12 credit hours of restricted electives with a required 6 credit hours of 300 or 400 level courses.

## Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
PSYC 101 (GEF 4)		3 MATH 126 (GEF 3)	3
WVUE 191		1 PSYC 201	1
SOC 101 (GEF 8)		3 PSYC 241	3
GEF 5		3 GEF 6	3
Open Elective		3 Open Elective	3
		16	16
Second Year			
Fall	Hours	Spring	Hours
PSYC 203		3 PSYC 204	3
& 203L		& 204L	
PSYC 363		3 PSYC 301	4
		& 301L	
PSYC 281 (GEF 7)		3 PSYC 350	3
BIOL 111 (GEF 2)		4 BIOL 112 (GEF 8)	4

PSYC 234		3 WRIT 305	3
		16	17
Third Year			
Fall	Hours	Spring	Hours
PSYC 302		4 PSYC 474	3
PSYC 362		3 PSYC 382	3
MDS 270 (GEF 8)		3 Math/Science Elective	3
Math/Science Electives		6 Restricted Elective or Minor	3
		16	12
Fourth Year			
Fall	Hours	Spring	Hours
Select one of the following:		3 PSYC 401	1
PSYC 491		Open Elective	11
PSYC 493			
PSYC 495			
PSYC 424		3	
Restricted Electives or Minor		9	
		15	12

Total credit hours: 120

## Major Learning Outcomes PSYCHOLOGY

Students completing the program will:

- · Summarize key concepts, principles, and overarching themes in psychology
- · Assess and apply psychological concepts to real-world practices
- Engage in integrative thinking and problem solving
- Interpret, design, and conduct basic psychological research
- · Interpret psychological phenomena using scientific reasoning
- Demonstrate effective writing skills
- · Exhibit effective presentation skills
- · Apply ethical standards to evaluate psychological science and practice
- · Develop and use effective team-working skills

## Public Service Administration, B.S.

### **Degree Offered**

Bachelor of Science

### Nature of the Program

The Public Service Administration (PSA) major was revised in 2014 as an interdisciplinary 120 credit hour program that enables students to complete the degree, including the internship, in a timely manner. A practicum/internship provides the students job experience and allows them to exercise skills obtained during the course of their studies. This degree prepares students for careers with all levels of government: local, county, state and federal. PSA also prepares students for a career in non - profit organizations. It is a perfect pre-law degree as it provides a number of Political Science courses. In addition, this degree is excellent preparation for graduate school in social work, public administration, political science, sociology, or business administration. Provided the correct restrictive electives are chosen, a student can obtain a minor in Political Science, Sociology or Economics without additional course work.

## FACULTY CHAIR

• Andi Kent - Ph.D. - Political Science

### ASSOCIATE PROFESSOR

• Andi Kent - PhD Political 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 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 comp	pletion 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
Program Requirements		22
Public Service Administration Major Requirements		69
Total Hours		120

### **University Requirements**

Code	Title	Hours
General Education Foundations (C	EF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credite	3)
Outstanding GEF Requirements 1	5, and 6	12
WVUE 191	First Year Seminar	1
General Electives		16
Total Hours		29

### **Program Requirements**

Code	Title	Hours
CS 101	Intro to Computer Applications	4
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
MATH 124	Algebra with Applications	3
PSYC 101	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
WRIT 305	Technical Writing	3
Total Hours		22

## Public Service Administration Major Requirements

Code	Title	Hours
BCOR 370	Principles of Management	3
ECON 225	Elementary Business and Economics Statistics	3
ECON 441	Public Economics	3
HUMS 210	Introduction to Welfare	3
HUMS 320	Public Administration	3
HUMS 480	Grant Writing and Documentation	3
HUMS 489	Practicum Capstone Internship	6
MANG 422	Organizational Behavior	3
POLS 102	Introduction to American Government	3
POLS 220	State and Local Government	3
POLS 260	Introduction to International Relations	3
POLS 313	American Constitutional Law	3
POLS 480	Seminar in Non-Profit Administration	3
SOC 207	Social Problems in Contemporary America	3
SOC 305	Social Stratification and Power in American Society	3
SOC 311	Social Research Methods	3
SOC 333	Sociology of Work and Work Places	3
Minor (choose from one of the following minors: Accounting, Criminal Justice, Economics, Political Science, Sociology) or Restricted Electives (at least 3 hours must be 300 or 400 level)		

69

Total Hours

### **Restricted Electives**

Code	Title	Hours
Any ACCT, ECON or POLS course		
ANTH 105	Introduction to Anthropology	3
BCOR 320	Legal Environment of Business	3
BCOR 330	Information Systems and Technology	3
CJ 101	Introduction to Criminal Justice	3
CJ 310	Law Enforcement Administration	3
CJ 320	Courts and Judicial Systems	3
CRIM 302	Deviant Behavior	3
HIST 153	Making of Modern America: 1865 to the Present	3
HIST 261	Recent America: The United States since 1918	3
HIST 464	American Foreign Relations 1941 to Present	3
HUMS 100	Community Service	3
MANG 330	Human Resource Management Fundamentals	3
MANG 350	Leadership In Business	3
MDS 270	Effective Public Speaking	3
MILS 301	Military Science	3
MILS 302	Military Science	3
MILS 401	Military Science	3
MILS 402	Military Science	3
PHIL 170	Introduction to Critical Reasoning	3
SOC 221	Families and Society	3
SOC 327	Appalachian Culture	3
SOC 360	Women and Men in Society	3
SOC 430	World Religions	3
SPAN 101	Elementary Spanish 1	3
SPAN 102	Elementary Spanish 2	3

SPAN 203	Intermediate Spanish 1	3
SPAN 204	Intermediate Spanish 2	3
WGST 225	Women in Appalachia	3

### **Suggested Plan of Study**

\_\_\_

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 124 (GEF 3)		3 CS 101 (GEF 2)	4
WVUE 191		1 SOC 101 (GEF 8)	3
Elective		3 Restricted Elective or Minor	3
Elective		4 Elective	3
		14	16
Second Year			
Fall	Hours	Spring	Hours
BCOR 370		3 ECON 202 (GEF 8)	3
ECON 201 (GEF 8)		3 HUMS 210	3
POLS 102		3 POLS 220	3
PSYC 101 (GEF 4)		3 POLS 260 (GEF 7)	3
Elective		3 SOC 333	3
		WRIT 305	3
		15	18
Third Year			
Fall	Hours	Spring	Hours
ECON 441		3 ECON 225	3
HUMS 320		3 SOC 207 or 235	3
HUMS 480		3 GEF 6	3
SOC 305		3 Restricted Elective or Minor	3
GEF 5		3 Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
MANG 422		3 HUMS 489	6
POLS 313		3 Restricted Elective or Minor	3
POLS 480		3 Restricted Elective (300 or 400 level) or Minor	3
Restricted Elective or Minor		3	
SOC 311		3	
		15	12

Total credit hours: 120

## Major Learning Outcomes PUBLIC SERVICE ADMINISTRATION

- The student will demonstrate leadership skills through written and oral communications, both in person and through computer technology.
- The student will be able to evaluate policy, use critical thinking skills, and be able to make some predictions concerning how these policies will impact their individual and collective situations.
- The student will know the process of managing an organization or government agency program, including understanding the fiscal responsibilities.
- The student will become culturally competent and know the importance of diversity in the work environment.

## **Regents Bachelor of Arts, R.B.A.**

### **Degree Offered**

• Regents Bachelor of Arts

### Nature of the Program

The Regents Bachelor of Arts degree is designed to meet the unique goals of non-traditional students. Whether you want to pursue a graduate or professional degree, transition into a new career, increase your marketability within an established career, or fulfill your life-long goal of completing a bachelor's degree, the RBA program can help you succeed. You can complete the program on campus or online, at your own pace. Eligible students may also acquire college credit for professional, volunteer, and military experiences. The Regents Bachelor of Arts program is designed for adults who wish to complete their college studies and offers an opportunity to gain credits for work and life experience. Students tailor their academic courses of study to meet their individual needs.

Passing grades from other regionally accredited colleges, CLEP, and DSST will be accepted.

Credit may also be awarded for certificates and licenses.

### **Areas of Emphasis**

WVU Tech encourages adult student in the Regents B.A. program to complete a focused area of education. The following areas of emphasis require the completion of 15 graded hours of upper-division classroom work with a grade of C- or better in each course.

- Aviation Studies AVIA 489 Aviation Law, 12 hours of Aviation Management (AVIA)
- Business Accounting (ACCT), Finance (FIN), Management (MANG), Marketing (MKTG), Information Systems (ISYS)
- Creative Arts English (ENGL), Music (MUSC), Theatre (THET), Languages
- Cultural Studies Sociology (SOC), History (HIST), Music (MUSC), Psychology (PSYC), English (ENGL)
- · Government Economics (ECON), History (HIST), Sociology (SOC), Political Science (POLS)
- Health Care Services HUMS 320 Public Administration and HUMS 330 Intro to Health Care Organizations, 9 hours from Human Services (HUMS), SOC 325 Illness/Health Care, and/or SOC 312 Death and Dying
- Information Studies Information Systems (ISYS), Management (MANG), English (ENGL)
- Marketing BCOR 350 Principles of Marketing, 12 hours of Marketing (MKTG)
- Organizational Management BCOR 370 Managing Individuals and Teams, MANG 422 The individual and the Organization, 9 hours from Business core (BCOR) and/or Management (MANG) courses
- Professional Pilot AVIA 301 Principles of Aviation Instruction, AVIA 302 Initial Flight instructor, AVIA 304 Instrument Flight Instructor, AVIA 306 Advanced Flight Instructor, AVIA 380 Aviation Weather, AVIA 381 Professional Field Experience (3 credit hours). Required Prerequisite Courses are AVIA 201 Instrument Rating, AVIA 231 Commercial Pilot, AVIA 241 Multi-Engine Rating, AVIA 281 Professional Field Experience or applicable FAA pilot certificates and ratings.
- Sciences Mathematics (MATH), Physics (PHYS), Biology (BIOL), Chemistry (CHEM)
- Social Sciences Economics (ECON), History (HIST), Sociology (SOC), Political Science (POLS)
- Sport Studies Athletic Coaching Education (ACE), Sport Management (SM). At least two courses each from ACE and SM.

For information, contact:

Dawn Surbaugh, Program Coordinator West Virginia University Institute of Technology Interdisciplinary Science Building, Room 112 Beckley, WV 25801 (304) 929-1685

Dawn.Surbaugh@mail.wvu.edu http://rba.wvutech.edu

### Admissions

Admission and retention requirements are the same as for other degree programs except that students are not eligible for admission until at least four years after graduation from high school.

Students may not be enrolled simultaneously in the RBA program and another college degree program and they are ineligible if they have already earned a bachelor's degree.

All passing grades from other accredited colleges, plus passing grades on CLEP, DSST and other college level tests, will be accepted.

Credit may be awarded for certificates and licenses listed in the Regents Bachelor of Arts Degree program Administrative Guidelines, available at http:// www.wvhepc.edu/wp-content/uploads/2017/11/RBA-Handbook.pdf

- General Education:
  - <u>Communication Skills (6 hours)</u> Outcome: Courses in this area must provide the student with skills and knowledge to be able to communicate effectively in a variety of formats.
  - <u>Humanities (6 hours)</u> Outcome: Courses in this area must demonstrate knowledge in the interdisciplinary study and philosophy of diverse cultures.
  - <u>Social Science (6 hours)</u> Outcome: Courses will demonstrate understanding of the development, diversity, and complexity of human behavior and institutions.
  - <u>Natural or Physical Science (3 hours)</u> 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)
  - <u>Mathematics, Statistics, or Computer Science (3 hours)</u>
- Upper Division: Minimum of 30 hours
- 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. Three of the 24 hours must be taken at WVU Institute of Technology

### **Curriculum Requirements**

Code	Title	Hours
WVU Tech GPA: Minimum 2.0 requ	uired.	
Overall GPA: Minimum 2.0 required	d.	
General Education		
Communication Skills		6
Select courses fulfilling GEF 1 or c	courses fulfilling this outcome and approved by the RBA Coordinator.	
Humanities		6
Select courses fulfilling GEF 6 or 7	7, or courses fulfilling this outcome and approved by the RBA Coordinator.	
Social Science		6
Select courses fulfilling GEF 4 or 5	5, or courses fulfilling this outcome and approved by the RBA Coordinator.	
Natural or Physical Science		3
Select courses fulfilling GEF 2, or	courses fulfilling this outcome and approved by the RBA Coordinator.	
Mathematics, Statistics, or Computer	Science	3
Select courses fulfilling GEF 3, or	courses fulfilling this outcome and approved by the RBA Coordinator.	
Upper Division Courses (Must be a	at the 300 or 400 level)	30
Electives		66
Total Hours		120

### Areas of Emphasis Offered:

- Aviation Studies (p. 96)
- Business (p. 96)
- Creative Arts (p. 96)
- Cultural Studies (p. 96)
- Government (p. 96)
- Health Care Services (p. 96)
- Information Studies (p. 96)
- Marketing (p. 97)
- Organizational Management (p. 97)
- Professional Pilot (p. 97)
- Sciences (p. 97)
- Social Sciences (p. 97)
- Sport Studies (p. 97)

### **AVIATION STUDIES AREA OF EMPHASIS**

Code	Title	Hours
A minimum grade of C is required in a	all AOE coursework.	
AVIA 489	Aviation Law	3
Jpper-Division AVIA Courses		12
Total Hours		15

#### **BUSINESS AREA OF EMPHASIS**

Code	Title	Hours
Must have a C- grade or better	in all AOE designated courses	
300 or 400 level courses in the fo	ollowing subject areas: ACCT, BCOR, ENTR, FIN, MANG, MKTG, ISYS	15
Total Hours		15

### **CREATIVE ARTS AREA OF EMPHASIS**

Code	Title	Hours
Must earn a C- grade o	r better in all designated AOE courses	
300 or 400 level courses	s in the following subject areas: ENGL, MUSC, THET, and Languages	15
Total Hours		15

### **CULTURAL STUDIES AREA OF EMPHASIS**

Code	Title	Hours
Must have a C- grade or better	in all AOE designated courses	
300 or 400 level courses in the fo	ollowing subject areas: ENGL, HIST, MUSC, PSYC, SOCA	15
Total Hours		15

### **GOVERNMENT AREA OF EMPHASIS**

Code	Title	Hours
Must earn a C- grade or b	etter in all designated AOE courses	
300 or 400 level courses in	the following subject areas: ECON, HIST, POLS, SOCA	15
Total Hours		15

### HEALTH CARE SERVICES AREA OF EMPHASIS

Code	Title	Hours
Must earn a C- grade or	better in all designated AOE courses	
HUMS 320	Public Administration	3
HUMS 330	Health Insurance	3
Select three of the following	ng:	9
300 or 400 level course	es in the following subject areas: HUMS	
SOC 312	Death and Dying	
SOC 325	Illness and Health Care	
Total Hours		15

### **INFORMATION STUDIES AREA OF EMPHASIS**

Code	Title	Hours
Must have a C- grade	or better in all AOE designated courses	
300 or 400 level course	es in the following subject areas: ENGL, ISYS, MANG	15
Total Hours		15

### **MARKETING AREA OF EMPHASIS**

Code	Title	Hours
Must earn a C- grade	or better in all designated AOE courses	
BCOR 350	Principles of Marketing	3
300 or 400 level course	es in the following subject areas: MKTG	12
Total Hours		15

### **ORGANIZATIONAL MANAGEMENT AREA OF EMPHASIS**

Code	Title	Hours
Must earn a C- grade	or better in all designated AOE courses	
BCOR 370	Principles of Management	3
MANG 422	Organizational Behavior	3
300 or 400 level courses in the following subject areas: BCOR, MANG		9
Total Hours		15

### **PROFESSIONAL PILOT AREA OF EMPHASIS**

Code	Title	Hours
Required Coursework		
AVIA 301	Principles of Aviation Instruction	3
AVIA 302	Initial Flight Instructor	3
AVIA 304	Instrument Flight Instructor	2
AVIA 306	Advanced Flight Instructor	1
AVIA 380	Aviation Weather	3
AVIA 381	Professional Field Experience 3	3
Total Hours		15

Total Hours

\*

Required prerequisite courses are AVIA 201, AVIA 231, AVIA 241, and AVIA 281. Students must complete these courses and/or have the applicable FAA pilot certificates (commercial pilot, instrument rating, and multi-engine rating)

### SCIENCES AREA OF EMPHASIS

Code	Title	Hours
Must earn a C- grade or better in al	I designated AOE courses	
300 or 400 level courses in the follow	ing subject areas: BIOL, CHEM, MATH, PHYS	15
Total Hours		15

### SOCIAL SCIENCES AREA OF EMPHASIS

Code	Title	Hours
Must earn a C- grade or better in al	I designated AOE courses	
300 or 400 level courses in the follow	ing subject areas: ANTH, CJ, CRIM, ECON, HIST, POLS, PSYC, SOC	15
Total Hours		15

### SPORT STUDIES AREA OF EMPHASIS

Code	Title	Hours
Upper-Division ACE Coursework		6
Upper-Division SM Coursework		6
Upper-Division ACE or SM Course	vork	3
Total Hours		15

## Major Learning Outcomes REGENTS BACHELOR OF ARTS

- Consistent with what society expects of all adult workers and good citizens, the Regents graduate will be able to demonstrate a general education in communications, the humanities, social sciences, natural sciences, and mathematics/computer applications.
- The Regents graduate will be able to demonstrate a focused knowledge of one or more academic areas of his or her own choosing.

## Sport Management, B.S.

### **Degree Offered**

Bachelor of Science

### Nature of the Program

WVU Tech offers a Bachelor of Science degree in Physical Education (BSPED) with major Sport Management (SM) in the College of Business, Humanities and Social Sciences (BHSS). The Sport Management major prepares graduates for careers in professional and collegiate sport organizations, fitness and recreational facilities, and sport-related businesses. Examples of career opportunities include directors of marketing and promotions, assistant general managers, athletic directors, vice presidents of operations, compliance directors, and other positions.

### FACULTY

#### CHAIR

Mark Jones

#### **TEACHING INSTRUCTOR**

Caroline McKelvie

### 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 com	pletion 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
Program Requirements		12

Sport Management Major Requirements	67
Total Hours	120

## **University Requirements**

Code	Title	Hours
General Education Fou	Indations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requ	uirements 1, 2, 3, 5, and 6	21
WVUE 191	First Year Seminar	1
General Electives		19
Total Hours		41

Total Hours

### **Program Requirements**

Code	Title	Hours
Minimum 2.5 cumulati	ve average for graduation	
COMM 102	Fundamentals of Interpersonal Communication	3
ECON 201	Principles of Microeconomics (GEF 8)	3
MDIA 101	Media and Society (GEF 8)	3
SM 167	Introduction to Sport Management (minimum grade of C-)	3
Total Hours		12

Total Hours

### **Sport Management Major Requirements**

Code	Title	Hours
Minimum 2.0 in all major courses		
Minimum 2.5 cumulative average for	or graduation	
SEP 271	Sport in American Society (GEF 8)	3
SEP 272	Psychological Perspectives of Sport (GEF 4)	3
SM 340	Sport Governance	3
SM 345	Technology in Sport Management	2
SM 350	Leadership Theory and Application in Sport	3
SM 355	Orientation in Sport Management	1
SM 370	Sport Finance and Economics	3
SM 375	Sport in the Global Market (GEF 7)	3
SM 380	History and Philosophy of Sport	3
SM 387	Contemporary Issues in Sport Management	3
SM 425	Sport Facility Management	3
SM 426	Liability in Sport	3
SM 485	Management of Sport Organizations	3
SM 486	Sport Marketing & Sales	3
SM 491	Professional Field Experience	3
ACCT 201	Principles of Accounting 1	3
CS 101	Intro to Computer Applications	4
BCOR 350	Principles of Marketing	3
BCOR 370	Principles of Management	3
HUMS 320	Public Administration	3
MDS 270	Effective Public Speaking	3
Restricted Electives: Select two co SM, ACE) *	urses (6 Credits) of the Following Subjects (ACCT, BCOR, BLAW, ECON, ENTR, FIN, MANG, MKTG	, 6

**Total Hours** 

\*

Restricted Electives are not required for students pursing a minor in Accounting, Business Administration, or Economics.

### Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
SM 167		3 COMM 102	3
WVUE 191		1 CS 101	4
GEF 2		4 GEF 5	3
GEF 3 (MATH 121 or higher)		3 GEF 6	3
		14	16
Second Year			
Fall	Hours	Spring	Hours
ACCT 201		3 MDIA 101	3
ECON 201		3 SEP 272 (GEF 4)	3
SEP 271 (GEF 8)		3 GEF 2 or Elective	3
SM 375 (GEF 7)		3 Elective	3
MDS 270		3 Restricted Elective or Approved Minor	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
BCOR 350		3 SM 345	2
BCOR 370		3 SM 350	3
HUMS 320		3 SM 355	1
SM 370		3 SM 340	3
SM 380		3 Elective	6
		Restricted Elective or Approved Minor	3
		15	18
Fourth Year			
Fall	Hours	Spring	Hours
SM 425		3 SM 387	3
SM 426		3 SM 486	3
SM 485		3 SM 491	3
Elective		3 Elective	3
Elective		3	
		15	12

Total credit hours: 120

## Major Learning Outcomes SPORT MANAGEMENT

Graduates of Sport Management will:

- · Recognize the importance and significance of the role of sport management
- · Develop analytical and communication skills appropriate to the professional and corporate environment
- · Be prepared to assume management positions in a variety of athletic and sport-related businesses and industries
- Be familiar with compliance programs at the collegiate and national athletic sport levels
- · Recognize the importance of continuing emotional, intellectual, and physical development throughout their lives

# Leonard C. Nelson College of Engineering and **Sciences**

### **General Information**

The mission of the Leonard C. Nelson College of Engineering and Sciences of the West Virginia University Institute of Technology closely reflects the mission of the Institution. The programs in the College of Engineering and Sciences address the professional engineering and science needs of industry, government, and business and prepare their graduate to be citizens of the state, national, and global communities. The programs provide for a student-centered education that balances career preparation with an understanding and appreciation of the traditional humanities and sciences. The programs strive to prepare tomorrow's engineers and scientists with a broad education necessary to effectively communicate technical concepts to a wide audience and to place technical solutions in a societal context. In addition, the College of Engineering and Sciences gives qualified students the opportunity to gain valuable experience practicing the fundamentals of engineering and science through the Co-Op program, as well as through the placement of students in intern positions.

### DEPARTMENT OF BIOLOGY

# Biology

## Minor Code - UT02

Code	Title	Hours
Required Courses		
BIOL 111	General Biology	4
BIOL 112	General Biology	4
BIOL Electives (must i	nclude at least 9 credit hours of upper division courses)	16
Total Hours		24

Total Hours

### DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

### **Computer Science**

### Minor Code - UT24

Code	Title	Hours
Student must earn a g	rade of C or better for each of the courses counted to	wards the minor.
Required Courses		
CS 121	Computer Science 1	4
CS 122	Computer Science 2	0 or 4
Complete the requirement	ents for one of the following tracks:	8-9
Programming Track		
CS 201	Data Structures	
CS 222	Intro Software Engineering	
CS 310	Principles of Programming Languages	
Systems Track		
CS 231	Introduction to Computer Organization	
CS 265	C Programming	
CS 355	Computer Systems	
Select two of the followi	ng courses:	6
CS 321	Introduction to Networking	
CS 324	Database Management	
CS 410	Compiler Construction	
CS 450	Operating Systems Structure	
CS 465	Cybersecurity Principles and Practice	
CS 472	Artificial Intelligence	
Tatal I la una		40.00

## **DEPARTMENT OF MATHEMATICS**

#### **Mathematics**

### Minor Code - UT14

Code	Title	Hours
<b>Required Courses</b>		
MATH 155	Calculus 1	4
MATH 156	Calculus 2	4
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
MATH 441	Applied Linear Algebra	3
Mathematics Electives	s: MATH 300+ or 400+ Level Courses (excluding MATH 315)	6
Total Hours		25

**Total Hours** 

#### DEPARTMENT OF PHYSICAL SCIENCES

### Chemistry

### Minor Code - UT04

Code	Title	Hours
An minimum overall GPA of 2.0 is	required for this minor.	
Required Courses		
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
CHEM 233 & 233L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
CHEM 234 & 234L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
Select two of the following courses:		8
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory	
CHEM 310 & 310L	Instrumental Analysis and Instrumental Analysis Laboratory	
CHEM 346 & 346L	Physical Chemistry 1 and Physical Chemistry 1 Laboratory	
CHEM 348 & 348L	Physical Chemistry 2 and Physical Chemistry 2 Laboratory	
Any CHEM course(s) at the 300-le	evel or higher	

24

**Total Hours** 

### Accreditation

Computer Science within the Leonard C. Nelson College of Engineering and Sciences has specialized accreditation through the Computing Accreditation Committee (CAC) of ABET.

The following programs within the Leonard C. Nelson College of Engineering and Sciences have specialized accreditation through the Engineering Accreditation Commission (EAC) of ABET.

- Chemical Engineering
- Civil Engineering
- · Computer Engineering
- Electrical Engineering
- Mechanical Engineering

## Aerospace Engineering, B.S.A.E

### **Degree Offered**

• Bachelor of Science in Aerospace Engineering

### Nature of the Program

West Virginia University Institute of Technology (WVU Tech) and West Virginia University (WVU) have joined their resources to offer a 2+2 aerospace program, (two years at Beckley and two years at Morgantown), leading to a Bachelor of Science in Aerospace Engineering degree. Under this arrangement, a student interested in a BSAE degree from WVU, can start as a freshman at WVU Tech in Mechanical Engineering, complete the appropriate courses in four semesters with a GPA of at least 2.0 at Beckley and transfer to the Mechanical and Aerospace Engineering (MAE) Department at Morgantown. Upon completion of the appropriate curriculum requirements during the following four semesters at Morgantown, he/she will receive a BSAE degree from WVU.

Air travel has fascinated humans for a long time. Recent technical advances in aerospace travel, space exploration, and flight of manned and unmanned vehicles have been phenomenal and continue to gain in significance. Aerospace engineering deals with the science and technology of airborne and space vehicles such as airplanes, rockets, missiles and spacecraft. Aerospace technology has also been successfully adopted to improve the performance of many earth-bound vehicles such as hydrofoil ships, high-speed trains and automobiles.

The Aerospace Engineering program at WVU is designed to prepare the student for a career in the aerospace industry or in government research and development centers and laboratories, as well as in military mission-oriented agencies. The undergraduate curriculum also allows the student to prepare for graduate studies in aerospace engineering and in other engineering, as well as non-engineering fields.

The Aerospace curriculum includes studies in the disciplines encountered in the design of aerospace vehicles, missiles, rockets and spacecraft. The undergraduate curriculum includes extensive study of the basic principles of fluid dynamics, solid mechanics and structures, stability and control, thermal sciences and propulsion.

The student is involved in both theoretical and experimental studies, and is trained to integrate basic knowledge of physical and engineering sciences with practical engineering design. With the breadth and depth of education in aerospace engineering, the student becomes a versatile engineer, competent to work in many areas. The curriculum may serve as a terminal 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.

Students can also simultaneously pursue B.S. degrees in both aerospace engineering and mechanical engineering by completing additional courses. Information on this 158 credit hour option can be obtained from the Mechanical/Aerospace Engineering Department at WVU.

The student should refer to the University catalog and relevant WVU publications for additional information on the graduation 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 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
F2A/F2B - Science & Technology	, i i i i i i i i i i i i i i i i i i i	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 com	pletion 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 2.0 GPA is required in	all MAE courses.	
WVUE 191	First Year Seminar	1
GEF Elective Requirements (5, 6 and	nd 7)	9
ENGL 101	Introduction to Composition and Rhetoric	6
& ENGL 102	and Composition, Rhetoric, and Research (GEF 1)	
MATH 155	Calculus 1 (GEF 3; Minimum grade of C-)	4
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
ENGR 111	Software Tools for Engineers	3
PHYS 111	General Physics 1	4
& 111L	and General Physics 1 Laboratory (GEF 2; Minimum grade of C-)	
PHYS 112	General Physics 2	4
& 112L	and General Physics 2 Laboratory	2
DRET 120	Drafting 1	2
CHEM 115	Fundamentals of Chemistry 1	4
		2
ECON 201	Principles of Microeconomics (GEF 4)	3
ECON 202	Principles of Macroeconomics (GEF 8)	3
	Statics	3
	Dynamics	3
MAE 243	The same advances of Materials	3
MAE 320	Inermodynamics	3
& 221L	and Introduction to Electrical Engineering Laboratory	4
MAE 215	Intro to Aerospace Engineering	3
MAE 244L	Dynamics and Strength Laboratory	1
MAE 316	Analysis-Engineering Systems	3
MAE 331	Fluid Mechanics	3
MAE 335	Incompressible Aerodynamics	3
MAE 336	Compressible Aerodynamics	3
MAE 343	Intermediate Mechanics of Materials	3
MAE 345	Aerospace Structures	3
MAE 365	Flight Dynamics	3
MAE 423	Heat Transfer	3
MAE 426	Flight Vehicle Propulsion	3
MAE 434	Experimental Aerodynamics	2
MAE 456	Computer-Aided Design and Finite Element Analysis	3
& 456L	and Computer-Aided Design and Finite Element Analysis Laboratory	
MAE 460	Automatic Controls	3
MAE 475S	Flight Vehicle Design-Capstone	3
MAE 476	Space Flight and Systems	3
Technical Electives		6
Total Hours		122

## Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
Beckley		Beckley	
ENGL 101 (GEF 1)	З	3 ENGL 102 (GEF 1)	

MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
CHEM 115		4 ENGR 111	3
& 115L (GEF 8)			
DRET 120		2 MAE 241	3
WVUE 191		1 GEF 5	3
		14	16
Second Year			
Fall	Hours	Spring	Hours
Beckley		Beckley	
MATH 251		4 ECON 201 (GEF 4)	3
PHYS 111 (GEF 2)		4 MATH 261	4
MAE 242		3 PHYS 112 (GEF 2)	4
MAE 243		3 MAE 320	3
GEF 6		3 MAE 331	3
		17	17
Third Year			
Fall	Hours	Spring	Hours
Morgantown		Morgantown	
ECON 202 (GEF 8)		3 MAE 244L	1
MAE 215		3 MAE 336	3
MAE 316		3 MAE 345	3
MAE 336		3 MAE 365	3
MAE 343		3 EE 221	4
		& 221L	
		15	14
Fourth Year			
Fall	Hours	Spring	Hours
Morgantown		Morgantown	
MAE 426		3 MAE 423	3
MAE 434		2 MAE 460	3
MAE 456		3 MAE 475S	3
& 456L			
MAE 476		3 Technical Elective	3
Technical Elective		3 GEF 7	3
		14	15

Total credit hours: 122

## Biology, B.S.

### **Degree Offered**

• Bachelor of Science

### Nature of the Program

The Biology Program covers all aspects of the organism, from molecular and biochemical pathways through anatomy and physiology of organisms to the structure of populations, communities, landscapes and ecosystems. The program provides grounding in mathematics and other natural science disciplines necessary for the understanding of the organism, such as chemistry, organic chemistry and physics. By careful choice of biology and restricted electives, students can tailor their educational experience to prepare for professional school, graduate school or entry into the workforce upon graduation.

The program provides the student with the opportunity to select additional courses from the disciplines of biology, chemistry, physics, math, computer science, business, foreign language, psychology, health sciences, engineering or other disciplines which might be helpful in biologically oriented careers. In addition to traditional coursework, students also have the opportunity to engage in research projects selected from a variety of biological disciplines. (Students who select electives in any science or technical areas may need additional courses to meet prerequisites.) The restricted electives are selected by consulting with the assigned biology advisor. For students who have reached a more advanced level in mathematics upon graduation from

high school and meet ACT score requirements, either Pre-Calculus and Calculus 1 or Calculus 1 and 2 may be substituted for College Algebra and Trigonometry. Biology majors must earn a "C" or better in the freshman biology courses to enter upper division BIOL courses. During the last semester of the program, students must take the exit exam in biology. Students are also expected to complete a program of volunteer work to fulfill the college requirement for citizenship/community service.

### **Program Objectives**

Upon graduation, students will be prepared to:

- Pursue advanced degrees in biology and related fields or professional degrees, including medicine, dentistry, veterinary medicine, pharmacy and other health related fields.
- Directly enter a broad range of career pathways in industry and federal or state governments which require a baccalaureate degree in 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 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 com	pletion 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
Program Requirements		36
Biology Major Requirements		59
Total Hours		120

### **University Requirements**

Code	Title	Hours
General Education Found	dations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requir	rements 1, 4, 5, 6, and 7	18
WVUE 191	First Year Seminar	1
General Electives *		6
Total Hours		25
Code	Title	Hours

An overall GPA of 2.0 is required for all coursework contributing to Program and Major requirements.

## **Program Requirements**

Code	Title	Hours
WRIT 305	Technical Writing	3
Mathematics Requirements (selec	t two of the following):	6
MATH 126	College Algebra (GEF 3)	
MATH 128	Plane Trigonometry	
MATH 129	Pre-Calculus Mathematics	
MATH 150	Applied Calculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	
CHEM 115	Fundamentals of Chemistry 1	4
& 115L	and Fundamentals of Chemistry 1 Laboratory (GEF 2)	
CHEM 116	Fundamentals of Chemistry 2	4
& 116L	and Fundamentals of Chemistry 2 Laboratory (GEF 8)	
CHEM 233	Organic Chemistry 1	4
& 233L	and Organic Chemistry 1 Laboratory	
CHEM 234	Organic Chemistry 2	4
& 234L	and Organic Chemistry 2 Laboratory	
PHYS 101	Introductory Physics 1	4
& 101L	and Introductory Physics 1 Laboratory	
PHYS 102	Introductory Physics 2	4
& 102L	and Introductory Physics 2 Laboratory	
STAT 211	Elementary Statistical Inference	3
Total Hours		36

## **Biology Major Requirements**

Code	Title	Hours
BIOL 111	General Biology (GEF 8)	4
BIOL 112	General Biology (GEF 8)	4
BIOL 225	Biology Methods	3
BIOL 240	Microbiology	4
BIOL 303	Genetics	4
BIOL 416	Cell Biology	4
BIOL 461	Principles of Evolution	3
BIOL 466	Ecology	4
BIOL 494	Seminar	2
Botany Electives		4
BIOL 354	Organismal Botany	
BIOL 452	Plant Taxonomy	
Zoology Electives		4
BIOL 343	Systematic Zoology	
BIOL 347	Parasitology	
BIOL 440	Comparative Anatomy	
Biology Electives (any 200-level of	r higher BIOL course)	8
Restricted Electives or Approved	Minor **	11
Exit Examination		
Community Service		
Total Hours		59

Total Hours

\*

Students choosing to minor in Chemistry will need to take additional courses to ensure 9 unique Chemistry credits are applied toward the minor.

\*\*

Restricted electives are chosen from a list approved by the Biology Department. Minors to replace restricted electives must be approved by the Biology Department Chair. Please see your advisor for details.

### Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
BIOL 111 (GEF 8)		4 BIOL 112 (GEF 8)	4
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 126 (GEF 3)		3 MATH 128	3
WVUE 191		1 GEF 5	3
GEF 4		3 GEF 6	3
		14	16
Second Year			
Fall	Hours	Spring	Hours
BIOL 225		3 BIOL 240	4
CHEM 115		4 CHEM 116	4
& 115L (GEF 2)		& 116L (GEF 8)	
PHYS 101		4 PHYS 102	4
& 101L		& 102L	
STAT 211		3 WRIT 305	3
GEF 7		3	
		17	15
Third Year			
Fall	Hours	Spring	Hours
CHEM 233 & 233L		4 BIOL 303	4
Botany Elective		4 BIOL 461	3
Zoology Elective		4 CHEM 234	4
		& 234L	
Elective		3 Restricted Elective	4
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
BIOL 416		4 BIOL 466	4
BIOL 494		2 Biology Elective	4
Biology Elective		4 Restricted Elective	3
Restricted Elective		4 Electives	3
		14	14

Total credit hours: 120

## Major Learning Outcomes BIOLOGY

Upon graduation, students of the biology program will be able to:

- Apply scientific method to solving problems.
  - a. Formulate a hypothesis and alternate hypotheses.
  - b. Design experiments to test hypotheses.
  - c. Collect data.
  - d. Analyze data statistically and graphically.
  - e. Interpret and report data.
- · Communicate effectively in writing and orally.
- Evaluate sources of information through a scientific lens.
- a. Perform search of primary scientific literature.
- b. Interpret scientific papers.
- c. Summarize research results from primary sources.
- d. Synthesize information from a variety of sources into a coherent argument.
- Develop a working vocabulary in evolution, ecology, genetics, anatomy, physiology, cellular, molecular, and organismal biology.
- Explain and apply basic concepts in cell and molecular biology, evolutionary theory, human biology, genetics and ecology.
- Demonstrate skills in the use of equipment and apply safety practices in the laboratory and field settings.

# Chemical Engineering, B.S.Ch.E.

### **Degree Offered**

• Bachelor of Science in Chemical Engineering (B.S.Ch.E.)

## Nature of the Program

### VISION

Our vision is to foster a community for lifelong personal and professional growth of our students, faculty and staff. We strive to be a recognized undergraduate Chemical Engineering program that prepares our students to be successful in a wide range of career paths and leadership roles. We inspire the pursuits of continuing education, innovation, critical thinking, creative problem-solving, leadership and social responsibility.

### **MISSION**

The Chemical Engineering program emphasizes undergraduate instruction. Graduates of this program have the skills and knowledge to become effective professional practitioners in a variety of industries and service organizations, as well as to be successful in programs of advanced study.

The Chemical Engineering department supports the development of West Virginia, the nation, and the global community by educating graduates who are employed in organizations that significantly contribute to the well - being of humanity.

This mission is filled by the achievement of the following Program Objectives:

- Program graduates will be prepared for successful chemical engineering careers in energy, chemical, materials processing, biotechnology, and related industries. They may take positions in manufacturing, environmental affairs, engineering and construction firms, government, education and technical service/sales.
- Program graduates will progress into positions having significant professional responsibilities. These responsibilities may include management and leadership duties, significant contributions on projects having valuable societal impacts, and entrepreneurial activity.
- Program graduates will have the foundation to continue with advanced study. This may include graduate work in engineering, business, or the sciences, as well as the study of medicine or law.
- · Program graduates will continue with professional development.
- Program graduates will be dedicated to sustainability, safety, and ethical behavior.
- Program graduates will engage in service to their alma mater, communities and the profession.

### FACULTY

#### **CHAIR**

• Kimberlyn Gray - Ph.D. (Louisiana Technical University)

#### PROFESSOR

• Gifty Osei-Prempeh - Ph.D. (University of Kentucky)

#### **ASSOCIATE PROFESSOR**

• Kimberlyn Gray - Ph.D. (Louisiana Technical University)

#### ASSISTANT PROFESSORS

- Nathan Galinsky Ph.D. (North Carolina State University)
- Sihe Zhang Ph.D. (Auburn University)

### **PROFESSORS EMERITI**

- Michael V. Minnick Ph.D.
- Prof. Garth Thomas
- David Doner Ph.D.

### **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	3	
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	ng	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 co	ompletion 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
Program Requirements		3
Math and Science Requirements		35
Chemical Engineering Major Require	nents	60
Total Hours		126

## **University Requirements**

Code	Title	Hours
General Education Foundations (GE	F) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 5	, 6, and 7	15
WVUE 191	First Year Seminar	1
General Electives *		12
Total Hours		28

<sup>\*</sup> 

Students are not required to take electives within a single area. However, an area of focus may be of benefit in entering a particular area of engineering practice or post-graduate study. Students should note that some of the courses listed are offered on an irregular basis and may not be available when desired. This is particularly true of some of the 400 level engineering and science electives.

### **Program Requirements**

Code	Title	Hours
MDS 270	Effective Public Speaking (GEF 4)	3
Total Hours		3

An overall 2.0 Professional GPA is required. Professional GPA includes all Math, Science and Engineering Major courses.

### Math and Science Requirements

Code	Title	Hours
MATH 155	Calculus 1 (GEF 3)	4
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory (GEF 2)	4
CHEM 116 & 116L	Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory (GEF 8)	4
CHEM 233 & 233L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
CHEM 234	Organic Chemistry 2	3
PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory (GEF 8)	4
PHYS 112 & 112L	General Physics 2 and General Physics 2 Laboratory	4
Total Hours		35

# **Chemical Engineering Major Requirements**

Code	Title	Hours
CHE 100	Introduction to Chemical Engineering 1	2
CHE 211	Material Balances	3
CHE 212	Energy Balances	3
CHE 316	Transport Operations	4
CHE 317	Transport Operations 2	4
CHE 318	Particle Processing Operations	3
CHE 320	Chemical Engineering Thermodynamics	3
CHE 327	Kinetics and Reactor Design	3
CHE 330	Modeling and Analysis	3
CHE 350	Chemical Engineering Laboratory	2
CHE 357	Design Laboratory 1	2
CHE 358	Design Laboratory 2	2
CHE 435	Chemical Process Control	3
CHE 450L	Unit Operations Laboratory 1	2
CHE 451L	Unit Operations Laboratory 2	2
CHE 457	Design Laboratory 3	3
CHE 458	Design Laboratory 4	3
ENGR 111	Software Tools for Engineers	3
ENGR 401	Senior Engineering Seminar	1
Advanced Science Electives (any E CHEM 234, and CHEM 235)	BIOL, CHEM, or PHYS course 200-level or higher, MAE 410, GEOL 312, excluding CHEM 233,	3
Advanced Chemistry Electives (an	y CHEM course 200-level or higher, excluding CHEM 233, CHEM 234, and CHEM 235)	3
Chemical Engineering Electives (s	elect from the following): *	3
CHE 411	Advanced Heat Transfer	
CHE 417	Advanced Separation Processes	

CHE 461	Polymer Science and Engineering	
CHE 493	Special Topics	
CHE 496	Senior Thesis	
Total Hours		60

Total Hours

Students majoring in Chemical Engineering cannot earn a minor in Chemistry, however it is possible to earn a Dual Degree in Chemical Engineering and Chemistry. Students interested in the Dual Degree option should contact their advisor.

\*

Other courses may be approved by the Chair.

### **Suggested Plan of Study**

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
CHE 100		2 ENGR 111	3
CHEM 115		4 CHEM 116	4
& 115L (GEF 2)		& 116L (GEF 8)	
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
WVUE 191		1 GEF 5	3
		14	17
Second Year			
Fall	Hours	Spring	Hours
CHE 211		3 CHE 212	3
CHEM 233		4 CHEM 234	3
& 233L			
MATH 251		4 PHYS 112	4
		& 112L	
PHYS 111		4 MDS 270 (GEF 4)	3
& 111L (GEF 8)			
		Enhancement Elective	3
		15	16
Third Year			
Fall	Hours	Spring	Hours
CHE 316		4 CHE 317	4
CHE 320		3 CHE 318	3
CHE 330		3 CHE 327	3
CHE 357		2 CHE 350	2
GEF 6		3 CHE 358	2
		Enhancement Elective	3
		15	17
Fourth Year			
Fall	Hours	Spring	Hours
CHE 435		3 CHE 451L	2
CHE 450L		2 CHE 458	3
CHE 457		3 ENGR 401	1
GEF 7		3 Advanced Chemistry Elective	3
Advanced Science Elective		3 Chemical Engineering Elective	3
Enhancement Elective		3 Enhancement Elective	3
		17	15

Total credit hours: 126

# Major Learning Outcomes CHEMICAL ENGINEERING

In order to achieve the educational objectives, the academic program will produce the following outcomes. Our graduates will gain:

- 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 through rigorous coursework in mathematics, chemistry, physics, chemical engineering, and the humanities and social sciences. Electives in other engineering, scientific and business disciplines are required, enabling graduates to work effectively with professionals having different areas of expertise.

# Chemistry, B.S.

### **Degree Offered**

· Bachelor of Science

### Nature of the Program

Chemistry is the study of the composition, structure and properties of matter. Chemists work in the growing fields of biotechnology, environmental science, catalysis, materials science, information and computer technologies, and many others. The study of chemistry is excellent preparation for medical, pharmacy, dental, and veterinary schools. Chemistry is also an excellent field of study to prepare for many other professional careers like patent law, chemical sales, and technical writing.

### **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 comp	pletion 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.

**GPA Requirements:** A grade of C- or better in all chemistry courses below 300-level is required and courses that might serve as prerequisites for other major-required courses. This includes (but is not limited to) the following courses: PHYS 111, PHYS 112, MATH 155, and MATH 156.

## **Curriculum Requirements**

Code	Title	Hours
University Requirements		19
Program Requirements		23
Chemistry Major Requirements		78
Total Hours		120

## **University Requirements**

Code	Title	Hours
General Education Fou	ndations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Cr	edits)
Outstanding GEF Requ	irements 1, 4, 5, 6, and 7	18
WVUE 191	First Year Seminar	1
Total Hours		19

Total Hours

## **Program Requirements**

Code	Title	Hours
MATH 155	Calculus 1 (GEF 3)	4
MATH 156	Calculus 2 (GEF 8)	4
MATH 251	Multivariable Calculus	4
PHYS 111	General Physics 1	4
& 111L	and General Physics 1 Laboratory (GEF 8)	
PHYS 112	General Physics 2	4
& 112L	and General Physics 2 Laboratory	
WRIT 305	Technical Writing	3
Total Hours		23

## **Chemistry Major Requirements**

Code	Title	Hours	
An overall 2.0 GPA must be mainta	ined in all CHEM courses.		
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory (GEF 2)	4	
CHEM 116 & 116L	Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory (GEF 8)	4	
CHEM 215 & 215L	Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory	4	
CHEM 233 & 233L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4	
CHEM 234 & 234L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4	
CHEM 310 & 310L	Instrumental Analysis and Instrumental Analysis Laboratory	4	
CHEM 346 & 346L	Physical Chemistry 1 and Physical Chemistry 1 Laboratory	4	
CHEM 348 & 348L	Physical Chemistry 2 and Physical Chemistry 2 Laboratory	5	
CHEM 422 & 422L	Inorganic Chemistry 2 and Inorganic Chemistry 2 Laboratory	5	
CHEM 490	Teaching Practicum: Peer-Led Team Learning	1	
CHEM 494	Seminar	1	
CHEM 497	Research	4	
Chemistry Electives (CHEM course	Chemistry Electives (CHEM courses at the 200 level or above and/or any CHE courses)		
Restricted Electives *		25	

Assessment Examination

**Total Hours** 

\*

Restricted Electives will vary for students choosing to Minor in Biology, Computer Science or Math.

## **Restricted Electives**

Code	Title	Hours
BIOL 111	General Biology	4
BIOL 112	General Biology	4
BIOL 225	Biology Methods	3
BIOL 240	Microbiology	4
BIOL 303	Genetics	4
BIOL 416	Cell Biology	4
BIOL 461	Principles of Evolution	3
BIOL 466	Ecology	4
CE 204	Surveying	3
CE 312	Construction Materials	3
CE 331	Transportation Engineering	3
CE 347 & 347L	Introduction to Environmental Engineering and Introduction to Environmental Engineering Laboratory	4
CE 351 & 351L	Introductory Soil Mechanics and Introductory Soil Mechanics Laboratory	4
CE 361	Structural Analysis 1	4
CE 411	Pavement Design	3
CE 421	Hydraulic Engineering	4
CE 422	Advanced Hydraulic Engineering	3
CE 425	Engineering Hydrology	3
CE 431	Highway Engineering	3
CE 432	Traffic Engineering	3
CE 444	Advanced Sanitary Engineering	3
CE 446	Solid Waste Management	3
CE 451	Foundations Engineering	3
CE 452	Groundwater and Seepage	3
CE 453	Earthwork Design	3
CE 461	Structural Analysis 2	3
CE 462	Reinforced Concrete Design	3
CE 463	Steel Design	3
CE 464	Timber Design	3
CE 479	Integrated Civil Engineering Design-Capstone	3
CHE 100	Introduction to Chemical Engineering 1	2
CHE 201	Material and Energy Balances 1	3
CHE 202	Material and Energy Balances 2	3
CHE 312	Separation Processes	3
CHE 316	Transport Operations	4
CHE 318	Particle Processing Operations	3
CHE 320	Chemical Engineering Thermodynamics	3
CHE 327	Kinetics and Reactor Design	3
CHE 330	Modeling and Analysis	3
CHE 350	Chemical Engineering Laboratory	2
CHE 357	Design Laboratory 1	2
CHE 358	Design Laboratory 2	2
CHE 435	Chemical Process Control	3

CHE 450L	Unit Operations Laboratory 1	2
CHE 451L	Unit Operations Laboratory 2	2
CHE 457	Design Laboratory 3	3
CHE 458	Design Laboratory 4	3
CIET 320	Construction Methods and Equipment	3
CIET 325	Codes, Contracts, and Cost Analysis	3
CIET 330	Computer Applications in Hydraulics and Hydrology	3
CIET 382	Environmental Engineering Technology	3
CPE 271 & 271L	Introduction to Digital Logic Design and Digital Logic Laboratory	4
CPE 310 & 310L	Microprocessor Systems and Microprocessor Systems Laboratory	4
CPE 421	Embedded Systems	4
CPE 442	Introduction to Digital Computer Architecture	3
CS 112	Computer Science - Engineers 1	3
CS 121	Computer Science 1	4
CS 122	Computer Science 2	0 or 4
CS 201	Data Structures	3
CS 220	Discrete Mathematics	3
CS 222		3
CS 231	Introduction to Computer Organization	3
CS 265		2
CS 210	Drinciples of Brogramming Languages	2
CS 310		3
CS 320	Analysis of Algoniums	3
00.004		3
00.050	Database Management	3
CS 350		3
CS 410		3
CS 450	Operating Systems Structure	3
CS 479	Advanced Computer Science Mathematics	3
DRET 120	Drafting 1	2
DRET 314	Computer Graphics	3
EE 200	Software Tools	2
EE 221 & 221L	Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory	4
EE 223 & 223L	Electrical Circuits and Electrical Circuits Laboratory	4
EE 311	Junior Instrumentation Lab	1
EE 327	Signals and Systems 1	3
EE 329	Signals and Systems 2	3
EE 335 & 335L	Electromechanical Energy Conversion and Systems and Electromechanical Energy Conversion and Systems Laboratory	4
EE 345	Engineering Electromagnetics	3
EE 355	Analog Electronics	4
& 355L	and Analog Electronics Laboratory	
EE 411	Fundamentals of Control Systems	3
EE 412	Automatic Control Lab	1
EE 435	Introduction to Power Electronics	3
EE 436	Power Systems Analysis	3
EE 461	Introduction to Communications Systems	3
ELET 315	Electronic Measurement and Instrumentation	4
ELET 337	Communication Systems 2	4
ELET 410	Control Systems Technology	3

ELET 420	Microprocessors and Digital Systems	0 or 4
ELET 426	Microprocessor-Based Data Acquisition and Control	0 or 4
ELET 436	Programmable Logic Controllers	4
ENGR 101	Engineering Problem Solving 1	2
ENGR 111	Software Tools for Engineers	3
ENGR 402	Fundamentals of Engineering Review	2
GNET 410	C++ Programming for Technology	3
GNET 412	Project Management	3
GNET 489	Senior Seminar and Project	2
INDT 302	Industrial Safety	3
INDT 308	Automated Manufacturing	3
INDT 354	Industrial Materials	3
INDT 384	Robotics 1	0 or 3
INDT 410	Plant Equipment and Maintenance	3
INDT 420	Construction Technology	3
ISYS 101	Introduction to Information Systems 1	3
ISYS 102	Introduction to Information Systems 2	3
ISYS 115	Discrete Structures	3
ISYS 270	Linux	3
ISYS 325	C#	3
ISYS 366	e-Commerce	3
MAE 201	Applied Engineering Analysis	3
MAE 215	Intro to Aerospace Engineering	3
MAE 240	Manufacturing Processes	0 or 3
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 244L	Dynamics and Strength Laboratory	1
MAE 316	Analysis-Engineering Systems	3
MAE 320	Thermodynamics	3
MAE 321	Applied Thermodynamics	3
MAE 331	Fluid Mechanics	3
MAE 332	Experimental Methods	1
MAE 333	Mechanical Measurements	1
MAE 335	Incompressible Aerodynamics	3
MAE 336	Compressible Aerodynamics	3
MAE 340	Vibrations	3
MAE 342	Dynamics of Machines	3
MAE 343	Intermediate Mechanics of Materials	3
MAE 345	Aerospace Structures	3
MAE 365	Flight Dynamics	3
MAE 405	Senior Mechanical Engineering Lab	1
MAE 410	Materials Science	4
MAE 419	Heat Transfer Lab	1
MAE 423	Heat Transfer	3
MAE 426	Flight Vehicle Propulsion	3
MAE 434	Experimental Aerodynamics	2
MAE 454	Machine Design and Manufacturing	3
MAE 455	Computer Aided Drafting and Design	3
MAE 456	Computer-Aided Design and Finite Element Analysis	2
MAE 460	Automatic Controls	3
MAE 475S	Flight Vehicle Design-Capstone	3

MAE 476	Space Flight and Systems	3
MAE 480	System Design 1	3
MAE 481	Systems Design 2	3
MATH 303	Introduction to the Concepts of Mathematics	3
MATH 341	Introduction to Algebraic Structures	3
MATH 441	Applied Linear Algebra	3
MATH 448	Probability and Statistics	3
MATH 451	Introduction to Real Analysis 1	3
MATH 452	Introduction to Real Analysis 2	3
MEET 316	Dynamics	3
MEET 435	Energy Conversion Systems	3

# Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
CHEM 115		4 CHEM 116	4
& 115L (GEF 2)		& 116L (GEF 8)	
WVUE 191		1 Restricted Elective	4
GEF 4		3	
		15	15
Second Year			
Fall	Hours	Spring	Hours
CHEM 215		4 CHEM 234	4
& 215L		& 234L	
CHEM 233		4 PHYS 112	4
& 233L		& 112L	
MATH 251		4 GEF 5	3
PHYS 111		4 GEF 7	3
& 111L (GEF 8)			
		16	14
Third Year			
Fall	Hours	Spring	Hours
CHEM 346		3 CHEM 310	3
WRIT 305		3 CHEM 346L	1
Chemistry Elective		3 CHEM 348	3
Restricted Elective		4 Restricted Elective	7
GEF 6		3	
		16	14
Fourth Year			
Fall	Hours	Spring	Hours
CHEM 310L		1 CHEM 422L	2
CHEM 348L		2 CHEM 494	1
CHEM 422		3 CHEM 497	4
CHEM 490		1 Chemistry Elective	3
Chemistry Elective		3 Restricted Elective	5
Restricted Elective		5 Assessment Examination	0
		15	15

Total credit hours: 120

# Major Learning Outcomes CHEMISTRY

In addition to the general education learning outcomes listed elsewhere in the catalog, the Chemistry Department's Bachelor of Science program is designed to meet broad educational objectives and learning outcomes, which prepare students:

- To apply fundamental chemical concepts and relationships in the solution of diverse scientific problems.
- With knowledge and application of chemical analytical instrumentation, experimental design, and scientific data collection and interpretation.
- · With diverse laboratory skills and techniques.
- With knowledge and application of good laboratory safety practices and environmental responsibility.
- · With the ability to effectively communicate technical information through writing and speaking.
- For professional employment in the various scientific fields or to continue with advanced study, which may include graduate work in business, the sciences, health professions or law.

# Civil Engineering, B.S.C.E.

### **Degree Offered**

• Bachelor of Science in Civil Engineering (B.S.C.E.)

### Nature of the Program

Civil Engineering, the most diverse branch of engineering, is directly related to the planning, design, construction, and maintenance of the infrastructure that directly affects public life. The infrastructure includes bridges, buildings, foundations, dams, sanitary and solid waste disposal systems, highways, airport facilities, transportation systems, waterways, hydroelectric installations, pipelines, coal preparation and loading facilities, and other systems and structures. Civil engineering also involves the understanding of environmental issues and geotechnical principles and how they relate to the design of the infrastructure.

Students get a sound basic knowledge of engineering and science as well as intellectual breath through courses in the humanities and social sciences. The Civil Engineering curriculum has been designed to give the student a broad coverage of all fields of civil engineering with some flexibility to explore a particular field of choice. This approach gives the WVU Tech graduate a well-rounded background to handle civil engineering projects.

Design is incorporated across the Civil Engineering curriculum with the design experience beginning early with the Surveying and Mechanics of Materials courses. Design exposure continues in the junior and senior years, with a minimum of 12 courses having design components for a total of 18 credit hours of ABET design content. In addition, design content is incorporated in the required courses such as Introductory Soil Mechanics, Hydraulic Engineering, Construction Materials, Transportation Engineering, Introduction to Environmental Engineering, the required structural design elective (Steel Design or Reinforced Concrete Design), the required geotechnical elective (Foundation Engineering, Earthwork Design, or Groundwater and Seepage), the required environmental elective (Advanced Sanitary Engineering, Solid Waste Management, Engineering Hydrology or Advanced Hydraulic Engineering), and the required transportation elective (Highway Engineering, Pavement Design, or Traffic Engineering). Two additional electives (one CE Elective and one Technical Elective) are also required. The five civil engineering electives and one technical elective must contain a minimum total of nine credit hours of ABET design content.

The design component is completed with a capstone design course (Integrated Civil Engineering Design) in which student teams are responsible for the completion of a comprehensive civil engineering project involving several civil engineering disciplines with oral and written presentations of the project. Discussion and consideration of constraints such as economic factors, safety, reliability, aesthetics, ethics, and environmental impact are incorporated as a normal part of most design courses. Aesthetics and environmental impact are stressed in the Introduction to Environmental Engineering course; and ethics, safety, and professional issues are covered in the Senior Engineering Seminar course. In addition to design, the Integrated Civil Engineering Design course includes principles of project and/or construction management and scheduling. The Integrated Civil Engineering Design course also incorporates cost analysis and estimating principles that are first taught in the prerequisite course CMGT 350 Construction Estimating.

## **Program Mission/Goals**

- To prepare students to be able to apply science and mathematics to the analysis of civil engineering problems and the design of infrastructure systems to increase human welfare and promote sustainable development
- To prepare well rounded students to practice engineering in a professional environment and to be successful in graduate school should they choose to attend
- To help students recognize the role of the civil engineer in contemporary society, especially with respect to the societal and environmental contexts
  of civil engineering projects
- To energize students to maximize individual potential, including acquisition of necessary skills and recognition of the need for continuing education and lifelong growth and development

### **Educational Objectives**

- Our graduates will obtain employment in the civil engineering field and will hold positions having significant professional responsibility.
- Our graduates will obtain professional registration.
- Our graduates will be prepared academically and those who choose advanced studies will be successful.
- Our graduates will be equipped to learn new skills as they progress in the careers and, as a result, will possess the capabilities to move to positions having increased leadership, mentoring, and management responsibilities.

### FACULTY

#### **CHAIR**

• Guillermo Hahn - Ph.D.

#### PROFESSORS

- Guillermo Hahn Ph.D.
- Steven Leftwich P.E., P.S., Ph.D.

### **ASSOCIATE PROFESSORS**

- Brian Dickman P.E., Ph.D.
- Amr Mohammed Ph.D.
- Horng-Jyh (Tigra) Yang P.E., Ph.D.

## **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 General Education Foundations	Title	Hours
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	U U	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 com	pletion 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		16
Program Requirements		9
Math and Science Requirements		34
Civil Engineering Major Engineering	J	66
Total Hours		125

### **University Requirements**

Code	Title	Hours
General Education Fou	indations (GEF) 1, 2, 3, 4, 5, 6, 7, an	18 (31-37 Credits)
Outstanding GEF Requ	irements 1, 5, 6, and 7	15
WVUE 191	First Year Seminar	1
Total Hours		16

### **Program Requirements**

Code	Title	Hours
CMGT 350	Construction Estimating	3
ECON 401	Managerial Economics (GEF 4)	3
WRIT 305	Technical Writing	3
Total Hours		9

An overall 2.0 Professional GPA is required. Professional GPA includes all Math, Science and Engineering Major courses, excluding DRET 120.

### Math and Science Requirements\*

Code	Title	Hours
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 448	Probability and Statistics	3
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 (GEF 8)	4
GEOL 312	Geology	3
PHYS 111	General Physics 1	4
& 111L	and General Physics 1 Laboratory (GEF 2)	
Total Hours		34

## **Civil Engineering Major Requirements**

Code	Title	Hours
DRET 120	Drafting 1	2
ENGR 111	Software Tools for Engineers	3
ENGR 401	Senior Engineering Seminar	1
ENGR 402	Fundamentals of Engineering Review	2
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 331	Fluid Mechanics	3
CE 204	Surveying	3
CE 312	Construction Materials	3
CE 331	Transportation Engineering	3
CE 347 & 347L	Introduction to Environmental Engineering and Introduction to Environmental Engineering Laboratory	4
CE 351	Introductory Soil Mechanics	4
& 351L	and Introductory Soil Mechanics Laboratory	
CE 361	Structural Analysis 1	4
CE 421	Hydraulic Engineering	4

Total Hours		66
Technical Electives (see list below)	**	3
CE 432	Traffic Engineering	
CE 431	Highway Engineering	
CE 411	Pavement Design	
Transportation		
CE 463	Steel Design	
CE 462	Reinforced Concrete Design	
Structural Design		
CE 453	Earthwork Design	
CE 452	Groundwater and Seepage	
CE 451	Foundations Engineering	
Geotechnical		
CE 446	Solid Waste Management	
CE 444	Advanced Sanitary Engineering	
CE 425	Engineering Hydrology	
CE 422	Advanced Hydraulic Engineering	
Environmental/Water Resources		
Any other 300 or 400 level CE cour	se	
CE 497	Research	
CE 464	Timber Design	
CE 461	Structural Analysis 2	
CE 375	Geographic Information Systems (GIS) Applications in Engineering	
CE Electives (select one from each	area) **	15
CE 479	Integrated Civil Engineering Design-Capstone	3

\*

Students choosing to minor in Mathematics will need to take additional courses to ensure 9 unique Math credits are applied toward the minor.

\*\*

The five CE elective courses and the one Technical Elective course must contain at least 9 hours of combined ABET design content.

### **Technical Electives**

Code	Title	Hours
Any 300 or 400 level CE course		
BIOL 240	Microbiology	4
CHEM 215	Introductory Analytical Chemistry	3
CHEM 233	Organic Chemistry 1	3
CHEM 234	Organic Chemistry 2	3
EE 221	Introduction to Electrical Engineering	3
MATH 420	Numerical Analysis 1	3
MATH 441	Applied Linear Algebra	3
MAE 320	Thermodynamics	3
MAE 340	Vibrations	3
MAE 445	Computer Applications in Engineering	3
MAE 456	Computer-Aided Design and Finite Element Analysis	2
PHYS 112	General Physics 2	4

## Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
WVUE 191		1 MAE 241	3

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CHEM 115		4 ENGR 111	3
DRET 120		2 CHEM 116	4
DRET 120		2 CHEM 110 & 116L (GEE 8)	4
MATH 155 (GEE 3)		4 MATH 156 (GEE 8)	1
		14	4
Second Year		14	17
Fall	Hours	Spring	Hours
MAE 242	liouis	3 MAE 331	3
MAE 243		3 CE 361	3
CE 204		3 MATH 261	т Л
MATH 251		4 CE 331	3
DHVS 111		4 GEOL 312	0 or 3
& 111L (GEF 2)		4 OLOL 312	0013
		17	14-17
Third Year			
Fall	Hours	Spring	Hours
CE 312		3 CE 347	4
		& 347L	
CE 421		4 CE 351	4
		& 351L	
MATH 448		3 WRIT 305	3
CE Structural Design Elective		3 CE Environmental/Water Resources Elective	3
GEF 5		3	
		16	14
Fourth Year			
Fall	Hours	Spring	Hours
ECON 401 (GEF 4)		3 CE 479	3
CE Geotechnical Elective		3 ENGR 401	1
CE Elective		3 ENGR 402	2
CMGT 350		3 CE Transportation Elective	3
GEF 6		3 Technical Elective	3
		GEF 7	3
		15	15

Total credit hours: 122-125

## Major Learning Outcomes CIVIL ENGINEERING

Our graduates will demonstrate:

- An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- 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.
- An ability to communicate effectively with a range of audiences.
- 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.
- 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.
- An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Computer Engineering, B.S.Cp.E.

## **Degree Offered**

• Bachelor of Science in Computer Engineering (B.S.Cp.E.)

### Nature of the Program

The effects of computer engineering are seen in all facets of our lives. Computer engineers develop systems that can perform very useful operations such as what can be found in high-end computers, devices for networking switches and hubs and for manufacturing control, and systems in automobiles, fax machines, and microwave ovens. Even cell phones have sophisticated computational operations that provide useful features and capabilities, and the work of computer engineers has enabled this technology to be readily available.

The Bachelor of Science in Computer Engineering degree program provides students with the knowledge and skills to ensure successful employment and advancement as an engineer, as well as, to pursue further education. We give students a solid foundation in mathematics and the sciences with a special emphasis on the fundamentals of computer science and electrical engineering relevant to computer engineering. We provide the general education to put the technical knowledge into perspective. The student can pursue special areas of interest through several elective courses. Upon graduation the student will be well prepared to be successful and productive in the workforce.

One of the key features of engineering that sets it apart from other disciplines is design. Design is the creative process of putting ideas, components, and systems together to develop solutions to problems and needs. The curriculum encourages design-oriented thinking at a fundamental level and culminates in the capstone senior design course sequence in which many factors such as technical, economic, environmental, ethical and legal, health and safety, manufacturability, political, social, sustainability, and realistic standards are considered. The program further encourages the development of good communication skills in written, oral and electronic forms.

## **Educational Objectives**

After graduation, students will accomplish one or more of the following objectives:

- Professional Practice: Computer engineering graduates will be successful in professional practice in engineering.
- Post-graduate Education: Computer engineering graduates will be successful in pursuing advanced education.
- Advancement: Computer engineering graduates will successfully advance in their careers.

## FACULTY

### CHAIR

• Kenan Hatipoglu - Ph.D.

### PROFESSORS

- Asad Davari Ph.D.
- Mingyu Lu Ph.D.

### **ASSOCIATE PROFESSOR**

Kenan Hatipoglu - Ph.D.

### ASSISTANT PROFESSORS

- Salam Hajjar Ph.D.
- Charan Litchfield Ph.D.

### **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 Reasonin	ıg	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 co	mpletion 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		16
Program Requirements		6
Math and Science Requirements		31
Computer Engineering Major Req	irements	73
Total Hours		126

## **University Requirements**

Code	Title	Hours
General Education Founda	tions (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requiren	nents 1, 5, 6, and 7	15
WVUE 191	First Year Seminar	1
Total Hours		16

An overall 2.0 Professional GPA is required. Professional GPA includes ENGL 305 and all Math, Science and Engineering Major courses.

## **Program Requirements**

Code	Title	Hours
ECON 401	Managerial Economics (GEF 4)	3
WRIT 305	Technical Writing	3
Total Hours		6

Math and Science Requirements

Code	Title	Hours
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 448	Probability and Statistics	3
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory	4
PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory (GEF 2)	4
PHYS 112 & 112L	General Physics 2 and General Physics 2 Laboratory (GEF 8)	4
Total Hours		31

# **Computer Engineering Major Requirements**

Code	Title	Hours
CPE 271	Introduction to Digital Logic Design	4
& 271L	and Digital Logic Laboratory	
CPE 320	Microprocessor Systems	4
& CPE 321	and Microprocessor Systems Laboratory	
CPE 421	Embedded Systems	4
CPE 442	Introduction to Digital Computer Architecture	3
CS 121	Computer Science 1	4
CS 122	Computer Science 2	0 or 4
CS 201	Data Structures	3
CS 220	Discrete Mathematics	3
CS 222	Intro Software Engineering	3
CS 265	C Programming	2
CS 320	Analysis of Algorithms	3
CS 321	Introduction to Networking	3
CS 355	Computer Systems	3
CS 450	Operating Systems Structure	4
& 450L	and Operating Systems Structure Laboratory	
EE 101	Introduction to Electrical and Computer Engineering	1
EE 221	Introduction to Electrical Engineering	4
& 221L	and Introduction to Electrical Engineering Laboratory	
EE 223	Electrical Circuits	4
& 223L	and Electrical Circuits Laboratory	
EE 311	Junior Instrumentation Lab	1
EE 327	Signals and Systems 1	3
EE 365	Analog Electronics	4
& EE 366	and Analog Electronics Laboratory	
EE 400	Community Service	0
EE 480	Capstone Project - Design	3
EE 481	Capstone Project - Implementation	3
Computer Engineering Electives		3
CPE 450	Introduction to Microelectronics Circuits	
CPE 455	VLSI Design	
CPE 462	Wireless Networking	
CPE 493	Special Topics	
Tatal Hauna		co 70

Total Hours

### 69-73

# Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
WVUE 191		1 EE 101	1
CS 121		4 CS 122	0 or 4
CHEM 115		4 GEF 5	3
& 115L (GEF 8)			
		16	11-15
Second Year			
Fall	Hours	Spring	Hours
MATH 251		4 MATH 261	4

PHYS 111		4 PHYS 112	4
& 111L (GEF 2)		& 112L (GEF 8)	
EE 221		4 CPE 271	4
& 221L		& 271L	
CS 201		3 EE 223	4
		& 223L	
CS 265		2	
		17	16
Third Year			
Fall	Hours	Spring	Hours
EE 365		3 EE 311	1
EE 366		1 CPE 421	4
EE 327		3 CS 220	3
CPE 320		3 CS 222	3
CPE 321		1 CS 355	3
MATH 448		3	
GEF 6		3	
		17	14
Fourth Year			
Fall	Hours	Spring	Hours
EE 480		3 EE 481	3
CPE 442		3 EE 400	0
CS 320		3 ECON 401	3
CS 321		3 WRIT 305	3
CS 450		4 CPE Elective	3
& 450L			
		GEF 7	3
		16	15

Total credit hours: 122-126

## Major Learning Outcomes COMPUTER ENGINEERING

#### 1. Problem Solving

Students will attain an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

#### 2. Engineering Design

Students will attain 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. Effective Communication

Students will attain an ability to communicate effectively with a range of audiences.

#### 4. Engineering Responsibilities

Students will attain 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. Teamwork

Students will attain 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. Engineering Experimentation

Students will attain an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

#### 7. Learning

Students will attain an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Computer Science, B.S.

### **Degree Offered**

· Bachelor of Science

### Nature of the Program

Computer scientists are distinguished from other computer professionals, such as information technology specialists and system administrators, by the higher level of theoretical expertise, the innovation they apply to complex problems, and the extensive knowledge and experience they possess in software engineering. A computer scientist can often expect to work on multidisciplinary projects such as robotics, human - computer interaction, advanced computer graphics, and artificial intelligence based systems.

The first two years of study in the Bachelor of Science in Computer Science (BS CS) program focus on the fundamentals of computer science concepts and provide a firm foundation in mathematics. During the junior and senior years, students are introduced to advanced concepts in the science of computation and are presented the opportunity to take elective courses such as video game development, cryptology, computer graphics, artificial intelligence and image processing. The two semester senior project sequence provides the culminating experience for the Computer Science students. Students may also have the opportunity to participate in undergraduate research projects with the computer science faculty.

### **Educational Objectives**

In three to five years after graduation, the graduates of the WVU Tech BS degree program in Computer Science will do the following:

- · Demonstrate success in the professional practice of Computer Science through recognition of their contributions to an organization or entrepreneurial accomplishments.
- · Alternatively or additionally, demonstrate success in the field of computing by continuing formal education through earning post graduate degrees, technical certificates, or other technical training.
- Demonstrate lifelong learning habits either as a professional or a researcher in their field.

### FACULTY

#### CHAIR

Ranjith Munasinghe - Ph.D.

#### PROFESSOR

Ranjith Munasinghe - Ph.D. (University of Wyoming)

### ASSOCIATE PROFESSOR

• Afrin Naz - Ph.D. (University of North Texas)

### ASSISTANT PROFESSORS

- Mohammad Ahmad Ph.D.
- · Cao Thang Bui Ph.D.

### 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	Hour	rs
General Education Foundations			
F1 - Composition & Rhetoric		3-	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 & Techn	nology	4-6
F3 - Math & Quantitative Re	pasoning	3-4
F4 - Society & Connections		3
F5 - Human Inquiry & the Pa	ast	3
F6 - The Arts & Creativity		3
F7 - Global Studies & Divers	sity	3
F8 - Focus (may be satisfied	d 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		22
Program Requirements		32
Computer Science Major Re	quirements	67
Total Hours		121

## **University Requirements**

Code	Title	Hours
General Education Fo	undations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Req	uirements 1, 5, 6, 7, and 8	18
WVUE 191	First Year Seminar	1
General Electives (Stu	Idents are free to choose any college level course to fulfill this requirement)	3
Total Hours		22

## **Program Requirements**

Code	Title	Hours
Laboratory Science, Students may	select any of the two courses from the following list: (also fulfills GEF 2 and GEF 8)	8
BIOL 111	General Biology	
BIOL 112	General Biology	
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 Laboratory	
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 Laboratory	
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	
PHYS 101 & 101L	Introductory Physics 1 and Introductory Physics 1 Laboratory	
PHYS 102 & 102L	Introductory Physics 2 and Introductory Physics 2 Laboratory	
PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory	
PHYS 112 & 112L	General Physics 2 and General Physics 2 Laboratory	
MATH 155	Calculus 1 (GEF 3)	4
MATH 156	Calculus 2 (GEF 8)	4

Total Hours		32
WRIT 305	Technical Writing	3
ECON 401	Managerial Economics (GEF 4)	3
MATH 448	Probability and Statistics	3
MATH 441	Applied Linear Algebra	3
MATH 251	Multivariable Calculus	4

### **Computer Science Major Requirements**

Code	Title	Hours
An overall GPA of 2.0 is required for	or all CS and CYBE courses.	
CS 121	Computer Science 1	4
CS 122	Computer Science 2	0 or 4
CS 201	Data Structures	3
CS 220	Discrete Mathematics	3
CS 222	Intro Software Engineering	3
CS 231	Introduction to Computer Organization	3
CS 265	C Programming	2
CS 310	Principles of Programming Languages	3
CS 320	Analysis of Algorithms	3
CS 321	Introduction to Networking	3
CS 324	Database Management	3
CS 355	Computer Systems	3
CS 410	Compiler Construction	3
CS 450	Operating Systems Structure	3
CS 479	Advanced Computer Science Mathematics	3
CS 480	Capstone Project - Design	2
CS 481	Capstone Project - Implementation	3
Select one of the following: AOE in	n Cybersecurity or Coursework Option	15

Coursework Option:

Upper Division Computer Science Electives consist of (300 and 400 level CS courses). Students may choose to complete 3 credits in CYBE 366, CYBE 466, or CYBE 467 as part of this requirement. CS 491 is excluded from this requirement. (9 credits)

Technical Electives (6 credits) (See approved list)

Total Hours

\*

Any Student completing a minor is not required to take the Technical Electives. Cybersecurity minor is not available for Computer Science majors.

62-66

## **Approved Technical Electives**

Code	Title	Hours
Accounting		
ACCT 201	Principles of Accounting 1	
ACCT 202	Principles of Accounting 2	
Biology		
BIOL 111	General Biology **	
BIOL 112	General Biology **	
Chemistry		
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 Laboratory	
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 Laboratory	
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
Computer Engineering	
CPE 271	Introduction to Digital Logic Design
Computer Science	
CS 300+ or 400+ (Except CS 491)	
Cybersecurity	
CYBE 266	Foundations of Cybersecurity
CYBE 366	Secure Software Development
CYBE 466	Host Based Cyber Defense
CYBE 467	Ethical Hacking & Penetration Testing
Electrical Engineering	
EE 221	Introduction to Electrical Engineering
EE 223	Electrical Circuits
Mechanical Engineering	
MAE 241	Statics
MAE 242	Dynamics
MAE 243	Mechanics of Materials
MAE 331	Fluid Mechanics
Information Systems	
ISYS 270	Linux
ISYS 325	C#
ISYS 366	e-Commerce
Mathematics	
MATH 261	Elementary Differential Equations
Physics	
PHYS 101 & 101L	Introductory Physics 1 and Introductory Physics 1 Laboratory
PHYS 102 & 102L	Introductory Physics 2 and Introductory Physics 2 Laboratory
PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory **
PHYS 112 & 112L	General Physics 2 and General Physics 2 Laboratory

\*\* Unless taken as a science requirement

Other courses are accepted as technical electives only with advance approval from the department. Most of the 300-400 level ACCT, BIOL, CHEE, CHEM, CPE, CE, EE, MAE, MATH, and PHYS courses are considered acceptable.

### **Suggested Plan of Study**

First Year		
Fall Hou	rs Spring	Hours
ENGL 101 (GEF 1)	3 ENGL 102 (GEF 1)	3
CS 121	4 CS 122	0 or 4
WVUE 191	1 GEF 6	3
General Elective	3 GEF 7	3
GEF 5	3 GEF 8	3
	14	12-16
Second Year		
Fall Hou	rs Spring	Hours
MATH 155 (GEF 3)	4 MATH 156	4
CS 201	3 CS 220	3
CS 231	3 CS 222	3
CS 265	2 CS 310	3

GEF 2 (Laboratory Science)		4 GEF 8 (Laboratory Science)	4
		16	17
Third Year			
Fall	Hours	Spring	Hours
ECON 401 (GEF 4)		3 MATH 441	3
MATH 251		4 WRIT 305	3
CS 320		3 CS 324	3
CS 321		3 CS 355	3
		Computer Science Elective/AOE Course	3
		13	15
Fourth Year			
Fall	Hours	Spring	Hours
MATH 448		3 CS 410	3
CS 450		3 CS 479	3
CS 480		2 CS 481	3
Computer Science Elective/AOE Course		3 CS/CYBE Elective/AOE Course	3
Technical Elective/AOE Course		3 Technical Elective/AOE Course	3
		14	15

Total credit hours: 116-120

### Area of Emphasis Offered:

• Cybersecurity (p. 132)

### **Cybersecurity Area of Emphasis**

Code	Title	Hours
CYBE 266	Foundations of Cybersecurity	3
CYBE 366	Secure Software Development	3
CS 465	Cybersecurity Principles and Practice	3
MATH 373	Introduction to Cryptography	3
Select one of the following:		3
CYBE 466	Host Based Cyber Defense	
CYBE 467	Ethical Hacking & Penetration Testing	
Total Hours		15

Total Hours

### **Major Learning Outcomes COMPUTER SCIENCE**

Graduates with a BS degree in Computer Science at WVU Tech will have an ability to:

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- · Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- · Apply computer science theory and software development fundamentals to produce computing-based solutions.

# **Construction Management, B.S.**

### **Degree Offered**

· Bachelor of Science

### Nature of the Program

Construction Management is an exciting field and rewarding career choice. Professional construction managers earn excellent salaries and derive great satisfaction working in any one of the many sectors of the construction industry. Construction is the second largest industry in the United States with over \$1 trillion in total volume, accounting for approximately 8% of the nation's GDP. It is the industry responsible for constructing the buildings and infrastructure that are so vital to the quality of life.

Construction is a technically driven, complex business that requires knowledgeable, highly-skilled managers to lead operations. There is and will be a continuing demand for professional construction managers. Construction management practitioners work in various construction organizations such as CM firms, general contractors, specialty contractors, design-builders, consulting engineers, architects, and real estate developers. Construction Management practitioners are also employed in various capacities representing project owners, suppliers, regulators, lenders, and other stakeholders involved with construction. Positions include project managers, coordinators, estimators, schedulers, safety specialists, business development managers, and many others. Some rise to senior level executive positions, while others own and operate their own firms.

### **Program Objectives**

Upon graduation, students will be prepared to:

- Obtain positions of increasing responsibility and leadership within the construction industry, professional organizations or civic organizations.
- Manage construction projects using contemporary management principles and techniques.
- · Solve problems through critical thinking and the application of math and 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 comp	pletion 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		16
Program Requirements		29
Construction Management Major	Requirements	79
Total Hours		124

Total Hours

## University Requirements

Code	Title	Hours
General Education Foundations (GEF	F) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 5,	6, and 7	15

WVUE 191	First Year Seminar
Total Hours	

# **Program Requirements**

Code	Title	Hours
ACCT 201	Principles of Accounting 1	3
ECON 225	Elementary Business and Economics Statistics	3
MATH 126	College Algebra (GEF 3)	3
MATH 128	Plane Trigonometry (GEF 8)	3
PHYS 101	Introductory Physics 1	4
& 101L	and Introductory Physics 1 Laboratory (GEF 2)	
PHYS 102	Introductory Physics 2	4
& 102L	and Introductory Physics 2 Laboratory (GEF 8)	
STAT 211	Elementary Statistical Inference (GEF 8)	3
MDS 270	Effective Public Speaking (GEF 4)	3
WRIT 305	Technical Writing	3
Total Hours		29

# **Construction Management Major Requirements**

Code	Title	Hours
CMGT 101	Introduction to Construction Management	3
CMGT 110	Computer Applications for Construction	4
CMGT 120	Analytical Techniques for Construction	3
CMGT 150	Construction Graphics	3
CMGT 210	Statics & Strength of Materials	3
CMGT 220	Construction Methods & Materials 1	3
CMGT 225	Construction Methods & Materials 2	3
CMGT 245	Soils, Foundations, Concrete Mix Design, and Testing	3
CMGT 250	Structural Systems	3
CMGT 320	Mechanical Building Systems	3
CMGT 330	Electrical Building Systems	3
CMGT 340	Construction Planning & Scheduling	3
CMGT 350	Construction Estimating	3
CMGT 360	Construction Law & Contract Administration	3
CMGT 370	Construction Safety & Production Systems	3
CMGT 385	Construction Project Management	3
CMGT 410	Construction Finance & Cost Control	3
CMGT 420	Management of Construction Operations	3
CMGT 440	Heavy Construction Practice	3
CMGT 465	BIM in Construction Management	3
CMGT 467	Facilities Management	3
CMGT 468	Temporary Structures	3
CMGT 470	Construction Project Capstone	3
CE 204	Surveying	3
Business Electives		6
BCOR 320	Legal Environment of Business	
BCOR 370	Principles of Management	

Total Hours

1 16

### Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ACCT 201	3
MATH 126 (GEF 3)		3 ENGL 102 (GEF 1)	3
CMGT 101		3 MATH 128 (GEF 8)	3
CMGT 110		4 CMGT 120	3
WVUE 191		1 CMGT 150	3
		14	15
Second Year			
Fall	Hours	Spring	Hours
PHYS 101		4 ECON 225	3
& 101L (GEF 2)			
STAT 211 (GEF 8)		3 PHYS 102	4
		& 102L (GEF 8)	
CE 204		3 CMGT 225	3
CMGT 210		3 CMGT 245	3
CMGT 220		3 CMGT 250	3
		MDS 270 (GEF 4)	3
		16	19
Third Year			
Fall	Hours	Spring	Hours
CMGT 320		3 WRIT 305	3
CMGT 330		3 CMGT 360	3
CMGT 340		3 CMGT 385	3
CMGT 350		3 The Arts and Creativity (GEF 6)	3
CMGT 370		3 Global Studies & Diversities (GEF 7)	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
CMGT 410		3 CMGT 440	3
CMGT 420		3 CMGT 465	3
CMGT 468		3 CMGT 467	3
BCOR 320		3 CMGT 470	3
BCOR 370		3 Human Enquiry & the Past (GEF 5)	3
		15	15

Total credit hours: 124

### Major Learning Outcomes CONSTRUCTION MANAGEMENT

Graduates of the Construction Management program will have the knowledge, as well as the technical, administrative and communication skills, necessary to succeed in the construction industry. Students will demonstrate the knowledge and skills to deliver construction projects with respect to scope, schedule, budget, quality, safety, and the environment.

The Construction Management program has adopted the 20 Student Learning Outcomes (SLOs) defined by ACCE as the Program Learning Outcomes. Upon graduation from Construction Management program, graduates shall be able to:

- 1. Create written communications appropriate to the construction discipline.
- 2. Create oral presentations appropriate to the construction discipline.
- 3. Create a construction project safety plan.
- 4. Create construction project cost estimates.
- 5. Create construction project schedules.
- 6. Analyze professional decisions based on ethical principles.

- 7. Analyze construction documents for planning and management of construction *processes.*
- 8. Analyze methods, materials, and equipment used to construct projects.
- 9. Understand the role of the construction manager as a member of different multidisciplinary project teams.
- 10. Apply electronic-based technology to manage the construction process.
- 11. Apply basic surveying techniques for construction layout and control.
- Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
- 13. Understand construction risk management.
- 14. Understand construction accounting and cost control.
- 15. Understand construction quality assurance and control.
- 16. Understand construction project control processes.
- 17. Understand the legal implications of contract, common, and regulatory law to manage a construction project.
- 18. Understand the basic principles of sustainable construction.
- 19. Understand the basic principles of structural behavior.
- 20. Understand the basic principles of mechanical, electrical and piping systems.

# **Electrical Engineering, B.S.E.E.**

## **Degree Offered**

• Bachelor of Science in Electrical Engineering (B.S.E.E.)

### Nature of the Program

Electrical engineering is one of the most dynamic fields of engineering today. New technologies are under constant development and new industries are emerging as a result of the efforts of electrical engineers.

The Electrical Engineering curriculum provides a well-rounded education to meet the needs and challenges of our modern society. The student will receive a solid background in mathematics and science, as well as, a strong foundation in the major areas of electrical engineering (circuits and systems, computers, electronics, electromagnetic fields, controls, communications, electric machinery and power) supported by practical-oriented laboratory assignments. The student can pursue special areas of interest through several elective courses. The student will be well prepared to be successful in the workforce and be productive.

One of the key features of engineering that sets it apart from other disciplines is design. Design is the creative process of putting ideas, components, and systems together to develop solutions to problems and needs. The curriculum encourages design-oriented thinking at a fundamental level and culminates in the capstone senior design course sequence in which many factors such as technical, economic, environmental, ethical and legal, health and safety, manufacturability, political, social, sustainability, and realistic standards are considered.

The ability of the engineer to communicate in writing and speech is very important as the modern engineer is expected to express technical concepts and defend technical decisions in front of non-technical people. Therefore, courses in English, social science, and the humanities are vital in the Electrical Engineering curriculum.

## **Educational Objectives**

After graduation, students will accomplish one or more of the following objectives:

- Professional Practice: Electrical engineering graduates will be successful in professional practice in engineering.
- Post-graduate Education: Electrical engineering graduates will be successful in pursuing advanced education.
- Advancement: Electrical engineering graduates will successfully advance in their careers.

### ADMINISTRATION PROGRAM ASSISTANT II

Kenny Smith

### FACULTY

### **CHAIR**

• Kenan Hatipoglu - Ph.D.

### PROFESSORS

- Asad Davari Ph.D.
- Mingyu Lu Ph.D.

### **ASSOCIATE PROFESSOR**

• Kenan Hatipoglu - Ph.D.

### ASSISTANT PROFESSORS

- Salam Hajjar Ph.D.
- Charan Litchfield Ph.D.

### **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 com	pletion 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		16
Program Requirements		6
Math and Science Requirements		34
Electrical Engineering Major Require	nents	68
Total Hours		124

### **University Requirements**

Code	Title	Hours
General Education Fo	undations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Rec	uirements 1, 5, 6, and 7	15
WVUE 191	First Year Seminar	1
Total Hours		16

Total Hours

An overall 2.0 Professional GPA is required. Professional GPA includes ENGL 305 and all Math, Science and Engineering Major courses.

### **Program Requirements**

Code	Title	Hours
ECON 401	Managerial Economics (GEF 4)	3
WRIT 305	Technical Writing	3
Total Hours		6

### Math and Science Requirements

Code	Title	Hours
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 441	Applied Linear Algebra	3
MATH 448	Probability and Statistics	3
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory (GEF 8)	4
PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory (GEF 2)	4
PHYS 112 & 112L	General Physics 2 and General Physics 2 Laboratory (GEF 8)	4
Total Hours		34

### **Electrical Engineering Major Requirements**

Code	Title	Hours
CPE 271	Introduction to Digital Logic Design	4
& 271L	and Digital Logic Laboratory	
CPE 320	Microprocessor Systems	4
& CPE 321	and Microprocessor Systems Laboratory	
CS 112	Computer Science - Engineers 1	3
EE 101	Introduction to Electrical and Computer Engineering	1
EE 200	Software Tools	2
EE 221	Introduction to Electrical Engineering	4
& 221L	and Introduction to Electrical Engineering Laboratory	
EE 223	Electrical Circuits	4
& 223L	and Electrical Circuits Laboratory	
EE 311	Junior Instrumentation Lab	1
EE 327	Signals and Systems 1	3
EE 329	Signals and Systems 2	3
EE 335	Electromechanical Energy Conversion and Systems	4
& 335L	and Electromechanical Energy Conversion and Systems Laboratory	
EE 345	Engineering Electromagnetics	3
EE 365	Analog Electronics	4
& EE 366	and Analog Electronics Laboratory	
EE 411	Fundamentals of Control Systems	3
EE 412	Automatic Control Lab	1
EE 436	Power Systems Analysis	3
EE 461	Introduction to Communications Systems	3
EE 480	Capstone Project - Design	3
EE 481	Capstone Project - Implementation	3
EE 400	Community Service	0
EE/CPE Electives (Select two of th	e following):	6

Total Hours		68
<b>Technical Electives (See</b>	e approved list)	6
EE 493	Special Topics	
EE 463	Digital Signal Processing Fundamentals	
EE 456	RF Design	
EE 452	Network Synthesis	
EE 445	Introduction to Antennas	
EE 437	Fiber Optics Communications	
EE 435	Introduction to Power Electronics	
EE 434	Alternative Energy Resources	
EE 431	Electrical Power Distribution Systems	
EE 427	Introduction to Robotics	
EE 413	Introduction to Digital Control	
EE 405	Protective Relaying	
CPE 493	Special Topics	
CPE 462	Wireless Networking	
CPE 455	VLSI Design	
CPE 450	Introduction to Microelectronics Circuits	
CPE 442	Introduction to Digital Computer Architecture	
CPE 421	Embedded Systems	

## **Technical Electives**

Code	Title	Hours
BIOL 230	Human Anatomy and Physiology 1	4
BIOL 231	Human Anatomy and Physiology 2	4
BIOL 233	Anatomy and Physiology	4
BIOL 240	Microbiology	4
BIOL 303	Genetics	4
CHEM 215	Introductory Analytical Chemistry	3
CHEM 233	Organic Chemistry 1	3
CHEM 233L	Organic Chemistry 1 Laboratory	1
CS 201	Data Structures	3
CS 222	Intro Software Engineering	3
CS 264	Data Base Management	3
CS 310	Principles of Programming Languages	3
CS 320	Analysis of Algorithms	3
CS 321	Introduction to Networking	3
CS 324	Database Management	3
CS 355	Computer Systems	3
CS 410	Compiler Construction	3
CS 450	Operating Systems Structure	3
CS 454	Cryptology	3
CS 456	Digital Image Processing	3
CS 465	Cybersecurity Principles and Practice	3
CS 470	Introduction to Computer Graphics	3
CS 472	Artificial Intelligence	3
CS 475	Game Development	3
MATH 341	Introduction to Algebraic Structures	3
MATH 378	Discrete Mathematics	3
MATH 381	Introduction to Analysis and Topology	3
MATH 420	Numerical Analysis 1	3
MATH 441	Applied Linear Algebra	3

MATH 448	Probability and Statistics	3
MATH 451	Introduction to Real Analysis 1	3
MATH 452	Introduction to Real Analysis 2	3
MATH 456	Complex Variables	3
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 320	Thermodynamics	3
MAE 321	Applied Thermodynamics	3
MAE 331	Fluid Mechanics	3
MAE 407	Power Plant Engineering	3
PHYS 314	Introductory Modern Physics	4
Any CPE (Computer Engineering) Co	burse	
Any EE (Electrical Englishering) Cours		

Any EE (Electrical Engineering) Course

### **Business Technical Electives**

Code	Title	Hours	
No more than one course (3 credits) can be used from this list.			
ACCT 201	Principles of Accounting 1	3	
ACCT 202	Principles of Accounting 2	3	
BCOR 350	Principles of Marketing	3	
BCOR 360	Supply Chain Management	3	
BCOR 370	Principles of Management	3	
ENTR 201	Business Planning	3	
FIN 310	Investments	3	
FIN 321	Personal Finance	3	
FIN 325	Financial Management 1	3	
FIN 326	Financial Management 2	3	
FIN 480	International Finance	3	
MANG 310	Management of Small Business	3	
MANG 350	Leadership In Business	3	
MANG 422	Organizational Behavior	3	
MKTG 315	Buyer Behavior	3	
MKTG 325	Marketing Research	3	
MKTG 485	Global Marketing	3	

# Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 EE 101	1
CS 112		3 GEF 5	3
WVUE 191		1 GEF 6	3
		15	14
Second Year			
Fall	Hours	Spring	Hours
MATH 251		4 MATH 261	4
PHYS 111		4 PHYS 112	4
& 111L (GEF 2)		& 112L (GEF 8)	

EE 200		2 EE 223	4
		& 223L	
EE 221		4 CPE 271	4
& 221L		& 271L	
GEF 7		3	
		17	16
Third Year			
Fall	Hours	Spring	Hours
MATH 448		3 MATH 441	3
CPE 320		4 WRIT 305	3
& CPE 321			
EE 327		3 EE 311	1
EE 345		3 EE 329	3
EE 365		4 EE 335	4
& EE 366		& 335L	
		17	14
Fourth Year			
Fall	Hours	Spring	Hours
EE 411		4 ECON 401	3
& EE 412			
EE 436		3 EE 400	0
EE 461		3 EE 481	3
EE 480		3 EE/CPE Elective	3
EE/CPE Elective		3 Technical Elective	3
		Technical Elective	3
		16	15

Total credit hours: 124

## Major Learning Outcomes ELECTRICAL ENGINEERING

#### 1. Problem Solving

Students will attain an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

#### 2. Engineering Design

Students will attain 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. Effective Communication

Students will attain an ability to communicate effectively with a range of audiences.

#### 4. Engineering Responsibilities

Students will attain 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. Teamwork

Students will attain 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. Engineering Experimentation

Students will attain an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

#### 7. Learning

Students will attain an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Information Systems, B.S.I.S.

### **Degree Offered**

Bachelor of Science

### Nature of the Program

The ever increasing use of technology has taken almost every business, non-profit organization, and government agency to a drastically different place from where they were only decades ago. Computers and the Internet have allowed companies to conduct operations, utilize resources, and sell products in almost any area of the world. Information systems specialists analyze the complex operational problems of private and public industry; and design, build, implement, and manage innovative software for improving operations from both a technological and business perspective.

### **Bachelor of Science in Information Systems (BSIS)**

WVU Tech Information Systems program is designed to train highly skilled professionals with expertise in networking, database management, computer systems management, and website development. The program curriculum contains 17 courses taught by Computer Science and Information Systems faculty that are specially developed for Information Systems majors. They include courses such as Database Management, e-Commerce, and Computer Science security. Those courses are supplemented by highly specialized Business Management courses such as Visual Basic for Business applications, Business Information Systems, and Business Statistic s. For elective requirements, the department offers a wide variety of courses on computer systems, programming, and special topics such as video game development, artificial intelligence, image processing, and computer graphics. Students have the opportunity to learn more theoretical aspects of computing, other programming languages, advanced programming concepts, or other applications of computing by taking Computer Science electives of their interest.

### **Program Educational Objectives**

In three to five years after graduation, the graduates of the WVU Tech BS degree program in Information Systems will do the following:

- Demonstrate success in the professional practice of Information Systems through recognition of their contributions to an organization or entrepreneurial accomplishments.
- Alternatively or additionally, demonstrate success in the field of computing by continuing formal education through earning post graduate degrees, technical certificates, or other technical training.
- Demonstrate lifelong learning habits either as a professional or a researcher in their field.

### FACULTY CHAIR

• Ranjith Munasinghe - Ph.D.

#### PROFESSOR

• Ranjith Munasinghe - Ph.D. (University of Wyoming)

#### ASSOCIATE PROFESSOR

• Afrin Naz - Ph.D. (University of North Texas)

#### ASSISTANT PROFESSORS

- Mohammad Ahmad Ph.D.
- Cao Thang Bui Ph.D.

### **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	According while	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 con	npletion 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
Program Requirements		23
Information Systems Maj	or Requirements	72
Total Hours		120

## **University Requirements**

Code	Title	Hours
General Education Foundations (GE	F) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 2	, 5, 6, 7, and 8	18
WVUE 191	First Year Seminar	1
General Electives (Students are free	to choose any college level course to fulfill this requirement)	6
Total Hours		25

## **Program Requirements**

Code	Title	Hours
Laboratory Science, Students may GEF 2 and GEF 8)	select any of the two four credit hour BIOL, CHEM, PHSC, or PHYS courses with lab*: (also fulfills	8
WRIT 305	Technical Writing	3
MATH 124	Algebra with Applications (GEF 3)	3
MATH 150	Applied Calculus (GEF 8)	3
ACCT 201	Principles of Accounting 1	3
ECON 202	Principles of Macroeconomics (GEF 4)	3
Total Hours		23

<sup>\*</sup> 

Department approval is required for four-credit-hour courses with laboratory components from other science disciplines.

# **Information Systems Major Requirements**

Code	Title	Hours		
A minimum GPA of 2.0 is required in all CS and ISYS courses.				
CS 121	Computer Science 1	4		
CS 122	Computer Science 2	4		
CS 222	Intro Software Engineering	3		

CS 231	Introduction to Computer Organization	3
CS 321	Introduction to Networking	3
CS 324	Database Management	3
CS 365	Computer Languages	1
CS 465	Cybersecurity Principles and Practice	3
CS 480	Capstone Project - Design	2
CS 481	Capstone Project - Implementation	3
CS 491	Professional Field Experience	4
ISYS 101	Introduction to Information Systems 1	3
ISYS 102	Introduction to Information Systems 2	3
ISYS 115	Discrete Structures	3
ISYS 270	Linux	3
ISYS 325	C#	3
ISYS 366	e-Commerce	3
MANG 386	Business Statistics	3
MANG 420	Business Information Systems	3
Minor(s) or Coursework Option *		15
Coursework Option:		

72

Technical Electives - 9 credits (See approved list)

Six (6) credits of 300-400 Level Electives (Students are free to choose any 300-400 college level courses to fulfill this requirement)

**Total Hours** 

\*

Minors option: Complete all the requirements of at least one minor available to Information Systems majors.

### **Approved Technical Electives**

Code	Title	Hours
Accounting		
ACCT 201	Principles of Accounting 1	
ACCT 202	Principles of Accounting 2	
ACCT 300-400 Level***		
Biology		
BIOL 111	General Biology **	
BIOL 112	General Biology **	
BIOL 300-400 Level***		
Chemistry		
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 Laboratory **	
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 Laboratory	
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	
CHEM 300-400 Level***		
Computer Science		
CS 265	C Programming	
CS 300-400 Level***		
Cybersecurity		
CYBE 266	Foundations of Cybersecurity	
CYBE 300-400 level***		
Economics		
ECON 201	Principles of Microeconomics	
ECON 300-400 Level***		
-----------------------	------------------------------------	
Physical Science		
PHSC 101	Introductory Physical Science 1 **	
PHSC 102	Introductory Physical Science 2 **	
PHSC 300-400 Level***		
Physics		
PHYS 101	Introductory Physics 1 **	
PHYS 102	Introductory Physics 2 **	
PHYS 111	General Physics 1 **	
PHYS 112	General Physics 2 **	
PHYS 300-400 Level***		

\*\* Unless taken as a science requirement

Other courses are accepted as technical electives only with advance approval from the department. Most of the 300-400 level ACCT, BCOR, BIOL, CHEM, ECON, FINC, MANG, and PHYS courses are considered acceptable.

\*\*\*Department approval required

# Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 124 (GEF 3)		3 MATH 150 (GEF 8)	3
CS 121		4 CS 122	0 or 4
ISYS 101		3 ISYS 102	3
WVUE 191		1 Elective	3
		14	12-16
Second Year			
Fall	Hours	Spring	Hours
ACCT 201		3 ECON 202 (GEF 4)	3
CS 231		3 CS 222	3
ISYS 115		3 CS 324	3
Elective		3 ISYS 270	3
GEF 5		3 GEF 6	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
CS 321		3 CS 365	1
ISYS 325		3 ISYS 366	3
MANG 386		3 WRIT 305	3
Technical Elective or Minor course		3 Laboratory Science	4
GEF 2		4 GEF 8	3
		16	14
Fourth Year			
Fall	Hours	Spring	Hours
CS 480		2 CS 465	3
MANG 420		3 CS 481	3
300-400 Level Elective or Minor course		3 CS 491	4
Technical Elective or Minor course		3 300-400 Level Elective or Minor course	3
GEF 7		3 Technical Elective or Minor course	3
		14	16

Total credit hours: 116-120

# Major Learning Outcomes INFORMATION SYSTEMS

The BS degree in Information Systems at WVU Tech enables students to attain:

- An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline.
- An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
- · An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
- An ability to function effectively on teams to accomplish a common goal.
- An understanding of professional, ethical, legal, security and social issues and responsibilities.
- An ability to communicate effectively with a range of audiences.
- An ability to analyze the local and global impact of computing on individuals, organizations, and society.
- · Recognition of the need for and an ability to engage in continuing professional development.
- · An ability to use current techniques, skills, and tools necessary for computing practice.
- An understanding of processes that support the delivery and management of information systems within a specific application environment.

# Mathematics, B.S.

## **Degree Offered**

Bachelor of Science

# Nature of the Program

Mathematics is the foundation for many of the natural sciences and, as knowledge is expanded in these sciences, new demands are made on mathematics to provide ideas to be used in advancing the sciences. Older sciences such as physics, chemistry, and engineering depend on mathematics, as do a large number of new and sophisticated subjects. The student's career in mathematics might include college teaching and research, computers, statistics, and many others.

# **Program Objectives**

The graduates of the Mathematics program:

- · Should be able to attend graduate school or find employment in industry or government.
- Will have a rounded education that encourages and supports meaningful dialogue with individuals from other disciplines especially sciences and engineering.
- Will be prepared to participate in lifelong learning opportunities.

# **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 Foundation	ons	
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 & Technolo	ogy	4-6
F3 - Math & Quantitative Reas	soning	3-4
F4 - Society & Connections		3
F5 - Human Inquiry & the Past	t	3
F6 - The Arts & Creativity		
-7 - Global Studies & Diversity		
F8 - Focus (may be satisfied b	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 for Classic Track**

Code	Title	Hours
University Requirements		47
Program Requirements		23
Mathematics Major Requirements		50
Total Hours		120

# **University Requirements**

Code	Title	Hours
General Education Foundations (GE	F) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 4	, 5, 6, 7, and 8	24
WVUE 191	First Year Seminar	1
General Electives		22
Total Hours		47

## **Program Requirements**

Code	Title	Hours
CS 121	Computer Science 1	4
CS 122	Computer Science 2	4
MATH 155	Calculus 1 (GEF 3)	4
MATH 156	Calculus 2 (GEF 8)	4
PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory (GEF 2)	4
WRIT 305	Technical Writing	3
Total Hours		23

Total Hours

# **Mathematics Major Requirements**

Code	Title	
A minimum GPA of a 2.0 is require	d in all major coursework	
MATH 251	Multivariable Calculus	4
MATH 261	Elementary Differential Equations	4
MATH 303	Introduction to the Concepts of Mathematics	3
MATH 341	Introduction to Algebraic Structures	3
MATH 441	Applied Linear Algebra	3
MATH 448	Probability and Statistics	3
MATH 451	Introduction to Real Analysis 1	3
MATH 452	Introduction to Real Analysis 2	3
VATH 496 Senior Thesis		2
MATH Elective (300+ or 400+ level; except MATH 315)		
Approved Minor or Technical Electives		
Total Hours		50

\*

Approved Minors include Biology, Chemistry, or Computer Science.

## **Technical Electives**

Code	Title	Hours
BIOL 111	General Biology	4
BIOL 112	General Biology	4

BIOL 230	Human Anatomy and Physiology 1	4		
BIOL 231	Human Anatomy and Physiology 2			
BIOL 240	Microbiology			
CE 204	Surveying			
CHE 201	Material and Energy Balances 1	3		
CHE 202	terial and Energy Balances 2			
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 Laboratory	4		
CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 Laboratory	4		
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		
CPE 271	Introduction to Digital Logic Design	3		
CPE 271L	Digital Logic Laboratory	1		
CS 201	Data Structures	3		
CS 222	Intro Software Engineering	3		
CS 231	Introduction to Computer Organization	3		
EE 221	ntroduction to Electrical Engineering			
EE 221L	ntroduction to Electrical Engineering Laboratory			
EE 223	Electrical Circuits	3		
MAE 240	Manufacturing Processes	0 or 3		
MAE 241	Statics	3		
MAE 242	Dynamics	3		
MAE 243	Mechanics of Materials	3		
MAE 320	Thermodynamics	3		
PHYS 112	General Physics 2	4		
& 112L	and General Physics 2 Laboratory			
Any BIOL 300-400 Level Course				
Any CHE 300-400 Level Course				
Any CHEM 300-400 Level Course				
Any CE 300-400 Level Course				
Any CS 300-400 Level Course				
Any CPE 300-400 Level Course				
Any EE 300-400 Level Course				
Any ENGR 300-400 Level Course	Any ENGR 300-400 Level Course			
Any MATH 300-400 Level Course (ex	Any MATH 300-400 Level Course (except MATH 315)			
Any MAE 300-400 Level Course				

Any PHYS 300-400 Level Course

# Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
WVUE 191		1 MATH 156 (GEF 8)	4
MATH 155 (GEF 3)		4 CS 122	0 or 4
CS 121		4 GEF 4	3
Elective		3 Elective	1
		15	11-15
Second Year			
Fall	Hours	Spring	Hours
MATH 303		3 MATH 261	4

MATH 251		4 MATH Elective (300-400 level)	3
PHYS 111		4 Technical Elective (GEF 8)/Approved Minor	4
& 111L (GEF 2)			
GEF 5		3 Elective	3
		Elective	3
		14	17
Third Year			
Fall	Hours	Spring	Hours
MATH 448		3 MATH 341	3
WRIT 305		3 MATH 441	3
GEF 6		3 Technical Elective/Approved Minor	3
Technical Elective/Approved Minor		3 GEF 7	3
Elective		3 Elective	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
MATH 451		3 MATH 452	3
MATH Elective (300-400 level)		3 MATH 496	2
Technical Elective/Approved Minor		3 Technical Elective/Approved Minor	3
GEF 8		3 Elective	3
Elective		3 Elective	3
		15	14

Total credit hours: 116-120

# **Major Learning Outcomes**

### MATHEMATICS

The graduates of the Mathematics program:

- 1. Demonstrate critical thinking and problem-solving abilities.
- 2. Algebra, Analysis, and Advanced Topics
  - a. Integrate concepts.
  - b. Solve problems.
  - c. Prove theorems.
- 3. Implement computational algorithms.
- 4. Develop computer programs.
- 5. Employ effective written communication skills.

6. Demonstrate effective oral communication skills

# Mechanical Engineering, B.S.M.E.

### **Degree Offered**

• Bachelor of Science in Mechanical Engineering

# Nature of the Program

Mechanical engineering is one of the largest technical professions with a history of significant contributions to industrial development since the dawn of human civilization. The history of technology is replete with stories of successful applications of ideas and concepts from mechanical engineering that have brought tremendous prosperity to industrialized nations starting with the industrial revolution. Mechanical engineers also play a vital role in maintaining leadership in technology to insure the survival and growth of an industrialized society.

In order to prepare students for the challenges awaiting them in the real world, the Mechanical Engineering Department at WVU Tech offers a practiceoriented education with strong emphasis on hands-on experience at all levels of its BSME program. The curriculum is designed to develop the skills necessary to succeed in a field that is both challenging and rewarding. The Mechanical Engineering Program includes sequential courses in several areas, such as English, mathematics, chemistry, physics, humanities, computer science, general engineering science and foundation courses in mechanical engineering such as thermodynamics, machine design, heat transfer, mechanical vibrations, control systems and materials science. Technical electives in thermal and mechanical systems are included in the program to enable graduates to pursue special areas of interest.

Practicing mechanical engineers consider these courses as essential for a sound mechanical engineering curriculum. They are also mandated by the ABET, the national organization that accredits engineering programs in the United States. The Mechanical Engineering curriculum is designed to include meaningful design experience in several of the required and elective courses. Students develop analytical and design skills systematically by successfully completing sequential courses such as Statics, Dynamics, Mechanics of Materials, Dynamics of Machines, Machine Design and Systems Design 1 and 2. Open - ended, multiple - solution design concept is incorporated across the curriculum starting with Mechanics of Materials in their sophomore year and ending with two capstone design courses during their senior year. In the capstone design courses, students learn how to apply the previously acquired knowledge in science, technology, humanities, communications, ethics, economics, etc.

The Mechanical Engineering faculty also recognizes the dynamic nature of modern technology in which advances are inevitable and the need for our students to be prepared to meet these challenges. The curriculum is therefore under constant review, and changes are introduced in response to the changing needs of industry and the job market.

## **Departmental Mission**

The mission of the Mechanical Engineering Department at WVU Tech is to produce high quality mechanical engineers with the best possible education that will enable them to become competent members of the profession able to handle the most challenging jobs. The Mechanical Engineering Department intends to fulfill this mission by maintaining high academic quality that insures continued ABET accreditation.

# **Departmental Goals**

The Mechanical Engineering faculty is committed to the following goals:

- Provide an atmosphere of dedicated teaching and support services to the students with the best possible classroom instruction, counseling, academic planning, career guidance and personal attention to facilitate growth and success in academic and professional work.
- · Provide quality learning tools and an academic environment that produces technically competent mechanical engineers who are able to meet the needs of employers from government, industry and business.
- Encourage and nurture students' interest in engineering as a profession.
- · Help students develop self-motivation, good work habits, personal discipline, and the skills needed to be a professionally successful member of society.

# **Educational Objectives**

The following Educational Objectives have been adopted by the faculty of the Mechanical Engineering Department. Graduates of the WVU Tech Mechanical Engineering program:

- · Are successful in the practice of mechanical engineering.
- · Advance to positions of technical and/or managerial leadership.
- · Are successful in graduate studies, if they choose to pursue advanced education.
- Are able to obtain professional registration, if they choose to, after appropriate professional experience.
- · Are dedicated to life-long learning in their professional career.

### Assessment

The Mechanical Engineering Program at WVU Tech has a multi-faceted assessment process in place which includes: students' classwork and portfolios such as design projects; course evaluations; faculty evaluations; exit surveys of graduating seniors; alumni surveys; advisory board surveys; employer surveys; placement data of graduates; and the results of the Fundamentals of Engineering (FE) Examination. The feedback from these sources is continuously used by the Mechanical Engineering faculty to update the curriculum and to make the changes necessary to maintain or enhance the quality of the program.

# **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
<b>General Education Foundations</b>		
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 & Techn	ology	4-6
F3 - Math & Quantitative Re	easoning	3-4
F4 - Society & Connections		3
F5 - Human Inquiry & the Pa	ast	3
F6 - The Arts & Creativity		3
F7 - Global Studies & Divers	3	
F8 - Focus (may be satisfied	d 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
WVUE 191	First Year Seminar	1
DRET 120	Drafting 1	2
GEF Elective Requirements (5, 6, a	nd 7)	9
ENGL 101	Introduction to Composition and Rhetoric	6
& ENGL 102	and Composition, Rhetoric, and Research (GEF 1)	
WRIT 305	Technical Writing	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
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory (GEF 8)	4
PHYS 111 & 111L	General Physics 1 and General Physics 1 Laboratory (GEF 2)	4
PHYS 112 & 112L	General Physics 2 and General Physics 2 Laboratory (GEF 8)	4
ECON 401	Managerial Economics (GEF 4)	3
EE 221 & 221L	Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory	4
ENGR 111	Software Tools for Engineers	3
ENGR 401	Senior Engineering Seminar	1
MAE 201	Applied Engineering Analysis	3
MAE 240	Manufacturing Processes	3
MAE 241	Statics	3
MAE 242	Dynamics	3
MAE 243	Mechanics of Materials	3
MAE 320	Thermodynamics	3
MAE 321	Applied Thermodynamics	3
MAE 331	Fluid Mechanics	3
MAE 332	Experimental Methods	1
MAE 333	Mechanical Measurements	1
MAE 340	Vibrations	3
MAE 342	Dynamics of Machines	3
MAE 405	Senior Mechanical Engineering Lab	1
MAE 410	Materials Science (GEF 2)	4
MAE 419	Heat Transfer Lab	1

105
6
3
3
3
3
3
3
3

# **Technical Electives**

Code	Title	Hours
Mechanical, Structural, and End	ergy Oriented	
MAE 407	Power Plant Engineering	3
MAE 425	Internal Combustion Engines	3
MAE 427	Heating, Ventilating, and Air Conditioning	3
MAE 428	Aerodynamics	3
MAE 429	Theory of Turbomachines	3
MAE 440	Industrial Hydraulics:Components and Circuits Design	0 or 3
MAE 463	Advanced Machine Design	3
MAE 493	Special Topics (Applied Computational Fluid Dynamics)	3
MAE 493	Special Topics (Student Engineering Practice)	3
MAE 493	Special Topics (Topics in CAD/CAM/CAE)	3
CE 361	Structural Analysis 1	4
CE 421	Hydraulic Engineering	4
EE 427	Introduction to Robotics	3
EE 335	Electromechanical Energy Conversion and Systems	4
& 335L	and Electromechanical Energy Conversion and Systems Laboratory	
EE 493	Special Topics (Alternative Energy Resources)	3
Digital Hardware and Software	Oriented	
ENGR 493	Special Topics (Microprocessors for Non-Electrical Engineers/Comp. Engineers)	3
CPE 271 & 271L	Introduction to Digital Logic Design and Digital Logic Laboratory	4
GNET 410	C++ Programming for Technology	3
ELET 493	Special Topics (C Programming for Engineering Applications)	3
Manufacturing Oriented		
ELET 436	Programmable Logic Controllers	4
INDT 302	Industrial Safety	3
INDT 308	Automated Manufacturing	3
INDT 410	Plant Equipment and Maintenance	3
GNET 412	Project Management	3
Math Oriented		
MATH 378	Discrete Mathematics	3
MATH 441	Applied Linear Algebra	3
MATH 448	Probability and Statistics	3
Biomechanics Oriented		
BIOL 230	Human Anatomy and Physiology 1	4
BIOL 440	Comparative Anatomy	4
CHE 493	Special Topics (Materials in Biosystems)	3

## Suggested Plan of Study

First fear			
Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
MATH 155 (GEF 3)		4 MATH 156 (GEF 8)	4
CHEM 115		4 ENGR 111	3
& 115L (GEF 8)			
DRET 120		2 MAE 241	3
WVUE 191		1 GEF 5	3
		14	16
Second Year			
Fall	Hours	Spring	Hours
MATH 251		4 MATH 261	4
PHYS 111 (GEF 2)		4 PHYS 112 (GEF 8)	4
MAE 240	C	) or 3 MAE 201	3
MAE 242		3 MAE 320	3
MAE 243		3 MAE 331	3
	1	4-17	17
Third Year			
Fall	Hours	Spring	Hours
EE 221		4 WRIT 305	3
& 221L			
MAE 321		3 ECON 401 (GEF 4)	3
MAE 333		1 MAE 332	1
MAE 342		3 MAE 340	3
MAE 480		3 MAE 419	1
		MAE 423	3
		MAE 460	3
		14	17
Fourth Year			
Fall	Hours	Spring	Hours
MAE 405		1 ENGR 401	1
MAE 455		3 MAE 410	4
MAE 480		3 MAE 456	3
		& 456L	
Technical Elective		3 MAE 481	3
GEF 6		3 Technical Elective	3
GEF 7		3	
		16	14

Total credit hours: 122-125

# Major Learning Outcomes MECHANICAL ENGINEERING

Consistent with the mission of WVU Tech and in compliance with the ABET criteria, the Program emphasizes the development of a well-rounded mechanical engineer. Upon graduation they will be able to demonstrate:

- · An ability to apply knowledge of mathematics, science, and engineering
- · An ability to design and conduct experiments, as well as to analyze and interpret data
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- · An ability to function on multidisciplinary teams
- An ability to identify, formulate, and solve engineering problems

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- An understanding of professional and ethical responsibility
- · An ability to communicate effectively
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- A recognition of the need for, and an ability to engage in life-long learning
- A knowledge of contemporary issues
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

# **Department of Nursing**

# **Degree Offered**

• Bachelor of Science in Nursing

## Nature of the Program

The mission of the WVU School of Nursing is to lead in improving health in West Virginia and the broader society through excellence in student-centered educational programs, research, and scholarship; the compassionate practice of nursing; and service to the public and the profession. 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 on the WVU Beckley campus is directed at providing a high quality, student-centered program of instruction which prepares superb professional nurses to meet basic healthcare needs. 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 Bachelor of Science in Nursing (BSN) curriculum offered on the WVU Beckley (WVUIT) campus follows the same fall progression plan as the WVU Morgantown campus and 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 healthcare 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 other fields.

The basic (traditional) baccalaureate (BSN) program is available for high school graduates who aspire to a career in nursing. It can be completed in four years on the WVU Beckley (WVUIT) campus, as well as on the WVU Morgantown and WVU Keyser campuses.

The baccalaureate degree program in nursing/master's degree program in nursing/Doctor of Nursing Practice program at West Virginia University is accredited by the Commission on Collegiate Nursing Education (CCNE), 655 K Street NW, Suite 750, Washington, DC 20001, 202-887-6791.

## **Simulation Experience**

We offer the opportunity for students to learn in two state-of-the-art simulation facilities where students practice patient care without fear of jeopardizing patient safety.

# **Beckley Campus Laptop Requirements**

Each nursing student will be required to have a serviceable laptop when starting the nursing program. This laptop will be required for course work and on-site testing in all nursing classes throughout the program. It is the nursing student's responsibility to maintain the laptop in working order. Not having a working laptop may exclude the student from nursing tests, resulting in course failure. For additional information on laptop compatibility for school of nursing, please email tritchie@hsc.wvu.edu.

# **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 a positive drug screen 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.

#### **ADMINISTRATION**

#### **CHAIR**

Hillary Parcell - MSN

#### ADMINISTRATIVE ASSISTANT

• Julie Wood - BS

#### FACULTY ASSISTANT PROFESSOR

• Peggy Lambert Fink - PhD (West Virginia University)

#### **CLINICAL EDUCATION ASSOCIATE PROFESSOR**

• Robin Spencer - MSN (Marshall University)

#### CLINICAL EDUCATION ASSISTANT PROFESSORS

- Mindy Harris MSN (Marshall University)
- Kelly Morton MSN (Capella University)
- Hillary Parcell MSN (Marshall University)

#### **CLINICAL EDUCATION INSTRUCTORS**

- Linda Angus MSN (West Virginia University)
- Cynthia Clark MSN (Chamberlain College)
- Engleish Flynn MSN (Walden University)
- Heather Wood BSN (Liberty University)

#### **ADJUNCT INSTRUCTORS**

- Debra Crowder MSN (Philadelphia University)
- Kathy Talley MA (Marshall University)
- Trei Thomas BSN (West Virginia University)

#### Admissions

- Admission to Basic Program as Pre-Nursing or Other College Major (http://catalog.wvu.edu/undergraduate/schoolofnursing/bsn/#Admit\_to\_Basic)
- Transfer (http://catalog.wvu.edu/undergraduate/schoolofnursing/bsn/#Transfer)

### 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 22 or SAT score of 540 +ACT Composite of 23 or SAT EBRW and Math of 1130
- 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.

#### 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 3.8 or higher, + Math ACT score of 22 or SAT score of 540, + ACT Composite of 25 or SAT EBRW and Math of 1200 or higher
- GPA of 3.6-3.79 + Math ACT score of 22 or SAT score of 540, + ACT Composite of 27 or SAT EBRW and Math of 1260 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.

# 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 THE BASIC (TRADITIONAL) BSN PROGRAM FROM GENERAL NURSING (PRE-NURSING) OR OTHER COLLEGE MAJOR

General nursing (Pre-Nursing) students 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), Intro to Psyc (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

An applicant with nursing credit from a nationally accredited nursing program in a regionally accredited college or university is eligible for consideration for transfer admission by presenting a record of courses comparable to those required in this curriculum and meeting other School of Nursing admission requirements, including, but not limited to the following:

- · 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/).

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# **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 com	pletion 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-Red	quisite Coursework	45
Bachelor of Science in N	Jursing Major Coursework	68
Total Hours		123

# **University Requirements**

Code	Title	Hours
General Education Fou	ndations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (	31-37 Credits)
Outstanding GEF Requ	irements 5, 6, and 7	9
WVUE 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.		
A minimum grade of C- is required	in all coursework applied towards the degree.	
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)	6
MATH 124	Algebra with Applications (GEF 3)	3
STAT 211	Elementary Statistical Inference	3
BIOL 111	General Biology	4
BIOL 230	Human Anatomy and Physiology 1	4
BIOL 231	Human Anatomy and Physiology 2	4
BIOL 240	Microbiology	4
CHEM 111 & 111L	Survey of Chemistry 1 and Survey of Chemistry 1 Laboratory (GEF 2)	4

CHEM 112 & 112L	Survey of Chemistry 2 and Survey of Chemistry 2 Laboratory	4
HLSC 104	Nutrition	3
PSYC 101	Introduction to Psychology (GEF 4)	3
PSYC 241	Introduction to Human Development	3
Total Hours		45

# Bachelor of Science in Nursing Major Coursework

Code	Title	Hours
A minimum GPA of 3.0	is required.	
A minimum grade of C-	- is required in Nursing coursework.	
NSG 100	Introduction to Nursing	2
NSG 211	Health Assessment & Communication	6
NSG 212	Foundations of Nursing Practice	6
NSG 250	Clinical Nursing Pharmacology	3
NSG 310	Maternal Infant Nursing & Women's Health Care	4
NSG 311	Alterations in Adult Health 1	6
NSG 312	Alterations in Adult Health 2	6
NSG 320	Child and Adolescent Health	4
NSG 350	Evidence Based Practice and Research	3
NSG 360	Ethics and Health Policy	3
NSG 411	Nursing in Complex Community Systems	7
NSG 412	Leadership in Complex Systems	7
NSG 450	Alterations in Mental Health	4
NSG 460	Care of the Critically III Patient	4
NSG 486	NCLEX Review	1
Nursing Electives		2
NSG 281	Perspectives on Caring	
NSG 400	Spirituality and Health	
NSG 435	Cardiology for Nursing	
NSG 478	The Role of the Nurse in the Patient Experience	
NSG 480	Core Concepts in Gerontological Nursing	
NSG 482	Palliative Care Nursing	
NSG 483	Holistic and Integrative Nursing	
NSG 484	Care of the Diabetic Patient	
NSG 485	Children With Complex Health Needs	
NSG 487	Movies and Mental Health	
NSG 488	Generics/Genomics in Health	
Total Hours		68

Total Hours

# Suggested Plan of Study

First Year			
Fall	Hours	Spring	Hours
BIOL 111		4 ENGL 101 (GEF 1)	3
CHEM 111 & 111L (GEF 2)		4 STAT 211	3
MATH 124 (GEF 3)		3 BIOL 230	4
PSYC 101 (GEF 4)		3 CHEM 112 & 112L	4
WVUE 191		1 NSG 100	2
		15	16

Second Year			
Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 BIOL 240	4
BIOL 231		4 PSYC 241	3
HLSC 104		3 NSG 212	6
NSG 211		6 NSG 250	3
		16	16
Third Year			
Fall	Hours	Spring	Hours
NSG 310		4 NSG 312	6
NSG 311		6 NSG 320	4
NSG 350		3 NSG 360	3
GEF 7		3 GEF 6	3
		16	16
Fourth Year			
Fall	Hours	Spring	Hours
NSG 411		7 NSG 412	7
NSG 450		4 NSG 460	4
Nursing Elective		2 NSG 486	1
GEF 5		3	
		16	12

Total credit hours: 123

# Major Learning Outcomes BACHELOR OF SCIENCE IN NURSING (BSN)

Upon completion of the BSN program, graduates will:

**Critical Thinking:** Employ scholarly inquiry and evidence-based reasoning and creativity in the process of assessment, interpretation, analysis, synthesis, evaluation, and inference as a basis for professional nursing practice.

**Nursing Interventions:** Ensure quality care by applying theory, evidence-based clinical judgment and decision-making, and patient care technology in the delivery of safe and skilled nursing therapeutics with individuals, families, communities, and populations across the health-illness continuum.

**Professional Role:** Demonstrate knowledge, attitudes, professional values, personal qualities and behaviors consistent with the nursing roles of health care designer and coordinator, organization and system leader, and advocate for consumers and the nursing profession.

**Caring:** Provide empathetic, culturally sensitive, and compassionate care for individuals, families, communities, and populations that upholds moral, legal, and ethical humanistic principles.

**Communication:** Integrate therapeutic, interpersonal, intraprofessional, interprofessional and informatics communication processes in professional nursing practice.

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