The West Virginia University Catalog is a general source of information about course offerings, academic programs and requirements, expenses, rules, and policies. In order to reach the goals and fulfill the mission of the University, the courses, requirements, and regulations contained herein are subject to continuing review and change by the West Virginia Higher Education Policy Commission, the WVU Board of Governors, University administrators, and the faculties of the schools and colleges. The University, therefore, reserves the right to change, delete, supplement, or otherwise amend the information, course offerings, requirements, rules, and policies contained herein without prior notice.
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The West Virginia University Institute of Technology (https://www.wvutech.edu) (WVU Tech) was established in February 1895 under the name, Montgomery Preparatory School located 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 extra-curricular activities. A WVU Nursing 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.

Location

BECKLEY CAMPUS

WVU Institute of Technology 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 the Beckley campus of 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, Frisbee 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. 4)
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 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; conducted at the course, program, and institutional levels, and grounded in the work of the Undergraduate Council, the Graduate Council, and the University Assessment Council (UAC). UAC members from all WVU locations align assessment with WVU’s mission. UAC 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 Council 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 a division of West Virginia University. West Virginia University is a member of the North Central Association of Colleges and Schools. Information regarding affiliation status may be directed to North Central Association of Colleges and Schools, Higher Learning Commission, 30 North LaSalle Street, Suite 2400, Chicago, Illinois 60652-2504.

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


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, http://www.aacn.nche.edu/ccne-accreditation.

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

• William D. Wilmoth, Chair, Wheeling
• David B. Alvarez, Vice Chair, Bridgeport
• Taunja Willis Miller, Secretary, Morgantown
• W. Martson “Marty” Becker, Charleston
• Charles L. Capito, Jr., Charleston
• Elmer F. Coppoolse, Lewisburg
• Thomas V. Fialherty, Charleston
• Thomas A. Heywood, Charleston
• Dr. Stanley Hileman, Faculty Representative, Morgantown
• J. Thomas Jones, Morgantown
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) 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.

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)
- Joan Neff, Campus Provost

Deans

- College of Business, Humanities, and Social Sciences, Stephen Brown
- Leonard C. Nelson College of Engineering and Sciences, TBD
- Department of Nursing, Crystal Sheaves

Academic Standards

Academic Rights, Penalties, and Appeals

The policies described in this section are based on the Board of Governors Rules and Policies. 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 in the West Virginia University Academic Integrity Policy. Please note that, to the extent there is any inconsistency
with the language in the catalog and the BOG Academics Rule 2.5 or the WVU Policy on Student Academic Integrity, the BOG Rule and the WVU Policy govern; please refer to the BOG Rule and WVU Policy for the most current language.

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

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

**Academic Rights**

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

1. Right to have their performance evaluated solely upon performance as measured against academic standards. The student shall not be evaluated prejudicially, capriciously, or arbitrarily. The student shall not be graded, nor shall their performance be evaluated on the basis of race, color, national origin, ancestry, age, physical or mental disability, marital or family status, pregnancy, veteran status, service in the uniformed services (as defined in state and federal law), religion, creed, sex, sexual orientation, genetic information, gender identity, or gender expression (see BOG (https://policies.wvu.edu/finalized-bog-rules) Governance Rule 1.6), or other protected status.

2. Right to appeal any final grade, charge of academic dishonesty, or other academic penalty.

3. Right to access a copy of the University catalog and program documents in which all current program requirements and standards are described (e.g. required courses, total credit requirements, time in residence requirements, special program requirements, minimum grade point average, probation standards, professional standards, etc.).

4. Right to receive course syllabi with descriptions of content and requirements for any course in which they are enrolled (e.g., attendance expectations, special requirements, laboratory requirements including time, field trips and costs, grading standards and procedures, professional standards, etc.).

5. Right to assigned grades issued from the instructor of each course to students enrolled in the course consistent with the academic rights set out in the preceding sections.

**Academic Dishonesty**

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

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

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

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

4. **Other Prohibited Academic Conduct** means:
   a. engaging in behavior specifically prohibited by a faculty member in the course syllabus; or
   b. violating other departmental, college, or university academic standards, and/or legal or professional standards.
5. **Facilitation** means:
   a. providing unauthorized materials or personal assistance to another student when such assistance allows them to commit academic dishonesty; or
   b. compelling someone else to commit academic dishonesty on one’s behalf.

Information on all associated procedures are found in the West Virginia University Academic Integrity Policy (https://provost.wvu.edu/governance/academic-standards-resources/academic-integrity-policy). 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/coursecreditstemsclassification/#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 Academic Standards Resources (https://provost.wvu.edu/governance/academic-standards-resources) 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. Community service, educational classes, and other work or research projects may be imposed by the Director of Academic Integrity instead of or in addition to other specified sanctions.
2. Required repetition or revision of the academic assignment at issue.
3. A lower grade on the academic assignment or course at issue.
4. Failure of the academic assignment or course at issue.
5. Unforgivable failure (UF) of the course. When a UF is assigned, a student may repeat the course at issue, but the undergraduate (and where applicable, the graduate or professional school) D/F repeat process will not be applied. A permanent record will appear on the student’s transcript, and the F will be permanently factored into the student’s GPA.

6. Failure of the course with exclusion from further participation. The student will receive a final grade of an “F” for the course at issue but will be prohibited from continued enrollment or participation in the course for the duration of the semester.

7. Disciplinary probation, deferred suspension, or disciplinary suspension at the university level. More information concerning disciplinary probation, deferred suspension, and disciplinary suspension of students at the university level is available in the West Virginia University Campus Student Code and in the regional campus handbooks (https://studentconduct.wvu.edu/campus-student-code).

8. Dismissal from a program, college, or school. Dismissal is defined as termination of student status, including any right or privilege to receive some benefit or recognition or certification, from a specific academic program. A student may be academically dismissed from any program and remain eligible to enroll in courses in other programs at the institution.

9. Expulsion. Permanent separation of the student from the University. More information concerning expulsion of students at the university level is available in the West Virginia University Campus Student Code and in the regional campus handbooks (https://studentconduct.wvu.edu/campus-student-code).

10. Other sanctions. Other sanctions may be imposed instead of or in addition to those specified, where those sanctions bear a reasonable relationship to the nature and severity of the violation.

Appeals

In this section:

- General Information about Appeals (p. 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/#probationsuspensionintext).
- When imposed for academic dishonesty, disciplinary penalties imposed by the Office of Student Conduct, 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 Conduct 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 Student Conduct, 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.
In addition, all penalties for academic dishonesty and the outcomes of all appeals involving academic dishonesty must be reported via the Academic Dishonesty Form found on the Academic Standards Resources webpage.

**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 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 that proceed through the Office of Student Conduct, and are subject to the limitations imposed by the Campus Student Code.

**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 webpage (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 webpage within the time limit provided below. The student’s appeal must include the documentation and evidence forming the basis of their appeal.
  - The individual or committee that gave the grade or imposed the penalty must provide all relevant documentation (including the criteria for determining the student’s final grade in the case of a final grade appeal) to the Level 1 appeal reviewer upon their request.
  - The Level 1 appeal reviewer assesses the available evidence and makes a decision about the appeal based on that evidence. The sanction(s) under review may be upheld, lessened, or dismissed entirely, but not aggravated, by the Level 1 reviewer.
  - The reviewer communicates the decision in writing via WVU e-mail to the student and other individuals or committees that have been involved in the grade, penalty, or appeal to that point. The reviewer retains all documentation related to the appeal for 5 years. In the case of a final grade appeal, the Level 1 appeal reviewer ensures that a grade modification is submitted if necessary.
- If the student accepts the Level 1 appeal decision, the appeal is concluded.
- Level 2 appeal (for final grades and other academic penalties):
  - If the student does not accept the Level 1 appeal decision, the student may continue their appeal by submitting a written appeal via WVU e-mail to the Level 2 appeal reviewer named on the Academic Standards Resources webpage within the time limit provided below.
  - 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 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 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 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.
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  • The Level 3 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 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.

• 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 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 within 10 academic days* after the grade is posted. See the Academic Standards Resources webpage for 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 Academic Standards Resources webpage on the Detailed Appeal Procedures tab to assist students, instructors, and administrators in managing the appeal process.

• If the course-level process is followed and only course-level sanctions are recommended:
  • A student who has been held responsible for academic dishonesty may begin an appeal by submitting a written appeal via WVU e-mail to the course-level appeal reviewer named on the Level 1 Reviewers webpage.
appeal-procedures/appeal-of-a-charge-of-and-or-penalty-based-on-academic-dishonesty/level-1-reviewers) tab of the Academic Standards Resources webpage, within the time limit provided on the Academic Integrity Policy (https://provost.wvu.edu/governance/academic-standards-resources/academic-integrity-policy) tab of the Academic Standards Resources webpage, 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. The student may appeal the charge, the penalty, or both.

- The individual or committee that made the charge must provide all relevant documentation to the course-level appeal reviewer upon their request.
- The course-level 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 course-level 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 charge or appeal to that point. The Office of Academic Integrity retains all documentation related to the appeal for 5 years.
- Once the course-level appeal reviewer has issued a decision, the matter is final and binding upon all involved.

- If the Academic Dishonesty Conduct Process is followed and both/either course-level and/or disciplinary sanctions are recommended:
  - A student who has been held responsible for academic dishonesty may begin an appeal by submitting a written appeal via WVU e-mail to the Provost within the time limit provided on the Academic Integrity Policy tab of the Academic Standards Resources webpage, 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. The student may appeal the charge, the penalty, or both.
  - The individual or committee that made the charge 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:**

- Course-Level Process:
  - The student files an appeal within 10 academic days* after the notice of charge 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.

- Academic Dishonesty Conduct Process:
  - The student files an appeal within 10 academic days* after the notice of charge is sent to the student.
  - The decision about the appeal is communicated to the student within 30 academic 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)
- Academic Probation Procedures (p. 13)
- Academic Suspension Procedures (p. 13)
- Duration of Suspension (p. 13)
- Appeal of Suspension (p. 13)
- Summer Enrollment for Students Suspended for Fall (p. 13)
- Immediate Reinstatement after Suspension (p. 13)
- Readmission after Serving Suspension (p. 13)

**Undergraduate Academic Probation and Suspension Policy**

This policy concerns academic probation and suspension (referred to below as probation and suspension) from the University. Individual schools, colleges, and programs may place students on probation or dismiss them from their programs as well, using criteria that supersedes the University requirement. Students who are dismissed from a program may transfer to another program if they meet the program’s admission requirements or they may be advised in the Center for Learning, Advising, and Student Success until they are able to be accepted to a program.

Following the summer session and fall term, any student with an overall grade point average (GPA) below 2.0 will be on probation. Should a student’s overall grade point average (GPA) be lower than a 2.0 immediately following the spring term, the student will be placed on suspension regardless of previous academic standing(s).
Academic Probation Procedures

At the conclusion of summer and/or fall, students with an overall (GPA) below a 2.0 will receive an academic probation letter (via email to their MIX account). This letter informs students about their academic probation status, explains what is meant by probation, provides information on resources available to help improve their academic performance, and describes the consequences of continued poor performance, including the standards and procedures concerning suspension.

Academic Suspension Procedures

At the end of each spring term only, students who have not raised their GPA to a 2.0 are sent a suspension letter (via e-mail to their MIX account and by post to their permanent address) and are suspended from the University effective at the end of the current summer term. This letter informs students that they have been suspended from the WVU, explains what that means, and provides information about how to appeal their suspension. The letter also describes procedures for reinstatement to the University after their suspension period, and the impact of taking classes at other institutions during the suspension period.

Students may also be suspended at the end of a fall or summer term, as recommended by the designated academic officer in each school or college, based on a failure to meet the provisions of a prior contract.

Duration of Suspension

Students who are suspended for the first time may not enroll in classes at WVU for the following term. Students suspended for a second time will not be allowed to enroll in classes at WVU for one calendar year. Students suspended for a third and final time will not be allowed to return to WVU for a minimum of five years.

Appeal of Suspension

Suspended students have until the date specified in written notice of suspension to appeal the suspension by sending a request to their school or college by e-mail or post. A designated academic officer in each school or college will then have until July 1 to review all requests and to reinstate students whose appeal is approved. Students whose appeals are denied or those who do not appeal their suspension will be removed from their fall classes.

Summer Enrollment for Students Suspended for Fall

Students who are suspended for fall may enroll in summer courses at any WVU campus, and those are the only courses which will be considered in determining eligibility for reinstatement for the fall or spring term following suspension. 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 who rehabilitate their overall GPA above 2.0 will be automatically reinstated from suspension. Colleges and schools may elect to defer a reinstatement decision as well until summer grades are available. Each college or school will communicate the final decision on reinstatement immediately after summer grades are released.

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.

Readmission after Serving Suspension

Students who wish to be readmitted to WVU after their required suspension period must contact Undergraduate Admissions. All reinstated students whose GPAs are below the suspension cutoff are given a contract that describes the conditions that must be met to avoid suspension in future terms.

Admissions

WVU Institute of Technology 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 Institute of Technology 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. (See https://www.wvhepc.org/resources/Series_23_2-7-13.pdf.)

The WVU Institute of Technology application is available online at http://admissions.wvutech.edu/. All applicants may contact the Beckley Admissions Office 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. Those who apply for the fall term before May 1 will automatically receive priority consideration for institutional scholarships.

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

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Freshman Students

Freshman applicants should submit the WVU Institute of Technology application, their official final high school transcript (sent directly from the high school), their ACT or SAT test scores, and proof of immunizations. 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:

- Four units of English (including grammar, composition, and literature)
- 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 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)
- 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)

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 a SAT math score of 460 taken prior to March 2016 or a 510 SAT score 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 WVU Potomac State College 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 and an official copy of the high school transcript.

WVU Tech is subject to the transfer guidelines adopted by the HEPC as described in Series 17: Transferability of Credits and Grades at West Virginia Public Colleges and Universities. (See https://www.wvhepc.org/resources/133-17.pdf.) Thus, WVU Tech will accept a maximum of 72 semester hours of lower-division credits and grades from public community and technical colleges or regional campuses. Additional credit from accredited four-year colleges and universities may be accepted, but the major department and the Registrar will determine which courses may apply to a particular degree.

Students with fewer than 24 transferable credit hours must meet freshman admission standards and must take the course, WVUE 191, First-Year Seminar.

All transfer students will be required to complete at least 36 hours of credit in residence at WVU Tech prior to their graduation. 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 BA 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 urged to visit the WVU Tech web page for international students at http://admissions.wvutech.edu/apply/international-student. 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
- Application Fee
- 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). 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
- Copy of Current Passport and/or Visa
- Financial Documentation
  - Applicant 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.).
    - 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

Financial Documentation

- 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 and TASC Students

Applicants who have completed the Test Assessing Secondary Completion (TASC) with a score of 500 on each of the five subtest categories or a General Equivalency Diploma (GED) with an average standard score of 2250 (450) or above should have the following sent to the WVU Tech Office of Admissions:

- GED and TASC scores sent directly by the State Department of Education
- Transcript from high school last attended sent directly by the high school.

Applicants who earned the GED fewer than five years prior to applying must also have ACT or SAT scores sent to WVU Tech. Admission requirements for applicants who earned the GED five or more years prior to applying and have not attended another college may be waived.

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. Immunization records must also be submitted before enrollment.

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 9th, 10th, 11th, and 12th 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. Note: West Virginia residents who were home-schooled and are applying for WV PROMISE Scholarship or WV Higher Education Grant must have GEDs or TASC scores. Further questions regarding this should be directed to the WV Higher Education Policy Commission at http://wvhepc.edu/.

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

High school juniors and seniors may earn credit hours toward a degree at WVU Tech prior to their graduation. To be eligible for ACCESS admission, the high school junior or senior must:

• Complete the application for ACCESS Admission
• Submit a high school transcript
• 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 the sophomore year of high school
• Have earned a minimum average of B (3.00) for all high school courses attempted

Students selected for ACCESS admission may enroll for any freshman level class as long as the student has a sufficient academic background. Students enrolled under this program will receive grades and quality points as earned. Transcripts will be forwarded to any other college upon request of the student; however, the acceptance of these credits toward a degree will be determined by the individual college. Tuition and fees will be the same as those for regular college students.

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

Agreements are in place with several high schools in West Virginia by which students may enroll in selected college courses that also satisfy requirements for high school graduation. High school students who are interested in these early enrollment classes may obtain information about them from the high school counselor or the WVU Tech Office of Admissions.

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 Veterans Affairs Office 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 Veterans Affairs 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 Veterans Affairs Office to continue their educational benefits. Please see http://techregistrar.wvutech.edu/forms.

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 Veterans Affairs Office. Failure to obtain prior approval may jeopardize continued funding and may result in a significant over payment of educational benefits that must be repaid to the VA. Students withdrawing from the institution must also contact the Veterans Affairs Office to avoid any over payment. Any over payment 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 Veterans Affairs Office and U.S. Department of Veterans Affairs or 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 Veterans Affairs 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: Phone 304.929.0337 (Beckley) – E-mail: Tech-Veterans-Affairs@mail.wvu.edu. (Tech-Veterans-Affairs@mail.wvu.edu)

In this section:

• Regents Bachelor of Arts (RBA) (p. 18)
• Transient Students (p. 18)
• 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. There are no application fees. For details, please see http://bhss.wvutech.edu/departments/regents-bachelor-of-arts.

WVU Tech’s Regents Bachelor of Arts (RBA) degree program is designed for adults who want to complete their college studies and obtain a bachelor’s 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 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 http://techregistrar.wvutech.edu/forms.
WVU Tech students who wish to take courses at another institution for credit toward a WVU Tech program must meet with their advisor and complete a Transient Student Form. This form indicates the courses to be taken at the other institution and the course equivalencies when transferred to WVU Tech. This form must be submitted to the Office of the Registrar before the student attends another institution. If the student will be taking courses at WVU Morgantown campus or Potomac State College, they must either complete a Dual Campus form if they will also be taking classes at WVU Tech, or a Change of Campus form if all courses during the term will be taken at another campus. Forms can be found at http://techregistrar.wvutech.edu/forms.

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 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 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.

PROCEDURE:

- Students must complete the Academic Forgiveness form located on the 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 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

ADVISING

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. 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
Changes in a student's schedule will be processed when a Change in Schedule form has been properly signed and returned to the Registrar. No additions to a student's schedule may be made after the late enrollment period without the approval of an academic dean. All withdrawals after the first week of classes must be approved by an advisor.

For specific information regarding Course Withdrawals and University Withdrawals, please review the Withdraw Policy (p. 21) 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 on the Degree Works website (https://registrar.wvu.edu/academic-records/degeworks).

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 or the Office of the University Registrar (https://registrar.wvu.edu).

In this section:
• Attendance Policy (p. 22)
• Military Leave Policy (p. 23)
• Auditors (p. 23)
• Registration (p. 23)
• Course Withdrawal and University Withdrawal Policy (p. 23)
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 the instructor will provide an opportunity 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 (http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#enrollmenttext), 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 (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 Policy (http://catalog.wvu.edu/undergraduate/enrollmentandregistration/#Military_Credit).

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 (http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification/#appealstext) process

EXCUSED ABSENCES

Other events may justify an excused absence at the discretion of the instructor or program. 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, illness of an immediate family member, death of an immediate family member, or extreme weather.

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 (https://diversity.wvu.edu/about/staff) for support regarding religious observances.

The Office of Accessibility Services (https://accessibilityservices.wvu.edu/about) can serve as a resource to discuss student absences related to accommodations.

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 policies 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 instructor 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 (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 for the relevant course.
Final course grades affected by attendance in an individual course may be appealed using the normal course grade appeal (http://catalog.wvu.edu/undergraduate/coursecredittermsclassification/#appealstext) process.

**Military Leave Policy**

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 (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 two following processes depending upon when the student withdraws.

1. Withdraw from the University up to and including the 13th week of instruction.
   a. Students who withdraw before the end of the 13th week of instruction will be processed for a full refund of their tuition and fees and be administratively removed from their classes. No course grades or credit will be awarded.

2. Withdraw from the University after the 13th week of instruction.
   a. Students who leave the University for military service after the 13th week of instruction should work with their home college/school's Dean's Office and the Center for Veteran, Military and Family Programs (https://wvuveterans.wvu.edu). The student may also contact the Office of the University Registrar.

   The Dean's Office will assist the student in reviewing the student's eligibility for credit for their courses on a course-by course basis with the instructors. If the course is substantially complete and the student has done passing work, the student should receive the grade earned at that time. It is anticipated that this would be the outcome in the majority of the courses.

   • When it is deemed that no credit can be awarded, the student can be administratively withdrawn from the course or, when possible, given an Incomplete.
   • Students called to service after the 13th week but for a relatively short duration (which may include exam week) may arrange for an Incomplete with provision to make up the final exam after completing the period of service.

   Students who expect to be separated from the institution for more than three weeks during a particular semester may apply for a Military Leave of Absence.

   • Students granted a Military Leave of Absence will not need to apply for readmission nor pay any readmission fees.

**PROCEDURES**

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

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

**Auditors**

A student who audits a course must register and pay full fees for the course but does not receive credit for the course. A student who audits a course must let one semester pass before enrolling in the same course for credit. A student may only change their status from audit to grade or grade to audit through their advisor, during the registration period. Advisors will notify the Office of the University Registrar of the students 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 to remove an auditor from a class list or grade report if attendance requirements are not met.

**Registration**

For each course students attend in person or online, they must be registered via STAR.

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 website (https://registrar.wvu.edu).

**Course Withdrawal and University Withdrawal Policy**

There are three time frames for withdrawals. The tuition refund policy can be reviewed at the Refunds (https://studentaccounts.wvu.edu/refunds) page on the Student Accounts website.
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 for courses beginning on different parts of term or in the summer must be within the deadline as indicated on the Add and Drop Dates (https://Registrar.Wvu.edu/calendars/add-and-drop-dates) section of the Office of the University Registrar's website. 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 several courses after the Drop/Add period but prior to the Withdrawal Deadline published in the University Calendar (during the 13th week of instruction for 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. “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 withdraw 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)

Withdrawal from all courses after the withdrawal deadline is considered a retroactive withdrawal from the University for that term. A retroactive withdrawal for one or more terms may be granted only under extreme circumstances and will require the approval of the academic college or unit in which the student was enrolled for the respective term(s). The Retroactive Withdrawal must be requested within 12 months of the Withdrawal Deadline for the term in question. If the withdrawal is granted, a grade of W will be recorded on the transcript for each course. A withdrawal from all courses constitutes withdrawal from the University for the approved term only.

IMPORTANT NOTICE: 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 office to contact to determine if their course load might be reduced below the minimum requirement set by their program. 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.

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 college dean or designee. A successful petition will demonstrate that the student’s performance was uncharacteristically low for that term, that the extreme circumstances arose after the Withdrawal Deadline, and that the student can now make satisfactory progress. If the petition is granted, the college/school in which the student is enrolled will request the withdrawal from all classes for the approved term directly to the appropriate institutional officer.

General considerations when withdrawing from classes

• Students who wish to withdraw from one or more courses are encouraged to meet with their academic adviser to discuss:
  • If their course load would be reduced below the minimum requirement set by their program.
  • 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.
  • 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. 25)
• Pass/Fail Grading (p. 25)
• Evaluation of Student Progress (p. 26)
• Incomplete Grade Policy (p. 26)
• Grade Point Average (p. 26)
• Repeat Policy (p. 28)
• Grade Reports (p. 28)
• Dean's List (p. 28)
• Transcripts (p. 28)

Grading System

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

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 Registration), 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.
- A pass/fail course is graded using the same criteria as are used for a graded course. The instructor turns in the appropriate letter grade to the Office of the University Registrar. This letter grade is then converted to a P or F on the basis of A, B, C, or D for a pass and F for a fail.
- 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 Institute of Technology 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. 26) 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. 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 or 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 form prior to the end of the term. If the instructor agrees, they will set the contractual conditions under which the grade of I will be changed to a letter grade and the student will sign the online contract. 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 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
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 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 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. To be eligible to receive a graduate degree, a student must have an overall GPA of at least 2.75 at the time of graduation. To be eligible to receive a graduate certificate, a student must have an overall GPA of at least 2.75 in courses applied to the certificate.
- 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.

\[
\text{(Number of Credit Hours) multiplied by the (Letter Grade Value)} = \text{Grade Points}
\]

- MATH 126 with a grade of A \((3 \text{ credits}) \times (4 \text{ points}) = 12 \text{ Quality Points}\)
- ENGL 101 with a grade of B \((3 \text{ credits}) \times (3 \text{ points}) = 9 \text{ Quality Points}\)
- POLS 102 with a grade of D \((3 \text{ credits}) \times (1 \text{ point}) = 3 \text{ Quality Points}\)
- SPAN 101 with a grade of F \((3 \text{ credits}) \times (0 \text{ points}) = 0 \text{ Quality Points}\)
- CHEM 111 with a grade of C \((4 \text{ credits}) \times (2 \text{ points}) = 8 \text{ Quality Points}\)

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 = \(32 \text{ (total number of quality points earned)} / 16 \text{ (total number of credit hours attempted)} = 2.0 \text{ semester GPA}\)

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 accredited institutions in the West Virginia public higher education system. The course can only be repeated at WVU locations. Students have only one opportunity to improve their original grade under the D/F repeat policy. Only the second grade in the repeated course counts toward the student’s institutional GPA and credit hours for graduation, even if the repeated course grade is lower than the original. The D/F repeat policy is applied any time an eligible course is repeated. Second degree students at WVU may only D/F repeat courses completed while attempting their second degree.

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

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

OTHER REPEATED COURSES

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

1. 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.
2. The original grade is included in determining the institutional GPA. It is excluded from earned or degree hours and is marked with an (A).
3. The original grade is not deleted from the student’s permanent record.
4. The second grade is entered on the student’s transcript and marked as included (I) in the semester that the course was repeated.
5. 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 List

To recognize academic excellence by students enrolled for at least 12 credit hours of graded courses, the Dean’s List is published at the end of each regular semester. In order to be eligible, students must not have any grades of I (incomplete), NR (not reported), or W (withdrawal). This list contains names of all full-time students whose grade average is 3.5 or higher.

Each student whose grade average in a particular semester is 3.5 or higher receives a certificate from the appropriate dean. Certificates distinctively marked “with highest honors” are awarded to students with a 4.0 average in a particular semester.

Official Transcripts

Students can order official transcripts through the Request Transcript webpage (https://registrar.wvu.edu/academic-records/request-transcript) for students at the Morgantown location; Transcript Request Procedures webpage (https://admissions.potomacstatecollege.edu/forms/transcript-request-procedures) for students at the Keyser location, the Transcript Request webpage (https://techregistrar.wvutech.edu/academic-records/transcript-request) for students at the Beckley location. Before ordering a transcript, students should ensure that all grades and degree(s) have been posted as transcript requests are processed immediately on the Morgantown Campus. All financial obligations to West Virginia University must be cleared before transcripts can be released. 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 students enrollment at Potomac State College. A WVU Institute of Technology College transcript is a complete record of a students enrollment at WVU Tech.
Degree Regulations

In this section:

- General Requirements for Graduation (p. 29)
- First Year Seminar (p. 30)
- General Education Foundation (p. 30)
- Credit Residence Requirements (p. 30)
- Coursework Done Out of Residence (p. 30)
- Credit Validation (p. 31)

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 29 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 re-enroll until they pass the course. Each degree program specifies its unique combination of required courses and electives. All WVU Tech baccalaureate level programs must require at least 120 credit hours of course work.

**General Education Foundation**

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

**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.

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 18 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. Courses brought in to WVU from another institution are called transient work. Transient work includes:

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

**RULES GOVERNING TRANSFER WORK**

- Transfer students must have earned a 2.0 GPA in baccalaureate-level work at their institution of origin to be eligible for admission to the West Virginia University system. Individual programs may require a higher transfer GPA and/or other prerequisites for admittance as noted in the University catalog. More information can be found on the WVU Undergraduate Admissions website [here](https://admissions.wvu.edu).
- Any remedial courses, or courses taken from a non-regionally accredited institution, that have been included in the grade point average of the institution of origin will be removed before consideration for admission to the West Virginia University system.
- Transfer students who have fewer than twenty-four transferable credit hours must also meet freshman admission standards.
- Upon matriculation to WVU, transfer students holding an Associate of Arts (A.A.) or Associate of Science (A.S.) degree from a regionally accredited institution shall be deemed as having satisfied the WVU general education requirement.
- All credit and grades earned at a regionally or internationally accredited institution will transfer to West Virginia University.
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 in good academic standing 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 study abroad, the military, or at other WVU system campuses.
- Transient work may violate the Credit Residency Requirement (http://catalog.wvu.edu/undergraduate/degree_regulations/#Residency_Requirements) and render the student ineligible for graduation.
- Courses completed for a grade other than W (Withdraw) in residence may not be repeated at another school for degree credit via the transient process.
- Students must have completed the required WVU prerequisites to take a course for transient credit or receive WVU credit for a course.
- Undergraduate transfer/transient coursework taken prior to the completion of a baccalaureate degree will not be posted to the student's academic record towards another degree in the WVU system. Undergraduate transfer/transient work taken after completion of a baccalaureate degree may be posted to the academic record towards a second degree in the WVU system.
- A student with extraordinary documented circumstances may appeal a decision regarding transfer or transient credit to the appropriate dean.

PROCEDURES

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

Credit Validation

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

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. 31)
- Dual Degrees (p. 32)
- Second Degrees (p. 32)

Double Majors

The double major is the awarding of one degree with two majors offered by one college/school. For instance, a student who completes majors in English and History earns one B.A. degree. A student who completes multiple majors with the same degree designation offered by different colleges/schools will be awarded dual degrees. 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 has completed a double major with the same degree designation. 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 requires students to complete a minimum of 30 unique credit hours that are not used to satisfy their primary degree requirements. For example, if the student’s primary degree program requires a minimum of 120 credit hours, the student must complete a minimum of 150 credit hours 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. Students who have already earned a WVU bachelor’s degree cannot earn a second bachelor’s degree with the same degree designation and within the same college as the first degree.

In this section:

• Application for Graduation (p. 32)
• Graduation with Honors (p. 32)

Application for Graduation

A formal application for graduation must be filed in the Registrar's Office 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.

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 or second baccalaureates.

All candidates for a baccalaureate with an overall 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.

The grade point average for honors consideration for a baccalaureate is based on baccalaureate-level college work attempted through the final semester. This calculation includes baccalaureate-level college work attempted at institutions accredited by regional accreditors in the United States. Credit hours earned with a grade of P or S are not considered in the determination. Grades of F, however, are computed as hours attempted. The grade point average through the penultimate semester will be used for notations in the commencement programs. Students must meet residency requirements within the WVU system to be considered for graduation with honors.

The GPA for honors consideration for entry-level professional degrees is based on baccalaureate-level and professional-level work attempted through the last semester. This calculation includes baccalaureate-level and professional-level college work attempted at all regionally accredited 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 eligible to receive the honors designation. Grade point averages for graduation with honors on second baccalaureates shall be computed on all baccalaureate-level work, excluding credit earned with a P or S. This includes work completed for the first degree as well.

FERPA

In this section:

• Notice to Students Regarding FERPA (p. 33)
• Designation of Directory Information (p. 33)
• Designation of Limited Use Directory Information (p. 33)
• Withholding Directory Information (p. 33)
• Parent/Guest Access to Online Student Records (p. 33)
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, 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 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. 34)
- Aid Offer Notification (p. 34)
- Employment Opportunities (p. 34)

To receive an offer of aid, a student must be admitted to the WVU System as a degree-seeking student. Students 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 who need financial aid 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 Preparing for the FAFSA (https://financialaid.wvu.edu/applying-for-aid/preparing-for-fafsa). See Complete the FAFSA (https://financialaid.wvu.edu/applying-for-aid/fafsa) for information on how to submit the FAFSA and priority deadlines.

Aid Offer Notification

WVU will receive students' FAFSA information electronically if the WVU System's school code (003827) was included on the FAFSA. The WVU Mountaineer Hub will notify students via their WVU email account if additional information is needed. Once a financial aid offer is available, a notification will be sent to the student's WVU email.

Employment Opportunities

Students are encouraged to use the job search database (https://studentemployment.wvu.edu) to search for on- and off-campus part-time employment opportunities.

In this section:

- Satisfactory Academic Progress (p. 34)
- Consequences of Withdrawal (p. 34)

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 Withdrawing from Courses (https://financialaid.wvu.edu/home/maintain/withdrawing) for more information. Withdrawing from one or more classes may also impact future financial aid eligibility per the Satisfactory Academic Progress Policy (http://financialaid.wvu.edu/home/maintain/academic-progress).

Additional Information

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

In this section:

• General Statement (p. 35)
• Requirements (p. 35)
• Process to Declare a Minor (p. 35)

General Statement

Minors are offered in various disciplines at the 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 6 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.

Programs, Courses & Credits

In this section:

• Academic Definitions (p. 35)
• Rules for Attaining Multiple Credentials (p. 36)
• Modality Definitions (p. 37)

Academic Definitions

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

DEGREE DESIGNATION

The 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, 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

Academic Definitions

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

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The 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, 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 majors on the student’s diploma and transcript.

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 the diploma.

AREA OF EMPHASIS
An area of emphasis 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. 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 diploma.

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 diploma.

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

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
A 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 an area of emphasis, minor, or major. Teacher specializations are added to a student's transcript only at the time of graduation.

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 6 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/#/programtext) are allowed to share more than 12 credits.

**Credit Sharing Limitations for Graduate Certificates**

See Academic Certificate Policies (http://catalog.wvu.edu/graduate/graduatecertificates) for credit limitations applicable to earning a certificate. See Credit Sharing Limitations for Graduate Degrees and Majors (p. 37) 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**

https://online.wvu.edu/

**DISTANCE AND EXTENDED EDUCATION PROGRAM DEFINITION**

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 - More than 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.

**DISTANCE EDUCATION COURSE DELIVERY**

Distance Education Courses are credit-bearing courses in which 50% or more of the course is delivered through distance learning technologies.

- **Entirely Online Asynchronous – (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 can be required.

- **Entirely Online Synchronous – (100% online + synchronous events)** 100% of class sessions are delivered via distance education technologies. There are no campus visits or visits to designated sites required. Synchronous learning events may be required throughout the course.

- **Mostly Online – (75-99% online)** More than 75% of class sessions are delivered via distance education technologies. A course may require students to travel to campus or other designated sites to attend an orientation, take exams, or participate in other on-site experiences.

- **Hybrid- (50-75% online)** More than 50% and less than 75% of class sessions are delivered via distance education technologies, but some visits to a classroom or designated instructional site are required.
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.
Abbreviations Used in Course Listings

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>credit hours per course</td>
</tr>
<tr>
<td>Lec</td>
<td>lecture period</td>
</tr>
<tr>
<td>Rec</td>
<td>recitation period</td>
</tr>
<tr>
<td>Lab</td>
<td>laboratory period</td>
</tr>
<tr>
<td>GLAB</td>
<td>graded lab</td>
</tr>
<tr>
<td>WEB</td>
<td>web-based course</td>
</tr>
<tr>
<td>CONC</td>
<td>concurrent - listed with PR meaning the course may be completed at the same time as enrollment in the course for which it is listed</td>
</tr>
<tr>
<td>PR</td>
<td>prerequisite - course must be completed in a term prior to enrollment in the course for which it is listed</td>
</tr>
<tr>
<td>Coreq</td>
<td>co-requisite - courses must be taken in the same term</td>
</tr>
<tr>
<td>Consent</td>
<td>consent of instructor required</td>
</tr>
<tr>
<td>CR</td>
<td>credit but no grade</td>
</tr>
</tbody>
</table>

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 eight-week 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 good academic standing (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.

Last Week of Exams and Final Examination Policy

In undergraduate courses greater than 8 weeks in duration, no substantial examinations or quizzes may be given during the last week of classes preceding finals with the exception of practical laboratory tests and make-up examinations. An examination or quiz is considered substantial if it counts for 20 percent or more of the final course grade. Exceptions to this policy must be approved by the dean of the college or school.

When the calendar permits, a preparation day for finals will be added to the academic calendar. Preparation days for finals are not to be used as dates on which papers are due, quizzes or examinations are administered, or for any other class-related activity, other than office hours.

The final examination period is reserved for scheduled final examinations. No other class-related activity, with the exception of office hours, may be scheduled during the final examination period. No final examinations may be given before the examination period begins, with the exception of evening courses.

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 at WVU Institute of Technology.

The undergraduate final examination schedule for each academic term is determined by the Office of the University Registrar at the Morgantown location, the Office of Academic Affairs at the WVU Potomac State College, and the Office of the Registrar at WVU Institute of Technology. The final examination date and time for a class is determined by the class meeting 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. Finals are held in the location of the regularly scheduled class meeting unless students are otherwise notified.

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.

Common examinations are scheduled for certain courses that administer examinations at the same time for all students enrolled in the course. Common examinations may only be administered during the specified common examination time slot in order to minimize conflicts in the students’ schedules and
help ensure room availability. No courses other than those listed on the final examination schedule may use a common examination time. Common
examinations given at the Morgantown location 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.

In a course extending over two semesters, when the subject matter is continuous, the second-semester final examination may include the subject matter
of the first semester.

If a student has more than three final examinations on any one calendar day of the final examination period, the student may make arrangements to
take the last examination of the day during the make-up examination time period. If a student has two final examinations scheduled during the same
common examination time period, the student must contact the departments administering the common examinations to make arrangements for a make-
up examination.

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, or to the Provost’s designee.

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.

Visiting Students

Full-time WVU Tech students and those employed by the University (administration, faculty, or other regular University employees) may attend classes
as visitors. Visiting students must have permission in writing from their advisor and/or supervisor, and all visiting students must have permission from the
instructor of the course. A visitor will not receive credit and may not apply for credit by examination in a visited class.

In this section:

• Classification of Students (p. 41)
• Course Overload (p. 41)
• Credit Hours (p. 41)
• Academic Credit for Military Training (p. 42)
• Credit by Examination (p. 42)

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:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>1-29 Earned Credit Hours, Inclusive</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30-59 Earned Credit Hours, Inclusive</td>
</tr>
<tr>
<td>Junior</td>
<td>60-89 Earned Credit Hours, Inclusive</td>
</tr>
<tr>
<td>Senior</td>
<td>90 or More Earned Hours</td>
</tr>
</tbody>
</table>

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.
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. 42)
- Tuition and Fees (p. 42)
- Identification Card (p. 42)

Cost of an Academic Year's Work

The Office of Enrollment Services provides an estimate of the total cost of attendance 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 Fees

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 are in place concerning late fees, financial holds, removal from classes, and collections 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 STAR Information System, which can be accessed through the WVU Portal at 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. No degree is conferred and no transcripts are 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 takes 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).

Courses

Veterans

In this section:

• Center for Veteran, Military and Family Programs (p. 43)
• Registration for Veterans (p. 44)
• Student Account Policies (p. 44)

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)

VETERANS

All students receiving VA benefits for the first time will need to complete a Certificate of Eligibility (CoE) by going to U.S. Department of Veteran Affairs (https://www.va.gov). This process may take three to four weeks to process. For all chapter benefits, go to the Center for Veteran, Military and Family Programs (https://wvuveterans.wvu.edu/home) for step-by-step instructions in order to be certified for benefits.

In order to receive full payments for VA benefits, veteran, current service members, and dependents, must maintain a minimum of 12-degree pursuant credit hours every term. Degree pursuant coursework can be defined as courses recorded as degree requirements, degree electives, course prerequisites, required general education courses, and minors required by a given major as stated in the WVU Catalog (http://catalog.wvu.edu).
Reserve Officers’ Training Corps (ROTC) or Military Science (MILS) courses and elective non-degree applicable courses, such as PE courses, do not count as degree pursuant courses except those fulfilling general education requirements or elective hours to complete major (if applicable).

Students receiving Chapter 33 (Post 9/11) who have served in the military, will need to send a DD-214 to ROTC@mail.wvu.edu to receive credit for basic training and advanced schooling.

Students receiving Chapter 33 (Post 9/11) benefits, need to be aware charges for housing and a meal plans are their responsibility. Once benefits begin, student will receive a stipend each month for full Basic Housing Allowance (BAH) as long as the student remains in 12 degree pursuant hours.

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 benefit payment.

PRIOR CREDIT EVALUATION

All student veterans are required to submit a Prior Credit Evaluation Form within two semesters of coming to WVU in order to be certified for benefits. It will be the student’s responsibility to inform a certifying official if their major has changed. The certifying official will send a Prior Credit Evaluation Form to the student’s adviser to list the amount of credits to be used for the new major of choice.

Contact Information:
The Center for Veteran, Military, and Family Programs (CVMF) at WVU Mountainlair, Room 214
Email: veterans@mail.wvu.edu
Phone: 304-293-8825
Website: wvuveterans.wvu.edu
Facebook: WVUVeteransHQ
Twitter: @WVUVeterans

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

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 takes 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 Sciences

General Information
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. 45)
- Bachelor of Science (B.S.) (p. 45)
- 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
- Career-Technical Education
- 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
- Professional Writing and Editing
- Psychology
- Risk and Insurance
- Sociology
- Sport Management

Certificates
- Fraud Examination

BHSS COLLEGE MINOR:
- Adventure Recreation Management (p. 46)

DEPARTMENT OF ACCOUNTING AND BUSINESS MANAGEMENT
- Accounting (p. 47)
- Business Administration (p. 47)
- Entrepreneurship (p. 48)
- Finance (p. 48)
- Fraud Examination (p. 48)
- Human Resources Administration (p. 48)
- Marketing (p. 49)

DEPARTMENT OF HISTORY, ENGLISH, AND CREATIVE ARTS
- History and Government (p. 49)
- Professional Writing and Editing (p. 49)

DEPARTMENT OF PSYCHOLOGY
- Psychology (p. 50)

DEPARTMENT OF SOCIAL SCIENCES AND PUBLIC ADMINISTRATION
- Criminal Justice (p. 50)
- Economics (p. 50)
- Forensic Investigation (p. 51)
- Health Services Administration (p. 51)
- Political Science (p. 51)
- Sociology (p. 52)

DEPARTMENT OF SPORT STUDIES
- Sport Management (p. 52)

BHSS COLLEGE MINOR
Adventure Recreation Management

MINOR CODE - UT25

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 101</td>
<td>Essential Skills in Adventure Recreation</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 103</td>
<td>Introduction to Adventure Recreation</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 301</td>
<td>Adventure Recreation Program Management</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 302</td>
<td>Adventure Travel and Tourism</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 401</td>
<td>Ethical and Legal Issues in Adventure Programming</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 491</td>
<td>Professional Field Experience</td>
<td>3</td>
</tr>
</tbody>
</table>
### Introductory Skills Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 111</td>
<td>Introduction to Whitewater Rafting</td>
</tr>
<tr>
<td>ADRC 121</td>
<td>Introduction to Rock Climbing</td>
</tr>
<tr>
<td>ADRC 131</td>
<td>Introduction to Mountain Biking</td>
</tr>
</tbody>
</table>

### Technique Development Skills Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 112</td>
<td>Whitewater Rafting Techniques</td>
</tr>
<tr>
<td>ADRC 122</td>
<td>Rock Climbing Techniques</td>
</tr>
<tr>
<td>ADRC 211</td>
<td>Introduction to Whitewater Raft Guiding</td>
</tr>
<tr>
<td>ADRC 212</td>
<td>Swiftwater Rescue</td>
</tr>
<tr>
<td>ADRC 221</td>
<td>Lead Climbing</td>
</tr>
<tr>
<td>ADRC 222</td>
<td>Climbing Rescue Techniques</td>
</tr>
<tr>
<td>ADRC 311</td>
<td>Whitewater Raft Trip Leadership</td>
</tr>
<tr>
<td>ADRC 321</td>
<td>Rock Climbing Instructor Development</td>
</tr>
</tbody>
</table>

Total Hours: 20

* Requires one introductory and one technique development course within the same area.

### DEPARTMENT OF ACCOUNTING AND BUSINESS MANAGEMENT

#### Accounting

**MINOR CODE - UT01**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 311</td>
<td>Intermediate Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 312</td>
<td>Intermediate Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 322</td>
<td>Accounting Systems</td>
<td></td>
</tr>
<tr>
<td>ACCT 348</td>
<td>Financial Statement Analysis</td>
<td></td>
</tr>
<tr>
<td>ACCT 432</td>
<td>Advanced Cost Management</td>
<td></td>
</tr>
<tr>
<td>ACCT 441</td>
<td>Income Tax Accounting 1</td>
<td></td>
</tr>
<tr>
<td>ACCT 442</td>
<td>Income Tax Accounting 2</td>
<td></td>
</tr>
<tr>
<td>ACCT 491</td>
<td>Professional Field Experience</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 18

#### Business Administration

**MINOR CODE - UT03**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 320</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro to Computer Applications</td>
<td>4</td>
</tr>
<tr>
<td>FIN 325</td>
<td>Financial Management 1</td>
<td>3</td>
</tr>
<tr>
<td>MANG 386</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 25
Entrepreneurship

MINOR CODE - UT27

Students must maintain a 2.5 GPA and must get a C or better in all courses required for the minor.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 300</td>
<td>Creativity and Idea Generation</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 400</td>
<td>Fundamentals of Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 420</td>
<td>Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 421</td>
<td>Entrepreneurial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 450</td>
<td>Entrepreneurial Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MANG 310</td>
<td>Management of Small Business</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 18

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

Finance

MINOR CODE - UT06

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 491</td>
<td>Professional Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>ECON 331</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>FIN 310</td>
<td>Investments</td>
<td>3</td>
</tr>
<tr>
<td>FIN 321</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN 325</td>
<td>Financial Management 1</td>
<td>3</td>
</tr>
<tr>
<td>FIN 326</td>
<td>Financial Management 2</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 18

Fraud Examination

MINOR CODE - UT07

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 348</td>
<td>Financial Statement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 420</td>
<td>Fraud Examination</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 421</td>
<td>Fraud Management: Legal/Ethical Issues</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 422</td>
<td>Advanced Fraud Investigation &amp; Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 423</td>
<td>Information Security and Controls</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 18

Human Resources Administration

MINOR CODE - UT10

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANG 330</td>
<td>Human Resource Management Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>MANG 422</td>
<td>The Individual and the Organization</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 430</td>
<td>Collective Bargaining</td>
<td></td>
</tr>
<tr>
<td>HRMG 440</td>
<td>Training and Development</td>
<td></td>
</tr>
<tr>
<td>MANG 350</td>
<td>Leadership In Business</td>
<td></td>
</tr>
<tr>
<td>PSYC 350</td>
<td>Topics in Social Psychology</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 15
Marketing

MINOR CODE - UT13

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 380</td>
<td>Integrated Promotions</td>
<td>3</td>
</tr>
</tbody>
</table>

Select four of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKTG 315</td>
<td>Buyer Behavior</td>
<td></td>
</tr>
<tr>
<td>MKTG 325</td>
<td>Marketing Research</td>
<td></td>
</tr>
<tr>
<td>MKTG 410</td>
<td>Retail Management</td>
<td></td>
</tr>
<tr>
<td>MKTG 420</td>
<td>Sales Management</td>
<td></td>
</tr>
<tr>
<td>MKTG 485</td>
<td>Global Marketing</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 18

Department of History, English, and Creative Arts

History and Government

MINOR CODE - UT09

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 102</td>
<td>Introduction to American Government</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following sets of courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 152 &amp; HIST 153</td>
<td>Growth of the American Nation to 1865 and Making of Modern America: 1865 to the Present</td>
<td>6</td>
</tr>
<tr>
<td>HIST 179 &amp; HIST 180</td>
<td>World History to 1500 and World History Since 1500</td>
<td></td>
</tr>
</tbody>
</table>

POLS 300+ Level Courses: 3

HIST 200+ Level Courses: 9

Total Hours: 21

Professional Writing and Editing

MINOR CODE - UT23

Minimum 3.0 GPA in PWE courses.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 301</td>
<td>Writing Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>Editing</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one course from each of the three following groups:

Business and Technical Writing

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 304</td>
<td>Business and Professional Writing</td>
<td></td>
</tr>
<tr>
<td>ENGL 305</td>
<td>Technical Writing</td>
<td></td>
</tr>
</tbody>
</table>

Writing with Technology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 303</td>
<td>Multimedia Writing</td>
<td></td>
</tr>
<tr>
<td>ENGL 306</td>
<td>Topics in Humanities Computing</td>
<td></td>
</tr>
</tbody>
</table>

Linguistics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 221</td>
<td>The English Language</td>
<td></td>
</tr>
<tr>
<td>ENGL 321</td>
<td>History of the English Language</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 15
**DEPARTMENT OF PSYCHOLOGY**

**Psychology**

**MINOR CODE - UT17**

A minimum grade of C- is required for all courses in the minor.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 202</td>
<td>Research Methods in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 301</td>
<td>Biological Foundations of Behavior</td>
<td>4</td>
</tr>
<tr>
<td>or PSYC 302</td>
<td>Behavior Principles</td>
<td></td>
</tr>
<tr>
<td>PSYC 241</td>
<td>Introduction to Human Development</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 281</td>
<td>Introduction to Abnormal Psychology</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following courses:

- PSYC 331 History and Systems of Psychology
- PSYC 343 Child and Adolescent Development
- PSYC 351 Topics in Social Psychology
- PSYC 363 Personality Theory
- PSYC 382 Exceptional Children
- PSYC 424 Learning and Behavior Theory
- PSYC 474 Applied Behavior Analysis
- PSYC 491 Professional Field Experience
- PSYC 493 Special Topics
- PSYC 495 Independent Study

**Total Hours**

19

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**DEPARTMENT OF SOCIAL SCIENCES AND PUBLIC ADMINISTRATION**

**Criminal Justice**

**MINOR CODE - UT21**

A 2.0 GPA is required for all courses counted toward the minor.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 233</td>
<td>Juvenile Justice</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three of the following courses:

- ACCT 421 Fraud Management: Legal/Ethical Issues
- CJ 310 Law Enforcement Administration
- CJ 320 Courts and Judicial Systems
- CJ 410 Criminal Investigations
- HUMS 320 Public Administration
- POLS 313 American Constitutional Law
- POLS 400 Terrorism and National Security
- SOCA 302 Deviant Behavior
- SOCA 311 Social Research Methods

**Total Hours**

15

---

**Economics**

**MINOR CODE - UT05**

Must have 18 credit hours and 9 hours must be 300 or 400 level courses

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Hours</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 301</td>
<td>Intermediate Micro-Economic Theory</td>
<td>3</td>
</tr>
<tr>
<td>Select three of the following:</td>
<td></td>
<td>9</td>
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<tr>
<td>ECON 225</td>
<td>Elementary Business and Economics Statistics</td>
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</tr>
<tr>
<td>ECON 331</td>
<td>Money and Banking</td>
<td></td>
</tr>
<tr>
<td>ECON 401</td>
<td>Managerial Economics</td>
<td></td>
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<tr>
<td>ECON 430</td>
<td>Collective Bargaining</td>
<td></td>
</tr>
<tr>
<td>ECON 441</td>
<td>Public Economics</td>
<td></td>
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<tr>
<td>Other ECON courses may be accepted with advisor approval.</td>
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<td>Total Hours</td>
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<td>18</td>
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**Forensic Investigation**

**MINOR CODE - UT26**

Must maintain an overall 2.0 GPA in minor coursework.

**Required Coursework**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRNX 101</td>
<td>Introduction to Forensic Investigation</td>
<td>3</td>
</tr>
<tr>
<td>Electives (At least three (3) courses must be 300 level and above)</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>FRNX 210</td>
<td>Fingerprint Evidence Analysis</td>
<td></td>
</tr>
<tr>
<td>FRNX 224</td>
<td>Automated Fingerprint Identification Systems</td>
<td></td>
</tr>
<tr>
<td>FRNX 301</td>
<td>Investigative Photography</td>
<td></td>
</tr>
<tr>
<td>FRNX 310</td>
<td>Firearms and Tool Marks</td>
<td></td>
</tr>
<tr>
<td>FRNX 311</td>
<td>Trace and Blood Spatter</td>
<td></td>
</tr>
<tr>
<td>FRNX 312</td>
<td>Digital Evidence Protocols</td>
<td></td>
</tr>
<tr>
<td>FRNX 314</td>
<td>Questioned Documents</td>
<td></td>
</tr>
<tr>
<td>FRNX 315</td>
<td>Interviewing Theory</td>
<td></td>
</tr>
<tr>
<td>FRNX 316</td>
<td>Death Investigation</td>
<td></td>
</tr>
<tr>
<td>FRNX 318</td>
<td>Crime Scenes</td>
<td></td>
</tr>
<tr>
<td>FRNX 324</td>
<td>Forensic Anthropology and Osteology</td>
<td></td>
</tr>
<tr>
<td>FRNX 326</td>
<td>Investigative Intelligence</td>
<td></td>
</tr>
<tr>
<td>FRNX 327</td>
<td>Sexual Assault Investigations</td>
<td></td>
</tr>
<tr>
<td>FRNX 422</td>
<td>Cold Case Investigations</td>
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<tr>
<td>Total Hours</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**Health Services Administration**

**MINOR CODE - UT28**

Must have 15 credit hours and 9 hours must be 300 or 400 level courses.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS 300</td>
<td>Introduction to Health Care Organizations</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 330</td>
<td>Health Insurance</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 410</td>
<td>Fundamentals of Health Care Administration</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 470</td>
<td>Health Services Planning</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HUMS 400</td>
<td>Health Services Law and Legislation</td>
<td></td>
</tr>
<tr>
<td>HUMS 420</td>
<td>Principle of Microhealthcare Finance</td>
<td></td>
</tr>
<tr>
<td>HUMS 440</td>
<td>Long Term Care Administration</td>
<td></td>
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<tr>
<td>Total Hours</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**Political Science**

**MINOR CODE - UT16**

Must have 15 credit hours and 9 hours must be 300 or 400 level courses.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 102</td>
<td>Introduction to American Government</td>
<td>3</td>
</tr>
</tbody>
</table>
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 and HUMS Courses

Total Hours 15

Sociology

MINOR CODE - UT19

Must have 15 hours of sociology courses and 9 hours must be in 300 or 400 level sociology courses.
A 2.0 GPA is required for all courses counted toward the minor.

Required Courses

SOCA 101  Introduction to Sociology 3

Sociology (SOCA) Electives 12
(must include at least 9 credit hours of upper division courses)
WGST 225  Women in Appalachia (may be included as part of the Sociology minor)

Total Hours 15

DEPARTMENT OF SPORT STUDIES

Sport Management

MINOR CODE - UT20

A minimum grade of C- is required for all courses in this minor.

Required Courses

BCOR 350  Principles of Marketing 3
BCOR 370  Managing Individuals & Teams 3
SM 425  Sport Facility and Event Management 3
SM 485  Sport Management 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

Accounting

Degree Offered
- Bachelor of Science

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 pursue graduate work as well as seek 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 the CPA certificate, they need an additional 30 undergraduate/graduate credit hours. Contact the department chair for details.
FACULTY

CHAIR
• Md. Nurul Amin - ABD (Univ. of Illinois at Urbana Champaign; MBA & Macct. (Western Illinois Univ.), CPA, CMA, CFE

ASSISTANT PROFESSORS
• Charles Seeman - Ph.D. (NCU), MBA (Pfeiffer University); CPA; CMA
  Income Tax, Information System, & Auditing
• Angela McCaskill - Ph.D. (NCU), Med, MAcc., MBA
  Financial Accounting, Managerial Accounting, & Finance; Research interest: BSC, managerial acct, & accounting education

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.

General Education Foundations

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

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

Minimum GPA of 2.0 is required in all ACCT courses.

GEF Elective Requirements (2, 4, 5, 6, and 7) 16

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>Introduction to Composition and Rhetoric, and Composition, Rhetoric, and Research (GEF 1)</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 124</td>
<td>Algebra with Applications (GEF 3)</td>
<td>3</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro to Computer Applications (GEF 8)</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting (minimum grade of C-)</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting (minimum grade of C-)</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 311</td>
<td>Intermediate Accounting (minimum grade of C-)</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 312</td>
<td>Intermediate Accounting (minimum grade of C-)</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 323</td>
<td>Accounting Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 348</td>
<td>Financial Statement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 415</td>
<td>Advanced Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 432</td>
<td>Advanced Cost Management</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 441</td>
<td>Income Tax Accounting 1</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 442</td>
<td>Income Tax Accounting 2</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 450</td>
<td>Accounting Technology</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 451</td>
<td>Auditing Theory</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Hours</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>BCOR 320</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 360</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 420</td>
<td>Law for the Certified Public Accountant</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 101</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics (GEF 8)</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics (GEF 8)</td>
<td>3</td>
</tr>
<tr>
<td>ECON 331</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>FIN 325</td>
<td>Financial Management 1</td>
<td>3</td>
</tr>
<tr>
<td>FIN 326</td>
<td>Financial Management 2</td>
<td>3</td>
</tr>
<tr>
<td>MANG 386</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

**Restricted Electives (Select two of the following):**

- ACCT 420  Fraud Examination
- ACCT 421  Fraud Management: Legal/Ethical Issues
- ACCT 461  Accounting for Nonbusiness Entities
- ACCT 491  Professional Field Experience

<table>
<thead>
<tr>
<th>Electives</th>
<th>9</th>
</tr>
</thead>
</table>

15 contact hours community service

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

Total Hours 120

## Suggested Plan of Study

### First Year

#### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 124</td>
<td>Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 101</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
<td>1</td>
</tr>
<tr>
<td>GEF 2</td>
<td>General Education Fund</td>
<td>3</td>
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</tbody>
</table>

#### Spring

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 102</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>CS 101</td>
<td>Computer Science I</td>
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<tr>
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<td>General Education Fund</td>
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</table>

#### Hours

17

### Second Year

#### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ACCT 311</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 320</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics (GEF 8)</td>
<td>3</td>
</tr>
<tr>
<td>MANG 386</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>GEF 4</td>
<td>General Education Fund</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Spring

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 312</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 420</td>
<td>Law for the Certified Public Accountant</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics (GEF 8)</td>
<td>3</td>
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<tr>
<td>GEF 7</td>
<td>General Education Fund</td>
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#### Hours

15

### Third Year

#### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ACCT 415</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 432</td>
<td>Principles of Accounting III</td>
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<tr>
<td>BCOR 370</td>
<td>Legal Environment of Business</td>
<td>3</td>
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<tr>
<td>FIN 325</td>
<td>Financial Management II</td>
<td>3</td>
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<tr>
<td>Restricted Elective</td>
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#### Spring

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ACCT 323</td>
<td>Principles of Accounting III</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 348</td>
<td>Principles of Accounting IV</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 350</td>
<td>Principles of Accounting V</td>
<td>3</td>
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<tr>
<td>FIN 326</td>
<td>Financial Management III</td>
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<tr>
<td>Restricted Elective</td>
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<td>3</td>
</tr>
</tbody>
</table>

#### Hours

15

### Fourth Year

#### Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 441</td>
<td>Principles of Accounting IV</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Hours

15
ACCT 451 3 ACCT 450 3
ENGL 305 3 BCOR 360 3
Elective 4 ECON 331 3
 Elective 2
Total 13 14

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 (GAAP) and IFRS.
- Demonstrate proficiency in manual and computerized accounting systems.
- Prepare, interpret and analyze financial statements.
- Demonstrate critical thinking, problem solving, and written communication skills.
- Discuss and apply the code of professional ethics for accountants.

**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.

A minimum overall GPA of 2.0 is required for this certificate.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 348</td>
<td>Financial Statement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 420</td>
<td>Fraud Examination</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 421</td>
<td>Fraud Management: Legal/Ethical Issues</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 422</td>
<td>Advanced Fraud Investigation &amp; Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 423</td>
<td>Information Security and Controls</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 449</td>
<td>Case Studies in Fraud Examination and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 18

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

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>ACCT 420</td>
<td>3</td>
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<tr>
<td>ACCT 423</td>
<td>3</td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Spring</td>
<td></td>
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<tr>
<td>ACCT 348</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 421</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 422</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>9</td>
</tr>
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</table>

**Third Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer or Fall</td>
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</tr>
<tr>
<td>ACCT 449</td>
<td>3</td>
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<td></td>
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Total credit hours: 18
Accounting Minor

MINOR CODE - UT01

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 311</td>
<td>Intermediate Accounting</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select three of the following courses:</td>
<td>9</td>
</tr>
<tr>
<td>ACCT 312</td>
<td>Intermediate Accounting</td>
<td></td>
</tr>
<tr>
<td>ACCT 322</td>
<td>Accounting Systems</td>
<td></td>
</tr>
<tr>
<td>ACCT 348</td>
<td>Financial Statement Analysis</td>
<td></td>
</tr>
<tr>
<td>ACCT 432</td>
<td>Advanced Cost Management</td>
<td></td>
</tr>
<tr>
<td>ACCT 441</td>
<td>Income Tax Accounting 1</td>
<td></td>
</tr>
<tr>
<td>ACCT 442</td>
<td>Income Tax Accounting 2</td>
<td></td>
</tr>
<tr>
<td>ACCT 491</td>
<td>Professional Field Experience</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 18

Adventure Recreation Management

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.

General Education Foundations

<table>
<thead>
<tr>
<th>GEF</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>ENGL 101 &amp; ENGL 102 or ENGL 103</td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing</td>
<td></td>
</tr>
<tr>
<td>F2A/F2B</td>
<td>Science &amp; Technology</td>
<td>4-6</td>
</tr>
<tr>
<td>F3</td>
<td>Math &amp; Quantitative Reasoning</td>
<td>3-4</td>
</tr>
<tr>
<td>F4</td>
<td>Society &amp; Connections</td>
<td>3</td>
</tr>
<tr>
<td>F5</td>
<td>Human Inquiry &amp; the Past</td>
<td>3</td>
</tr>
<tr>
<td>F6</td>
<td>The Arts &amp; Creativity</td>
<td>3</td>
</tr>
<tr>
<td>F7</td>
<td>Global Studies &amp; Diversity</td>
<td>3</td>
</tr>
</tbody>
</table>
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

A minimum cumulative GPA of 2.0 is required in all major coursework.

#### GEF Requirements (1, 2, 3, 4, 6, 7, and 8)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 102</td>
<td>Adventure in Society (GEF 5)</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
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</table>

#### Theoretical Foundations Coursework

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 103</td>
<td>Introduction to Adventure Recreation</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 301</td>
<td>Adventure Recreation Program Management</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 302</td>
<td>Adventure Travel and Tourism</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 303</td>
<td>Management of Adventure Resources</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 401</td>
<td>Ethical and Legal Issues in Adventure Programming</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 402</td>
<td>Research and Evaluation in Adventure Recreation</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 403</td>
<td>Senior Project - Capstone</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 491</td>
<td>Professional Field Experience</td>
<td>6</td>
</tr>
<tr>
<td>ADRC 494</td>
<td>Seminar</td>
<td>2</td>
</tr>
<tr>
<td>RPT 242</td>
<td>Environmental and Cultural Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>RPT 251</td>
<td>Leadership in Experiential Education</td>
<td>3</td>
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</tbody>
</table>

#### Field Skills Coursework

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 101</td>
<td>Essential Skills in Adventure Recreation</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 304</td>
<td>Adventure Guiding and Instruction</td>
<td>1</td>
</tr>
<tr>
<td>RPT 148</td>
<td>Wilderness First Responder</td>
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</table>

#### Introductory Skills Courses

Select three of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 111</td>
<td>Introduction to Whitewater Rafting</td>
<td></td>
</tr>
<tr>
<td>ADRC 121</td>
<td>Introduction to Rock Climbing</td>
<td></td>
</tr>
<tr>
<td>ADRC 131</td>
<td>Introduction to Mountain Biking</td>
<td></td>
</tr>
<tr>
<td>RPT 325</td>
<td>Challenge Course Facilitation</td>
<td></td>
</tr>
<tr>
<td>RPT 326</td>
<td>Canopy Tour Facilitation</td>
<td></td>
</tr>
</tbody>
</table>

#### Technique Development Skills Courses

Select four of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 112</td>
<td>Whitewater Rafting Techniques</td>
<td></td>
</tr>
<tr>
<td>ADRC 122</td>
<td>Rock Climbing Techniques</td>
<td></td>
</tr>
<tr>
<td>ADRC 212</td>
<td>Swiftwater Rescue</td>
<td></td>
</tr>
<tr>
<td>ADRC 221</td>
<td>Lead Climbing</td>
<td></td>
</tr>
<tr>
<td>RPT 325</td>
<td>Challenge Course Facilitation</td>
<td></td>
</tr>
<tr>
<td>RPT 326</td>
<td>Canopy Tour Facilitation</td>
<td></td>
</tr>
</tbody>
</table>

#### Instructor/Guide Development Course

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 311</td>
<td>Whitewater Raft Trip Leadership</td>
<td></td>
</tr>
<tr>
<td>ADRC 321</td>
<td>Rock Climbing Instructor Development</td>
<td></td>
</tr>
<tr>
<td>RPT 325</td>
<td>Challenge Course Facilitation</td>
<td></td>
</tr>
<tr>
<td>RPT 326</td>
<td>Canopy Tour Facilitation</td>
<td></td>
</tr>
</tbody>
</table>

#### Rescue Course

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 212</td>
<td>Swiftwater Rescue</td>
<td></td>
</tr>
<tr>
<td>ADRC 222</td>
<td>Climbing Rescue Techniques</td>
<td></td>
</tr>
</tbody>
</table>

#### Restricted Electives or Minor

18

F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) 9

Total Hours 31-37
Select from ACCT, BUSA, BCOR, CJ, ECON, FIN, HUMS, MANG, MKTG, SM, or SOCA.

Students are encouraged to complete a minor in a supporting field.

General Electives

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Electives</td>
<td>16</td>
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</tr>
</tbody>
</table>

Co-Curricular Requirements

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
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</thead>
<tbody>
<tr>
<td>60 Days Documented Program/Trip Leadership</td>
<td>1 Instructor or Guide Certification</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
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<tbody>
<tr>
<td>Total Hours</td>
<td>120</td>
<td></td>
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</table>

* 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.

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

Suggested Plan of Study

First Year

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>Hours Fall</td>
<td>Hours Spring</td>
</tr>
<tr>
<td>ADRC 102 (GEF 5)</td>
<td>3</td>
<td>ADRC 103</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>1 ADRC Intro Skill Course</td>
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</tr>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3 ADRC Development Skill Course</td>
<td></td>
</tr>
<tr>
<td>GEF 3</td>
<td>3 ENGL 102 (GEF 1)</td>
<td></td>
</tr>
<tr>
<td>GEF 6 or 7</td>
<td>3 GEF 6 or 7</td>
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</tr>
<tr>
<td>General Elective</td>
<td>3 Restricted Elective</td>
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<tr>
<td></td>
<td>16</td>
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Second Year

<table>
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<tbody>
<tr>
<td>Fall</td>
<td>Hours Fall</td>
<td>Hours Spring</td>
</tr>
<tr>
<td>ADRC 101</td>
<td>3</td>
<td>RPTR 148</td>
</tr>
<tr>
<td>ADRC Intro Skill Course</td>
<td>1 RPTR 242</td>
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<tr>
<td>ADRC Development Skill Course</td>
<td>2 RPTR 251</td>
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</tr>
<tr>
<td>ADRC Rescue Course</td>
<td>1 ADRC 494</td>
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</tr>
<tr>
<td>GEF 2</td>
<td>4 GEF 4</td>
<td></td>
</tr>
<tr>
<td>Restricted Elective</td>
<td>3 GEF 8</td>
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Third Year

<table>
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<th>Column 3</th>
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<tbody>
<tr>
<td>Fall</td>
<td>Hours Fall</td>
<td>Hours Spring</td>
</tr>
<tr>
<td>ADRC 301</td>
<td>3</td>
<td>ADRC 303</td>
</tr>
<tr>
<td>ADRC 302</td>
<td>3 ADRC 401</td>
<td></td>
</tr>
<tr>
<td>ADRC 304</td>
<td>1 GEF 8</td>
<td></td>
</tr>
<tr>
<td>ADRC Intro Skill Course</td>
<td>1 Restricted Elective</td>
<td></td>
</tr>
<tr>
<td>ADRC Instructor/Guide Development Course</td>
<td>1 General Elective</td>
<td></td>
</tr>
<tr>
<td>GEF 8</td>
<td>3</td>
<td></td>
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<tr>
<td>Restricted Elective</td>
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</table>

Fourth Year

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>Hours Fall</td>
<td>Hours Spring</td>
</tr>
<tr>
<td>ADRC 402</td>
<td>3</td>
<td>ADRC 403</td>
</tr>
<tr>
<td>ADRC 491</td>
<td>6 ADRC 494</td>
<td></td>
</tr>
<tr>
<td>Restricted Elective</td>
<td>3 Restricted Electives</td>
<td></td>
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<tr>
<td></td>
<td>3</td>
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</tbody>
</table>
**West Virginia University**

**General Electives**

<table>
<thead>
<tr>
<th>4 General Electives</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

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.

**Adventure Recreation Management Minor**

**MINOR CODE - UT25**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC 101</td>
<td>Essential Skills in Adventure Recreation</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 103</td>
<td>Introduction to Adventure Recreation</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 301</td>
<td>Adventure Recreation Program Management</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 302</td>
<td>Adventure Travel and Tourism</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 401</td>
<td>Ethical and Legal Issues in Adventure Programming</td>
<td>3</td>
</tr>
<tr>
<td>ADRC 491</td>
<td>Professional Field Experience</td>
<td>3</td>
</tr>
</tbody>
</table>

**Introductory Skills Course**

- ADRC 111 Introduction to Whitewater Rafting
- ADRC 121 Introduction to Rock Climbing
- ADRC 131 Introduction to Mountain Biking

**Technique Development Skills Course**

- ADRC 112 Whitewater Rafting Techniques
- ADRC 122 Rock Climbing Techniques
- ADRC 211 Introduction to Whitewater Raft Guiding
- ADRC 212 Swiftwater Rescue
- ADRC 221 Lead Climbing
- ADRC 222 Climbing Rescue Techniques
- ADRC 311 Whitewater Raft Trip Leadership
- ADRC 321 Rock Climbing Instructor Development

Total Hours: 20

*Requires one introductory and one technique development course within the same area.

**Athletic Coaching Education**

**Degree Offered**

- Bachelor of Science

**Nature of the Program**

WVU Tech offers a Bachelor of Science degree in Physical Education (BSPED) with majors in Athletic Coaching Education (ACE) and in Sport Management (SM) in the College of Business, Humanities and Social Sciences (BHSS). The ACE major provides students with an opportunity to study coaching and the important roles coaches have in society. The major provides students with hands on practicum experience in coaching throughout the curriculum. BSPED graduates with the ACE major are employed as coaches, strength and conditioning specialists, and work in the health and fitness industry.
Admissions

During the initial hours of course work, students may enroll in courses in the Pre-Athletic Coaching Education Program. Applicants must meet the following requirements for admission to the ACE major:

- Achieve a 2.5 GPA in all coursework at the time of application to ACE
- Achieve a C or better in all Probationary ACE required courses (SEP 272, ACE 106, ACE 168, ACE 256, ACE 265,ATTR 121, PE 220, PE 221, PE 223, PET 124, PET 125, PET 175, and PET 244).
- All ACE Probationary required coursework completed (with advisor's approval, students may be admitted when they are within 9 hours of completing the Pre-ACE required coursework)
- Students will take between 31 and 37 credits, organized into eight foundation areas (F1 through F8).

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.

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

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

A minimum GPA of 2.0 is required in all major coursework

Minimum cumulative 2.5 GPA for graduation

<table>
<thead>
<tr>
<th>GEF Elective Requirements (1, 2, 3, 5, and 6)</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE 105 Nutrition for Coaches</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191 First Year Seminar</td>
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</table>

<table>
<thead>
<tr>
<th>Pre-Major Requirements</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SEP 272 Psychological Perspectives of Sport (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>ACE 106 Athletic Coaching Education</td>
<td>3</td>
</tr>
<tr>
<td>ACE 168 Sport Officiating</td>
<td>2</td>
</tr>
<tr>
<td>ACE 256 Principles and Problems of Coaching</td>
<td>3</td>
</tr>
<tr>
<td>ACE 265 Diversity and Sport</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 121 Sport Injury Control and Management</td>
<td>3</td>
</tr>
<tr>
<td>PE 220 Striking and Field Games</td>
<td>1</td>
</tr>
<tr>
<td>PE 221 Invasion Games</td>
<td>1</td>
</tr>
<tr>
<td>PE 223 Net and Wall Games</td>
<td>1</td>
</tr>
<tr>
<td>PET 124 Human Body: Structure and Function</td>
<td>2</td>
</tr>
<tr>
<td>PET 125 Principles of Human Movement</td>
<td>2</td>
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<tr>
<td>PET 175 Motor Development</td>
<td>2</td>
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</table>
**PET 244**  
Motor Learning and Performance  

**Major Requirements (Minimum grade of C required in all courses)**

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ACE 215</td>
<td>Sport for Exceptional Athlete (GEF 7)</td>
<td>3</td>
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<tr>
<td>ACE 350</td>
<td>Career Planning In Sport</td>
<td>3</td>
</tr>
<tr>
<td>ACE 410</td>
<td>Training Theories for Coaches</td>
<td>3</td>
</tr>
<tr>
<td>ACE 430</td>
<td>Coaching Education Administration</td>
<td>3</td>
</tr>
<tr>
<td>ACE 468</td>
<td>Sport Movement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACE 469</td>
<td>Basic Strength/Condting-Coaches</td>
<td>3</td>
</tr>
<tr>
<td>ACE 488</td>
<td>Practicum Coaching Exceptional Athletes</td>
<td>3</td>
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<tr>
<td>ACE 489</td>
<td>Practicum Coaching Youth Sport</td>
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<tr>
<td>ACE 491</td>
<td>Professional Field Experience</td>
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**Techniques of Coaching Courses (Select two of the following):**

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<th>Course Title</th>
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<tbody>
<tr>
<td>ACE 361</td>
<td>Techniques of Coaching: Soccer</td>
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<tr>
<td>ACE 362</td>
<td>Techniques of Coaching: Basketball</td>
<td>3</td>
</tr>
<tr>
<td>ACE 364</td>
<td>Techniques of Coaching: Football</td>
<td>3</td>
</tr>
<tr>
<td>ACE 365</td>
<td>Techniques of Coaching: Baseball</td>
<td>3</td>
</tr>
<tr>
<td>ACE 366</td>
<td>Techniques of Coaching: Volleyball</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 365</td>
<td>Exercise Physiology 1</td>
<td>3</td>
</tr>
<tr>
<td>SM 426</td>
<td>Liability in Sport</td>
<td>3</td>
</tr>
</tbody>
</table>

**Minor Requirements (Sport Management Minor)**

**Electives**

First Aid/AED/CPR Certifications  
WVSSAC or NFHS Certification  
Passage of background check  
Negative TB test results

**Total Hours**

120

**Suggested Plan of Study**

**First Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3</td>
<td>ENGL 102 (GEF 1)</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>1</td>
<td>ACE 168</td>
<td>2</td>
</tr>
<tr>
<td>ACE 106</td>
<td>3</td>
<td>ACE 265</td>
<td>3</td>
</tr>
<tr>
<td>PE 220</td>
<td>1</td>
<td>PET 244</td>
<td>2</td>
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<tr>
<td>GEF 2</td>
<td>4</td>
<td>SEP 272 (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>GEF 3</td>
<td>3</td>
<td>GEF 5</td>
<td>3</td>
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<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td></td>
<td><strong>16</strong></td>
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**Second Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE 105</td>
<td>3</td>
<td>ATTR 121</td>
<td>3</td>
</tr>
<tr>
<td>ACE 215 (GEF 7)</td>
<td>3</td>
<td>PE 223</td>
<td>1</td>
</tr>
<tr>
<td>ACE 256</td>
<td>3</td>
<td>PET 125</td>
<td>2</td>
</tr>
<tr>
<td>PE 221</td>
<td>1</td>
<td>PET 175</td>
<td>2</td>
</tr>
<tr>
<td>PET 124</td>
<td>2</td>
<td>GEF 8</td>
<td>3</td>
</tr>
<tr>
<td>GEF 8</td>
<td>3</td>
<td>GEF 8</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td></td>
<td><strong>14</strong></td>
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</tbody>
</table>

**Third Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE 468</td>
<td>3</td>
<td>ACE 410</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 365</td>
<td>3</td>
<td>ACE 430</td>
<td>3</td>
</tr>
<tr>
<td>Techniques of Coaching Course</td>
<td>2</td>
<td>Techniques of Coaching Course</td>
<td>2</td>
</tr>
<tr>
<td>Minor Course</td>
<td>3</td>
<td>Minor Course</td>
<td>3</td>
</tr>
</tbody>
</table>
Major Learning Outcomes

ATHLETIC COACHING EDUCATION

This program has the following specific outcomes:

• Graduates may coach on the collegiate level
• Graduates may apply for graduate school and graduate assistantships in coaching
• Graduates may work in area businesses and coach locally
• Graduates will recognize the importance and significance of the role of coaching
• Graduates will recognize the importance of continuing emotional, intellectual, and physical development throughout their lives

Aviation Management

Degree Offered

• Bachelor of Science

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 FlightSafety Academy in Vero Beach, Florida (KVRB) and Fairmont State University, conducting flight operations at the Clarksburg Benedum Airport (KCKB).

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

ADMINISTRATION

CHAIR

• Frank Robbins
  Program Coordinator

ASSOCIATE PROGRAM DIRECTOR

• Nancy Nickell
  Associate Program Coordinator
FACULTY

ADJUNCT PROFESSORS

- John Sabel - Juris Doctor, American Airways Airbus Captain
  AVIA 484 - Aviation Safety, AVIA 489 - Aviation Law
- John Billet - MS in Engineering Management, Marshal University
  Science and Operations Officer, National Weather Service (Ret.), AVIA 380 - Aviation Weather
- Henry (Hank) Luke - Masters 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 - Masters of Aeronautical Science, Embry Riddle University
  AVIA 480 - Air Transportation
- Sharon L. Frisinger - Doctorate of Executive Leadership, University of Charleston; Masters 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. 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
- Personal 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.

General Education Foundations

<table>
<thead>
<tr>
<th>General Education Foundations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F1 - Composition &amp; Rhetoric</strong></td>
</tr>
<tr>
<td>ENGL 101</td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
</tr>
<tr>
<td>or ENGL 103</td>
</tr>
<tr>
<td><strong>F2A/F2B - Science &amp; Technology</strong></td>
</tr>
<tr>
<td><strong>F3 - Math &amp; Quantitative Reasoning</strong></td>
</tr>
<tr>
<td><strong>F4 - Society &amp; Connections</strong></td>
</tr>
<tr>
<td><strong>F5 - Human Inquiry &amp; the Past</strong></td>
</tr>
<tr>
<td><strong>F6 - The Arts &amp; Creativity</strong></td>
</tr>
<tr>
<td><strong>F7 - Global Studies &amp; Diversity</strong></td>
</tr>
</tbody>
</table>
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

### GEF Elective Requirements (2, 3, 4, 5, 6, 7, and 8)

A minimum GPA of 2.0 is required in the following major courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)</td>
<td>6</td>
</tr>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>MANG 330</td>
<td>Human Resource Management Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>MANG 350</td>
<td>Leadership In Business</td>
<td>3</td>
</tr>
<tr>
<td>MANG 422</td>
<td>The Individual and the Organization</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 101</td>
<td>Private Pilot</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 181</td>
<td>Professional Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 201</td>
<td>Instrument Rating</td>
<td>4</td>
</tr>
<tr>
<td>AVIA 231</td>
<td>Commercial Pilot</td>
<td>4</td>
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<tr>
<td>AVIA 241</td>
<td>Multi-Engine Rating</td>
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</tr>
<tr>
<td>AVIA 281</td>
<td>Professional Field Experience 2</td>
<td>8</td>
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<tr>
<td>AVIA 380</td>
<td>Aviation Weather</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 382</td>
<td>Aerodynamic and Aircraft Performance</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 383</td>
<td>Aircraft Systems</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 385</td>
<td>Air Traffic Control and Airspace</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 480</td>
<td>Human Factors in Flight</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 484</td>
<td>Aviation Safety</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 486</td>
<td>Aviation Management and Leadership</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 489</td>
<td>Aviation Law</td>
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</table>

### Restricted AVIA Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVIA 301</td>
<td>Principles of Aviation Instruction</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 302</td>
<td>Initial Flight Instructor</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 304</td>
<td>Instrument Flight Instructor</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 306</td>
<td>Advanced Flight Instructor</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 351</td>
<td>Crew Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 352</td>
<td>ATP/Turbine Aircraft Operations</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 381</td>
<td>Professional Field Experience 3</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 483</td>
<td>Air Transportation</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 485</td>
<td>Aviation Economics</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 487</td>
<td>Aviation Security</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 488</td>
<td>Aviation Stories: Aviation and the Humanities</td>
<td>3</td>
</tr>
</tbody>
</table>

### Restricted Electives (ACCT, AVIA, BCOR, ECON, MANG, MKTG at 300-400 level)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
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<td>3</td>
</tr>
<tr>
<td>AVIA 231</td>
<td></td>
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<td>AVIA 281</td>
<td></td>
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### Electives

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td></td>
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### Total Hours

<table>
<thead>
<tr>
<th>Hours</th>
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<tbody>
<tr>
<td>120</td>
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### Second Year

#### Fall

<table>
<thead>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AVIA 281</td>
<td>4</td>
</tr>
<tr>
<td>AVIA 382</td>
<td>3</td>
</tr>
<tr>
<td>Restricted AVIA Elective</td>
<td>6</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>GEF 2</td>
<td>3</td>
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</table>

**Hours:** 13

#### Spring

<table>
<thead>
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<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AVIA 381</td>
<td>3</td>
</tr>
<tr>
<td>AVIA 380</td>
<td>3</td>
</tr>
<tr>
<td>Restricted AVIA Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>GEF 2</td>
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**Hours:** 17

### Third Year

#### Fall

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<tbody>
<tr>
<td>AVIA 480</td>
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</tr>
<tr>
<td>BCOR 370</td>
<td>3</td>
</tr>
<tr>
<td>GEF 2</td>
<td>3</td>
</tr>
<tr>
<td>GEF 3</td>
<td>3</td>
</tr>
<tr>
<td>GEF 4</td>
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**Hours:** 13

#### Spring

<table>
<thead>
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<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BCOR 350</td>
<td>3</td>
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<tr>
<td>Restricted Elective</td>
<td>3</td>
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<tr>
<td>GEF 5</td>
<td>3</td>
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<tr>
<td>GEF 6</td>
<td>3</td>
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<tr>
<td>GEF 7</td>
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**Hours:** 15

### Fourth Year

#### Fall

<table>
<thead>
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<th>Course</th>
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<tr>
<td>AVIA 489</td>
<td>3</td>
</tr>
<tr>
<td>MANG 330</td>
<td>3</td>
</tr>
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<td>MANG 350</td>
<td>3</td>
</tr>
<tr>
<td>GEF 8</td>
<td>3</td>
</tr>
<tr>
<td>GEF 8</td>
<td>3</td>
</tr>
</tbody>
</table>

**Hours:** 15

#### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVIA 386</td>
<td>3</td>
</tr>
<tr>
<td>MANG 422</td>
<td>3</td>
</tr>
<tr>
<td>Restricted AVIA Elective</td>
<td>3</td>
</tr>
<tr>
<td>Restricted Elective</td>
<td>3</td>
</tr>
<tr>
<td>GEF 8</td>
<td>3</td>
</tr>
</tbody>
</table>

**Hours:** 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

#### Degree Offered

- Bachelor of Science

#### 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 critical written and verbal communications skills, learn to integrate and synthesis information and improve upon leadership capabilities. Students have the flexibility to take a variety of electives to customize their major focusing on accounting, economics, finance, human resource administration and/or marketing.
FACULTY

ASSISTANT PROFESSORS

• KyungMoon Kim - DBA (Louisiana Tech)
  Marketing, Business Strategy, Business Simulation. Research Interest:
• Yan Liu - DBA (Louisiana Tech), 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.

General Education Foundations

F1 - Composition & Rhetoric
  ENGL 101 Introduction to Composition and Rhetoric
  & ENGL 102 and Composition, Rhetoric, and Research
  or ENGL 103 Accelerated Academic Writing

F2A/F2B - Science & Technology

F3 - Math & Quantitative Reasoning

F4 - Society & Connections

F5 - Human Inquiry & the Past

F6 - The Arts & Creativity

F7 - Global Studies & Diversity

F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)

Total Hours

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

GEF Elective Requirements (2, 5, 6, and 7)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric</td>
<td>6</td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
<td>and Composition, Rhetoric, and Research (GEF 1)</td>
<td></td>
</tr>
<tr>
<td>MATH 124</td>
<td>Algebra with Applications (GEF 3)</td>
<td>3</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro to Computer Applications (GEF 8)</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 101</td>
<td>Introduction to Psychology (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 331</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 299</td>
<td>Business Communication</td>
<td>3</td>
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<tr>
<td>BCOR 320</td>
<td>Legal Environment of Business</td>
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<tr>
<td>BCOR 350</td>
<td>Principles of Marketing (minimum grade of C-)</td>
<td>3</td>
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<tr>
<td>BCOR 360</td>
<td>Supply Chain Management (minimum grade of C-)</td>
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<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams (minimum grade of C-)</td>
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<tr>
<td>BCOR 460</td>
<td>Contemporary Business Strategy</td>
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</tr>
<tr>
<td>BUSA 101</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics (GEF 8)</td>
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</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics (GEF 8)</td>
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<tr>
<td>ENTR 400</td>
<td>Fundamentals of Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>FIN 325</td>
<td>Financial Management 1</td>
<td>3</td>
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<tr>
<td>MANG 310</td>
<td>Management of Small Business</td>
<td>3</td>
</tr>
<tr>
<td>MANG 330</td>
<td>Human Resource Management Fundamentals</td>
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</tr>
<tr>
<td>MANG 360</td>
<td>International Business</td>
<td>3</td>
</tr>
</tbody>
</table>
MANG 386 Business Statistics (minimum grade of C-) 3  
MANG 420 Business Information Systems 3  
MANG 422 The Individual and the Organization 3  
MANG 434 Business Research Methods 3  
MKTG 315 Buyer Behavior 3  
WVUE 191 First Year Seminar 1  
**Restricted Electives (ACCT, BCOR, BLAW, ECON, ENTR, FIN, MANG, MKTG must be 300 or 400 level)** 15  
**Electives** 9  
15 hours of community service  
Take ETS Business Test which is offered once a year in April.  

**Total Hours** 120  

### Suggested Plan of Study

**First Year**

<table>
<thead>
<tr>
<th>Fall Hours</th>
<th>Spring Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3 ENGL 102 (GEF 1)</td>
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<tr>
<td>MATH 124 (GEF 3)</td>
<td>3 PSYC 101 (GEF 4)</td>
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<tr>
<td>BUSA 101</td>
<td>3 ECON 201 (GEF 8)</td>
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<tr>
<td>WVUE 191</td>
<td>1 CS 101 (GEF 8)</td>
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<tr>
<td>GEF 2</td>
<td>4 GEF 5</td>
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**Second Year**

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<tbody>
<tr>
<td>ACCT 201</td>
<td>3 ACCT 202</td>
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<tr>
<td>ECON 202 (GEF 8)</td>
<td>3 BCOR 350</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 299</td>
<td>3 MANG 330</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>3 Elective</td>
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<tr>
<td>GEF 6</td>
<td>3 GEF 7</td>
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**Third Year**

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<td>3 BCOR 360</td>
<td>3</td>
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<tr>
<td>BCOR 320</td>
<td>3 ENTR 400</td>
<td>3</td>
</tr>
<tr>
<td>FIN 325</td>
<td>3 MANG 360</td>
<td>3</td>
</tr>
<tr>
<td>MANG 310</td>
<td>3 MKTG 315</td>
<td>3</td>
</tr>
<tr>
<td>MANG 386</td>
<td>3 Restricted Elective</td>
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**Fourth Year**

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<td>MANG 420</td>
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</tr>
<tr>
<td>MANG 422</td>
<td>3 MANG 434</td>
<td>3</td>
</tr>
<tr>
<td>Restricted Elective</td>
<td>6 Restricted Elective</td>
<td>6</td>
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<tr>
<td>Elective</td>
<td>3 Elective</td>
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<td><strong>Total</strong></td>
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</table>

**Total credit hours: 120**

### Major Learning Outcomes

**BUSINESS MANAGEMENT**

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

- Demonstrate proficient knowledge and skills within core business components
- Demonstrate proficiency in applying analytical abilities in business decision-making
• Demonstrate critical thinking and written communication skills
• Demonstrate the use of current business technology in basic decision-making applications
• Show the ability to work effectively in teams as a leader and a follower

BUSINESS ADMINISTRATION MINOR

MINOR CODE - UT03

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
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</tr>
<tr>
<td>BCOR 320</td>
<td>Legal Environment of Business</td>
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<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
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<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
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<tr>
<td>CS 101</td>
<td>Intro to Computer Applications</td>
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<td>FIN 325</td>
<td>Financial Management 1</td>
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<tr>
<td>MANG 386</td>
<td>Business Statistics</td>
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</table>

Total Hours 25

Career-Technical Education

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.

General Education Foundations

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Course Code &amp; Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>F1 - Composition &amp; Rhetoric</td>
<td>ENGL 101 &amp; ENGL 102 or ENGL 103 Introduction to Composition and Rhetoric</td>
<td>3-6</td>
</tr>
<tr>
<td>F2A/F2B - Science &amp; Technology</td>
<td></td>
<td>4-6</td>
</tr>
<tr>
<td>F3 - Math &amp; Quantitative Reasoning</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>F4 - Society &amp; Connections</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>F5 - Human Inquiry &amp; the Past</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>F6 - The Arts &amp; Creativity</td>
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<tr>
<td>F7 - Global Studies &amp; Diversity</td>
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<tr>
<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
<td>9</td>
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</tr>
</tbody>
</table>

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

**GEF Elective Requirements (2, 3, 4, 5, 6, 7, and 8)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>Introduction to Composition and Rhetoric, and Composition, Rhetoric, and Research</td>
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</tr>
<tr>
<td>PSYC 241</td>
<td>Introduction to Human Development</td>
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<tr>
<td>CTED 201</td>
<td>Introduction to Career Technical Education</td>
<td>3</td>
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<tr>
<td>CTED 301</td>
<td>Occupational Analysis</td>
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<tr>
<td>CTED 302</td>
<td>Course Construction and Planning in Career Technical Education</td>
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</tr>
<tr>
<td>CTED 303</td>
<td>Organization and Management of School Shops and Laboratories</td>
<td>3</td>
</tr>
<tr>
<td>CTED 304</td>
<td>Safety in Career Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>CTED 305</td>
<td>Methods of Examination in Career Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>CTED 306</td>
<td>Coordination of Cooperative Career Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>CTED 308</td>
<td>Application of Basic Skills in Career Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>CTED 402</td>
<td>History and Philosophy of Career Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>CTED 409</td>
<td>Coordination of Career Technical Youth Activities</td>
<td>3</td>
</tr>
<tr>
<td>CTED 421</td>
<td>Teaching Special Students in Career Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>CTED 485</td>
<td>Teaching Methods in Career Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>CTED 493</td>
<td>Special Topics (Advanced Computer Applications)</td>
<td>3</td>
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<tr>
<td>or CTED 307</td>
<td>Computer Applications in Career Technical Education</td>
<td>3</td>
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</table>

**Industrial Processes Courses (Occupational Update)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CTED 422</td>
<td>Back to Industry Experience</td>
</tr>
<tr>
<td>CTED 423</td>
<td>Industrial Processes</td>
</tr>
<tr>
<td>CTED 424</td>
<td>Industrial Processes</td>
</tr>
<tr>
<td>CTED 425</td>
<td>Industrial Processes</td>
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</table>

**Occupational Competency Exam**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>30</td>
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</tbody>
</table>

Total Hours 121

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

## Suggested Plan of Study

### First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Fall Hours</th>
<th>Spring Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3 ENGL 102 (GEF 1)</td>
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</tr>
<tr>
<td>CTED 485</td>
<td>3 PSYC 241</td>
<td>3</td>
</tr>
<tr>
<td>GEF 5</td>
<td>3 CTED 201</td>
<td>3</td>
</tr>
<tr>
<td>GEF 8</td>
<td>3 CTED 307 or 493 (Advanced Computer Applications)</td>
<td>3</td>
</tr>
<tr>
<td>GEF 8</td>
<td>3 GEF 4</td>
<td>3</td>
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<tr>
<td></td>
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### Second Year

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>CTED 304</td>
<td>3 CTED 301</td>
<td>3</td>
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<tr>
<td>CTED 308</td>
<td>3 CTED 303</td>
<td>3</td>
</tr>
<tr>
<td>GEF 2</td>
<td>4 CTED 409</td>
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<tr>
<td>GEF 6</td>
<td>3 GEF 3</td>
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<td>GEF 7</td>
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### Third Year

<table>
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<tbody>
<tr>
<td>CTED 302</td>
<td>3 CTED 305</td>
<td>3</td>
</tr>
<tr>
<td>CTED 306</td>
<td>3 CTED 402</td>
<td>3</td>
</tr>
<tr>
<td>CTED 423</td>
<td>3 CTED 421</td>
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</tbody>
</table>
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

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
• Thomas McGraw - MHA

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.

General Education Foundations

<table>
<thead>
<tr>
<th>General Education Foundations</th>
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<tbody>
<tr>
<td>F1 - Composition &amp; Rhetoric</td>
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<tr>
<td>ENGL 101</td>
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<tr>
<td>&amp; ENGL 102</td>
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</tr>
<tr>
<td>or ENGL 103</td>
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<tr>
<td>Introduction to Composition and Rhetoric</td>
<td></td>
</tr>
<tr>
<td>and Composition, Rhetoric, and Research</td>
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<tr>
<td>Accelerated Academic Writing</td>
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</table>

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

GEF Requirements (2B, 5, and 6) 10

WVUE 191 First Year Seminar 1
ENGL 101 Introduction to Composition and Rhetoric 6
& ENGL 102 and Composition, Rhetoric, and Research (GEF 1) 6
ENGL 305 Technical Writing 3
MATH 124 Algebra with Applications (GEF 3) 3
ECON 225 Elementary Business and Economics Statistics (GEF 8) 3
POL 220 State and Local Government (GEF 8) 3
POL 313 American Constitutional Law 3
PSYC 101 Introduction to Psychology (GEF 4) 3
SOCA 101 Introduction to Sociology (GEF 8) 3
SOCA 221 Families and Society 3
SOCA 232 Criminology 3
SOCA 235 Race and Ethnic Relations (GEF 7) 3
SOCA 302 Deviant Behavior 3
SOCA 311 Social Research Methods 3
SOCA 360 Women and Men in Society 3
SOCA 430 World Religions 3
### Suggested Plan of Study

#### First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>WVUE 191</td>
<td>1</td>
<td>SOCA 101 (GEF 8)</td>
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<td>ENGL 101 (GEF 1)</td>
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<td>ENGL 102 (GEF 1)</td>
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<td>CJ 101</td>
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<td>HUMS 100</td>
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<td>MATH 124 (GEF 3)</td>
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<td>SOCA 232</td>
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<td>GEF 2B</td>
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<td>GEF 5</td>
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#### Second Year

<table>
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<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<td>PSYC 101 (GEF 4)</td>
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<td>POLS 220 (GEF 8)</td>
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<td>Restricted Elective</td>
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<td>ECON 225 (GEF 8)</td>
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<td><strong>Total</strong></td>
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#### Third Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCA 302</td>
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<td>SOCA 235 (GEF 7)</td>
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<td>SOCA 311</td>
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<td>CJ 310</td>
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<tr>
<td>HUMS 320</td>
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<td>CJ 320</td>
<td>3</td>
</tr>
<tr>
<td>SOCA 360</td>
<td>3</td>
<td>SOCA 430</td>
<td>3</td>
</tr>
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</table>
### Fourth Year

<table>
<thead>
<tr>
<th>Hours Fall</th>
<th>Hours Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 313</td>
<td>3 HUMS 489</td>
<td>6</td>
</tr>
<tr>
<td>CJ 475</td>
<td>3 Restricted Electives</td>
<td>6</td>
</tr>
<tr>
<td>GEF 6</td>
<td>3</td>
<td></td>
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<tr>
<td>Restricted Elective (300-400)</td>
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<tr>
<td>Elective</td>
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<td>15</td>
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</table>

Total credit hours: 120

### Corrections Area of Emphasis

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 233</td>
<td>Juvenile Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 240</td>
<td>Correctional Counseling</td>
<td>3</td>
</tr>
<tr>
<td>CJ 316</td>
<td>Community Based Corrections</td>
<td>3</td>
</tr>
<tr>
<td>SOCA 207</td>
<td>Social Problems in Contemporary America</td>
<td>3</td>
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<td></td>
<td>Total Hours</td>
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</table>

### Law Enforcement Area of Emphasis

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 233</td>
<td>Juvenile Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 324</td>
<td>Drugs, Crime and Society</td>
<td>3</td>
</tr>
<tr>
<td>CJ 410</td>
<td>Criminal Investigations</td>
<td>3</td>
</tr>
<tr>
<td>POLS 400</td>
<td>Terrorism and National Security</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>12</td>
</tr>
</tbody>
</table>

### 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.

### Criminal Justice Minor

**MINOR CODE - UT21**

A 2.0 GPA is required for all courses counted toward the minor.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 233</td>
<td>Juvenile Justice</td>
<td>3</td>
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</table>

**Select three of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 421</td>
<td>Fraud Management: Legal/Ethical Issues</td>
</tr>
<tr>
<td>CJ 310</td>
<td>Law Enforcement Administration</td>
</tr>
<tr>
<td>CJ 320</td>
<td>Courts and Judicial Systems</td>
</tr>
<tr>
<td>CJ 410</td>
<td>Criminal Investigations</td>
</tr>
<tr>
<td>HUMS 320</td>
<td>Public Administration</td>
</tr>
<tr>
<td>POLS 313</td>
<td>American Constitutional Law</td>
</tr>
<tr>
<td>POLS 400</td>
<td>Terrorism and National Security</td>
</tr>
<tr>
<td>SOCA 302</td>
<td>Deviant Behavior</td>
</tr>
</tbody>
</table>
Forensic Investigation

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

- Thomas McGraw - MHA

ASSOCIATE PROFESSOR

- Andrew Wheeler - Masters of Forensic Science
  Forensic Investigation

ASSISTANT PROFESSOR

- Roger L. Jefferys II - MS in Forensic and Investigative 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.

General Education Foundations

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

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

A minimum GPA of 2.0 across all courses applied to the major

<table>
<thead>
<tr>
<th>GEF Elective Requirements (5, 6, and 7)</th>
<th>(GEF 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>3</td>
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<tr>
<td>MATH 126</td>
<td>3</td>
</tr>
<tr>
<td>ECON 225 or STAT 211</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following groups (GEF 2):

| CHEM 111 & 111L                        | 4       |
| Fundamentals of Chemistry              |         |
| and Survey of Chemistry 1 - Laboratory |         |
| CHEM 115 & 115L                        | 4       |
| Fundamentals of Chemistry              |         |
| and Fundamentals of Chemistry 1 - Laboratory |         |

Select one of the following groups (GEF 2):

| CHEM 112 & 112L                        | 4       |
| Fundamentals of Chemistry              |         |
| and Survey of Chemistry 2 - Laboratory |         |
| CHEM 116 & 116L                        | 4       |
| Fundamentals of Chemistry              |         |
| and Fundamentals of Chemistry 2 - Laboratory |         |

| PHSC 101                               | 4       |
| Introductory Physical Science 1 (GEF 8)|         |
| CS 101                                 | 4       |
| Intro to Computer Applications          |         |
| or POLS 220                            | 3       |
| POLS 102                               |         |
| Introduction to American Government    |         |
| or POLS 313                            | 3       |
| American Constitutional Law             |         |
| PSYC 101                               | 3       |
| Introduction to Psychology (GEF 8)      |         |
| or SOCA 311                            | 3       |
| Social Research Methods                |         |
| or PSYC 202                            |         |
| Research Methods                       |         |
| or CJ 101                              | 3       |
| Introduction to Criminal Justice (minimum grade of C) | |
| or CJ 202                              | 3       |
| Principles of Criminal Law (minimum grade of C) | |
| or CJ 320                              | 3       |
| Courts and Judicial Systems (minimum grade of C) | |
| FRNX 101                               | 3       |
| Introduction to Forensic Investigation (minimum grade of C) | |
| or FRNX 210                            | 4       |
| Fingerprint Evidence Analysis (minimum grade of C) | |
| or FRNX 212                            | 3       |
| Advanced Fingerprint Evidence (minimum grade of C) | |
| or FRNX 301                            | 3       |
| Investigative Photography (minimum grade of C) | |
| or FRNX 310                            | 3       |
| Firearms and Tool Marks (minimum grade of C) | |
| or FRNX 311                            | 3       |
| Trace and Blood Spatter (minimum grade of C) | |
| or FRNX 315                            | 3       |
| Interviewing Theory (minimum grade of C) | |
| or FRNX 316                            | 3       |
| Death Investigation (minimum grade of C) | |
| or FRNX 318                            | 3       |
| Crime Scenes (minimum grade of C)       |         |
| or FRNX 484                            | 3       |
| Senior Seminar in Forensic Investigation (minimum grade of C) | |
| or FRNX 496                            | 3       |
| Senior Thesis (minimum grade of C)      |         |
| or HUMS 489                            | 6       |
| Practicum Capstone Internship (minimum grade of C) | |
| or WVUE 191                            | 1       |
| First Year Seminar                     |         |

| Restricted Electives                   | 15      |
| ACCT 420                              |         |
| Fraud Examination                      |         |
| ACCT 422                              |         |
| Advanced Fraud Investigation & Analysis |         |
| CSAD 270                              |         |
| Effective Public Speaking             |         |
| COMM 100                              |         |
| Principles of Human Communication     |         |
| POLS 400                              |         |
| Terrorism and National Security        |         |
Any FRNX, CJ, or SOCA course (must be approved by an advisor and must not be an already required course)
Any CHEM, BIOL, MATH, or PHYS course (must be approved by an advisor and must meet the pre-requisite requirements for each course)
HUMS 489 Practicum Capstone Internship (may include up to 6 additional hours with advisor approval)

Total Hours 120

## Suggested Plan of Study

### First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
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<td>ENGL 102 (GEF 1)</td>
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<td>MATH 126 (GEF 3)</td>
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<td>4 Select one of the following groups (GEF 2):</td>
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<td></td>
<td></td>
<td>CHEM 112 &amp; 112L</td>
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<td></td>
<td></td>
<td>CHEM 116 &amp; 116L</td>
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<td>Select one of the following groups (GEF 2):</td>
<td></td>
<td>CS 101</td>
<td>4</td>
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<td>CHEM 111</td>
<td>3</td>
<td>SOCA 101 (GEF 4)</td>
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<tr>
<td>&amp; 111L</td>
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<td>GEF 5</td>
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<td>CHEM 115</td>
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<tr>
<td>&amp; 115L</td>
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<td></td>
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<tr>
<td>CJ 101</td>
<td>3</td>
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<td>FRNX 101</td>
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<td>WVUE 191</td>
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### Second Year

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<th>Hours</th>
<th>Spring</th>
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<tr>
<td>ENGL 305</td>
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<td>ECON 225 or STAT 211 (GEF 8)</td>
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<td>PHSC 101 (GEF 8)</td>
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<td>POLS 102 or 220</td>
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<td>PSYC 101 (GEF 8)</td>
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<td>FRNX 212</td>
<td>3</td>
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<td>CJ 202</td>
<td>3</td>
<td>GEF 6</td>
<td>3</td>
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<td>FRNX 210</td>
<td>4</td>
<td>GEF 7</td>
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### Third Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>FRNX 311</td>
<td>3</td>
<td>CJ 320</td>
<td>3</td>
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<td>FRNX 315</td>
<td>3</td>
<td>FRNX 301</td>
<td>3</td>
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<td>POLS 313</td>
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<td>FRNX 310</td>
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<td>Restricted Electives</td>
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<td>FRNX 316</td>
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<td>FRNX 318</td>
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### Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCA 311 or PSYC 202</td>
<td>3</td>
<td>FRNX 496</td>
<td>3</td>
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<tr>
<td>FRNX 484</td>
<td>3</td>
<td>HUMS 489</td>
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<td>Restricted Elective</td>
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<td>Restricted Elective</td>
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<tr>
<td>Restricted Elective</td>
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<td>Elective (if needed)</td>
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<tr>
<td></td>
<td>12</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

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 an interviewing, investigative, and in legal settings both verbally and in writing.
• 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.

Forensic Investigation Minor

MINOR CODE - UT26

Must maintain an overall 2.0 GPA in minor coursework.

Required Coursework

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRNX 101</td>
<td>Introduction to Forensic Investigation</td>
<td>3</td>
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</table>

Electives (At least three (3) courses must be 300 level and above) 12

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
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<tbody>
<tr>
<td>FRNX 210</td>
<td>Fingerprint Evidence Analysis</td>
</tr>
<tr>
<td>FRNX 224</td>
<td>Automated Fingerprint Identification Systems</td>
</tr>
<tr>
<td>FRNX 301</td>
<td>Investigative Photography</td>
</tr>
<tr>
<td>FRNX 310</td>
<td>Firearms and Tool Marks</td>
</tr>
<tr>
<td>FRNX 311</td>
<td>Trace and Blood Spatter</td>
</tr>
<tr>
<td>FRNX 312</td>
<td>Digital Evidence Protocols</td>
</tr>
<tr>
<td>FRNX 314</td>
<td>Questioned Documents</td>
</tr>
<tr>
<td>FRNX 315</td>
<td>Interviewing Theory</td>
</tr>
<tr>
<td>FRNX 316</td>
<td>Death Investigation</td>
</tr>
<tr>
<td>FRNX 318</td>
<td>Crime Scenes</td>
</tr>
<tr>
<td>FRNX 324</td>
<td>Forensic Anthropology and Osteology</td>
</tr>
<tr>
<td>FRNX 326</td>
<td>Investigative Intelligence</td>
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<tr>
<td>FRNX 327</td>
<td>Sexual Assault Investigations</td>
</tr>
<tr>
<td>FRNX 422</td>
<td>Cold Case Investigations</td>
</tr>
</tbody>
</table>

Total Hours 15

Health Services Administration

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
• Thomas McGraw - MHA

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.

General Education Foundations

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 - Composition &amp; Rhetoric</td>
<td>ENGL 101 Introduction to Composition and Rhetoric &amp; ENGL 102 Composition, Rhetoric, and Research or ENGL 103 Accelerated Academic Writing</td>
<td>3-6</td>
</tr>
<tr>
<td>F2A/F2B - Science &amp; Technology</td>
<td></td>
<td>4-6</td>
</tr>
<tr>
<td>F3 - Math &amp; Quantitative Reasoning</td>
<td>MATH 124 Algebra with Applications (GEF 3)</td>
<td>3</td>
</tr>
<tr>
<td>F4 - Society &amp; Connections</td>
<td>POLS 220 State and Local Government (GEF 8)</td>
<td>3</td>
</tr>
<tr>
<td>F5 - Human Inquiry &amp; the Past</td>
<td>POLS 480 Seminar in Non-Profit Administration</td>
<td>3</td>
</tr>
<tr>
<td>F6 - The Arts &amp; Creativity</td>
<td>PSYC 101 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>F7 - Global Studies &amp; Diversity</td>
<td>SOCA 207 Social Problems in Contemporary America</td>
<td>3</td>
</tr>
<tr>
<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
<td>SOCA 325 Illness and Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>

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

GEF Elective Requirements (2, 5, 6, 7, and 8)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric (GEF 1)</td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
<td>and Composition, Rhetoric, and Research</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>MATH 124</td>
<td>Algebra with Applications (GEF 3)</td>
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<tr>
<td>POLS 220</td>
<td>State and Local Government (GEF 8)</td>
</tr>
<tr>
<td>POLS 480</td>
<td>Seminar in Non-Profit Administration</td>
</tr>
<tr>
<td>PSYC 101</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>SOCA 101</td>
<td>Introduction to Sociology (GEF 4)</td>
</tr>
<tr>
<td>SOCA 207</td>
<td>Social Problems in Contemporary America</td>
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<tr>
<td>or SOCA 235</td>
<td>Race and Ethnic Relations</td>
</tr>
<tr>
<td>SOCA 325</td>
<td>Illness and Health Care</td>
</tr>
<tr>
<td>SOCA 333</td>
<td>Sociology of Work and Work Places</td>
</tr>
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<td>BCOR 350</td>
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<td>BUSA 101</td>
<td>Introduction to Business</td>
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<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics</td>
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<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics</td>
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<td>Public Economics</td>
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<tr>
<td>HUMS 320</td>
<td>Public Administration</td>
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<td>HUMS 330</td>
<td>Health Insurance</td>
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<td>Health Services Law and Legislation</td>
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<td>HUMS 410</td>
<td>Fundamentals of Health Care Administration</td>
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<td>HUMS 420</td>
<td>Principle of Microhealthcare Finance</td>
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<td>HUMS 430</td>
<td>Medical Ethics</td>
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<td>HUMS 440</td>
<td>Long Term Care Administration</td>
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<td>HUMS 470</td>
<td>Health Services Planning</td>
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<tr>
<td>HUMS 489</td>
<td>Practicum Capstone Internship</td>
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<td>WVUE 191</td>
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Restricted Electives in ACCT, ECON, POLS, SOCA, HUMS 12

Total Hours 120

### Suggested Plan of Study

#### First Year

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<th>Hours</th>
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<td>1 HUMS 210</td>
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<td>4 GEF 6</td>
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#### Second Year

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<td>HUMS 300</td>
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#### Third Year

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<td>HUMS 330</td>
<td>3 HUMS 410</td>
<td>3</td>
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<td>HUMS 420</td>
<td>3 HUMS 421</td>
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<td>HUMS 430</td>
<td>3 HUMS 440</td>
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<td>3 Restricted Elective</td>
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#### Fourth Year

<table>
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<th>Spring Days</th>
<th>Hours</th>
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<tr>
<td>BCOR 350</td>
<td>3 HUMS 489</td>
<td>6</td>
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<tr>
<td>ECON 441</td>
<td>3 SOCA 333</td>
<td>3</td>
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<td>HUMS 470</td>
<td>3 Restricted Elective</td>
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<td>POLS 480</td>
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</table>

| | | | | | | |

| | | | | | | |

West Virginia University 78
Restricted Elective  3

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

Health Services Administration Minor

MINOR CODE - UT28

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:

HUMS 400  Health Services Law and Legislation  3
HUMS 420  Principle of Microhealthcare Finance  3
HUMS 440  Long Term Care Administration  3

Total Hours  15

History and Government

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)

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.

General Education Foundations

F1 - Composition & Rhetoric

ENGL 101  Introduction to Composition and Rhetoric  3-6
& ENGL 102  and Composition, Rhetoric, and Research
or ENGL 103 Accelerated Academic Writing

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>F2A/F2B</td>
<td>Science &amp; Technology</td>
<td>4-6</td>
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<tr>
<td>F3</td>
<td>Math &amp; Quantitative Reasoning</td>
<td>3-4</td>
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<tr>
<td>F4</td>
<td>Society &amp; Connections</td>
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</tr>
<tr>
<td>F5</td>
<td>Human Inquiry &amp; the Past</td>
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</tr>
<tr>
<td>F6</td>
<td>The Arts &amp; Creativity</td>
<td>3</td>
</tr>
<tr>
<td>F7</td>
<td>Global Studies &amp; Diversity</td>
<td>3</td>
</tr>
<tr>
<td>F8</td>
<td>Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
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<tr>
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<td><strong>Total Hours</strong></td>
<td><strong>31-37</strong></td>
</tr>
</tbody>
</table>

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**

A minimum GPA of a 2.0 in all major coursework is required.

**GEF Elective Requirements (2, 3, 4, 6, 7, and 8)**

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<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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<tr>
<td>ENGL 101 &amp; ENGL 102</td>
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<td>CSAD 270</td>
<td>Effective Public Speaking</td>
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<td>GEOG 108</td>
<td>Human Geography</td>
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<tr>
<td>HIST 152</td>
<td>Growth of the American Nation to 1865 (GEF 5)</td>
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<tr>
<td>HIST 153</td>
<td>Making of Modern America: 1865 to the Present</td>
<td>3</td>
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<tr>
<td>HIST 179</td>
<td>World History to 1500</td>
<td>3</td>
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<tr>
<td>HIST 180</td>
<td>World History Since 1500</td>
<td>3</td>
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<tr>
<td>HIST 203</td>
<td>Introduction to Medieval Europe</td>
<td>3</td>
</tr>
<tr>
<td>HIST 261</td>
<td>Recent America: The United States since 1918</td>
<td>3</td>
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<tr>
<td>HIST 277</td>
<td>Revolutions in Science and Technology</td>
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<td>HIST 300</td>
<td>Greece and Rome</td>
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<td>HIST 375</td>
<td>Hollywood and History</td>
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<td>HIST 473</td>
<td>Appalachian Regional History</td>
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<td>HIST 484</td>
<td>Historical Research-Capstone</td>
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<td>HUMS 480</td>
<td>Grant Writing and Documentation</td>
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<td>POLS 102</td>
<td>Introduction to American Government</td>
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<td>POLS 260</td>
<td>Introduction to International Relations</td>
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<td>PSYC 351</td>
<td>Topics in Social Psychology</td>
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<td>SOCA 101</td>
<td>Introduction to Sociology</td>
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<td>Economics Elective (must be 300 or 400 level)</td>
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<td>English Elective (must be 300 or 400 level)</td>
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<tr>
<td>History Elective (must be 300 or 400 level)</td>
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<td>Political Science Elective (must be 300 or 400 level)</td>
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<td>Restricted Electives (must be 300 or 400 level) HIST, ECON, ENTR, PHIL, POLS, ENGL, SOCA, BCOR, MANG, MKTG, ACCT, PSYC, CJ, FRNX</td>
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**Suggested Plan of Study**

**First Year**

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<td>ENGL 101 (GEF 1)</td>
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<td>HIST 152 (GEF 5)</td>
<td>3 POLS 102</td>
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<td><strong>Spring</strong></td>
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<td>ENGL 102 (GEF 1)</td>
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<tr>
<td>3 HIST 153</td>
<td>3</td>
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<tr>
<td>3 POLS 102</td>
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WVUE 191 1  GEF 4 3  
Elective 1  GEF 6 3  
GEF 2 4  
GEF 3 3  

**Second Year**

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<td>GEOG 108</td>
<td>3 HIST 277</td>
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<td>GEF 7</td>
<td>3 POLS 260</td>
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<td>GEF 8</td>
<td>3 SOCA 101</td>
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15 15

**Third Year**

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<tr>
<td>HIST 203</td>
<td>3 PSYC 351</td>
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<tr>
<td>Literature or Foreign Language Elective</td>
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<td>Political Science Elective (must be 300 or 400 level)</td>
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**Fourth Year**

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<td>HIST 473</td>
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15 15

Total credit hours: 120

**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

**History and Government Minor**

**MINOR CODE - UT09**

**Required Courses**

<table>
<thead>
<tr>
<th></th>
<th>Introduction to American Government</th>
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Select one of the following sets of courses:

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<thead>
<tr>
<th></th>
<th>Growth of the American Nation to 1865</th>
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<tr>
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<th>World History to 1500</th>
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<tbody>
<tr>
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<td>and World History Since 1500</td>
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<td>HIST 180</td>
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POLS 300+ Level Courses 3
Interdisciplinary Studies

Degree Offered

- Bachelor of Arts
- Bachelor of Science

Nature of the Program

The WVU Tech student who is studying Interdisciplinary Studies (IDS) in the College of Business, Humanities, and Social Sciences is provided the unique opportunity to develop his/her own flexible Program of Study toward either a Bachelor of Science or Bachelor of Arts degree that represents their personal and career goals. Students work closely with the IDS Program Advisor in structuring their program and completing their degree program. Based upon the student's selected areas of study, this unique degree option includes elective opportunities that can be used to further develop knowledge in the selected areas of study, related areas, or career-oriented courses. Each student's self-designed program of interdisciplinary study is what makes an IDS degree unique.

Areas of Study

The following list of areas of study represents a few of the many possibilities for combining two or three areas of study and scholarship uniquely available to IDS students. More options than those presented below are available throughout the university

- Accounting
- Criminal Justice
- English Studies
- Fraud Examination
- Psychology
- Sociology
- Business Management
- Political Science
- Economics
- Accounting and Finance
- History and Government
- Marketing
- Risk and Insurance
- Sport Management

Students are encouraged to explore IDS Program options. Students considering entering into the degree program who wish to identify areas of study other than those in the above Core List should make arrangements to meet with the IDS Program Advisor to discuss their choices.

FACULTY

ASSISTANT PROFESSOR

- Rachel Lanier Bragg - Ph.D. (Old Dominion University)

Major Learning Outcomes

INTERDISCIPLINARY STUDIES

1. Develop broad knowledge in two or more areas of study.
2. Explain interdisciplinary studies and its value to career goals and the community to others.
3. Collect and evaluate information using the appropriate interdisciplinary perspectives.
4. Compose various academic documents associated with a successful career path, including a research paper, cover letter, and resume.
5. Analyze contemporary issues using an interdisciplinary perspective and academic knowledge.
Minors

DEPARTMENT OF ACCOUNTING AND FINANCE
- Accounting (p. 84)
- Finance (p. 85)
- Fraud Examination (p. 85)

DEPARTMENT OF BIOLOGY
- Biology (p. 85)

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS
- Computer Science (p. 85)

DEPARTMENT OF HISTORY, ENGLISH, AND CREATIVE ARTS
- History and Government (p. 86)
- Professional Writing and Editing (p. 86)

DEPARTMENT OF MANAGEMENT
- Business Administration (p. 87)
- Human Resources Administration (p. 87)
- Marketing (p. 87)

DEPARTMENT OF MATHEMATICS
- Mathematics (p. 87)

DEPARTMENT OF PHYSICAL SCIENCES
- Chemistry (p. 88)

DEPARTMENT OF PSYCHOLOGY
- Psychology (p. 88)

DEPARTMENT OF SOCIAL SCIENCES AND PUBLIC ADMINISTRATION
- Criminal Justice (p. 89)
- Economics (p. 89)
- Political Science (p. 89)
- Sociology (p. 90)

DEPARTMENT OF SPORT STUDIES
- Sport Management (p. 90)

DEPARTMENT OF ACCOUNTING AND FINANCE

Accounting

MINOR CODE - UT01

Required Courses

<table>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ACCT 311</td>
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Select three of the following courses:

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<th>Title</th>
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<tbody>
<tr>
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<td>Intermediate Accounting</td>
</tr>
<tr>
<td>ACCT 322</td>
<td>Accounting Systems</td>
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</tbody>
</table>
ACCT 348  Financial Statement Analysis
ACCT 432  Advanced Cost Management
ACCT 441  Income Tax Accounting 1
ACCT 442  Income Tax Accounting 2
ACCT 491  Professional Field Experience

Total Hours 18

Finance

MINOR CODE - UT06

Required Courses
ACCT 491  Professional Field Experience 3
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 18

Fraud Examination

MINOR CODE - UT07

Required Courses
ACCT 201  Principles of Accounting 3
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

Total Hours 18

DEPARTMENT OF BIOLOGY

Biology

MINOR CODE - UT02

Required Courses
BIOL 111  General Biology 4
BIOL 112  General Biology 4
BIOL Electives (must include at least 9 credit hours of upper division courses) 16

Total Hours 24

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

Computer Science

MINOR CODE - UT24

Student must earn a grade of C or better for each of the courses counted towards the minor.

Required Courses
CS 121  Computer Science 1 4
CS 122  Computer Science 2 4

Complete the requirements for one of the following tracks:

Programming Track
CS 201  Data Structures
CS 222  Intro Software Engineering

8-9
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 310</td>
<td>Principles of Programming Languages</td>
</tr>
<tr>
<td>Systems Track</td>
<td></td>
</tr>
<tr>
<td>CS 231</td>
<td>Introduction to Computer Organization</td>
</tr>
<tr>
<td>CS 265</td>
<td>C Programming</td>
</tr>
<tr>
<td>CS 350</td>
<td>Computer System Concepts</td>
</tr>
<tr>
<td>Select two of the following courses:</td>
<td>6</td>
</tr>
<tr>
<td>CS 321</td>
<td>Introduction to Networking</td>
</tr>
<tr>
<td>CS 324</td>
<td>Database Management</td>
</tr>
<tr>
<td>CS 410</td>
<td>Compiler Construction</td>
</tr>
<tr>
<td>CS 450</td>
<td>Operating Systems Structure</td>
</tr>
<tr>
<td>CS 465</td>
<td>Cybersecurity Principles and Practice</td>
</tr>
<tr>
<td>CS 472</td>
<td>Artificial Intelligence</td>
</tr>
</tbody>
</table>

Total Hours 22-23

DEPARTMENT OF HISTORY, ENGLISH, AND CREATIVE ARTS

History and Government

MINOR CODE - UT09

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 102</td>
<td>Introduction to American Government</td>
</tr>
<tr>
<td>Select one of the following sets of courses:</td>
<td>6</td>
</tr>
<tr>
<td>HIST 152</td>
<td>Growth of the American Nation to 1865</td>
</tr>
<tr>
<td>&amp; HIST 153</td>
<td>and Making of Modern America: 1865 to the Present</td>
</tr>
<tr>
<td>HIST 179</td>
<td>World History to 1500</td>
</tr>
<tr>
<td>&amp; HIST 180</td>
<td>and World History Since 1500</td>
</tr>
<tr>
<td>POLS 300+ Level Courses</td>
<td>3</td>
</tr>
<tr>
<td>HIST 200+ Level Courses</td>
<td>9</td>
</tr>
</tbody>
</table>

Total Hours 21

Professional Writing and Editing

MINOR CODE - UT23

Minimum 3.0 GPA in PWE courses.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 301</td>
<td>Writing Theory and Practice</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>Editing</td>
</tr>
<tr>
<td>Select one course from each of the three following groups:</td>
<td>9</td>
</tr>
<tr>
<td>Business and Technical Writing</td>
<td></td>
</tr>
<tr>
<td>ENGL 304</td>
<td>Business and Professional Writing</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>Writing with Technology</td>
<td></td>
</tr>
<tr>
<td>ENGL 303</td>
<td>Multimedia Writing</td>
</tr>
<tr>
<td>ENGL 306</td>
<td>Topics in Humanities Computing</td>
</tr>
<tr>
<td>Linguistics</td>
<td></td>
</tr>
<tr>
<td>ENGL 221</td>
<td>The English Language</td>
</tr>
<tr>
<td>ENGL 321</td>
<td>History of the English Language</td>
</tr>
</tbody>
</table>

Total Hours 15
## DEPARTMENT OF MANAGEMENT
### Business Administration

**MINOR CODE - UT03**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 320</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro to Computer Applications</td>
<td>4</td>
</tr>
<tr>
<td>FIN 325</td>
<td>Financial Management 1</td>
<td>3</td>
</tr>
<tr>
<td>MANG 386</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours** 25

### Human Resources Administration

**MINOR CODE - UT10**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANG 330</td>
<td>Human Resource Management Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>MANG 422</td>
<td>The Individual and the Organization</td>
<td>3</td>
</tr>
</tbody>
</table>

**Select three of the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 430</td>
<td>Collective Bargaining</td>
<td>3</td>
</tr>
<tr>
<td>HRMG 440</td>
<td>Training and Development</td>
<td>3</td>
</tr>
<tr>
<td>MANG 350</td>
<td>Leadership In Business</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 350</td>
<td>Topics in Social Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours** 15

### Marketing

**MINOR CODE - UT13**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 380</td>
<td>Integrated Promotions</td>
<td>3</td>
</tr>
</tbody>
</table>

**Select four of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKTG 315</td>
<td>Buyer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 325</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 410</td>
<td>Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 420</td>
<td>Sales Management</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 485</td>
<td>Global Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours** 18

## DEPARTMENT OF MATHEMATICS
### Mathematics

**MINOR CODE - UT14**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 155</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 156</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 251</td>
<td>Multivariable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 261</td>
<td>Elementary Differential Equations</td>
<td>4</td>
</tr>
<tr>
<td>MATH 441</td>
<td>Applied Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>
Select two of the following courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 283</td>
<td>Concepts of Mathematics 2</td>
</tr>
<tr>
<td>MATH 300+ or 400+ Level Courses (excluding MATH 315)</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 25

**DEPARTMENT OF PHYSICAL SCIENCES**

**Chemistry**

**MINOR CODE - UT04**

A minimum overall GPA of 2.0 is required for this minor.

A minimum grade of D- is required for the courses in this minor.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 115</td>
<td>Fundamentals of Chemistry</td>
</tr>
<tr>
<td>&amp; 115L</td>
<td>and Fundamentals of Chemistry 1 - Laboratory</td>
</tr>
<tr>
<td>CHEM 116</td>
<td>Fundamentals of Chemistry</td>
</tr>
<tr>
<td>&amp; 116L</td>
<td>and Fundamentals of Chemistry 2 - Laboratory</td>
</tr>
<tr>
<td>CHEM 233</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>&amp; CHEM 235</td>
<td>and Organic Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 234</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>&amp; CHEM 236</td>
<td>and Organic Chemistry Laboratory</td>
</tr>
</tbody>
</table>

Select two of the following courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 215</td>
<td>Introductory Analytical Chemistry</td>
</tr>
<tr>
<td>&amp; 215L</td>
<td>and Introductory Analytical Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 310</td>
<td>Instrumental Analysis</td>
</tr>
<tr>
<td>&amp; CHEM 313</td>
<td>and Instrumental Analysis Laboratory</td>
</tr>
<tr>
<td>CHEM 346</td>
<td>Physical Chemistry</td>
</tr>
<tr>
<td>&amp; CHEM 347</td>
<td>and Physical Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 348</td>
<td>Physical Chemistry</td>
</tr>
<tr>
<td>&amp; CHEM 349</td>
<td>and Physical Chemistry Laboratory</td>
</tr>
</tbody>
</table>

Any CHEM course(s) at the 300-level or higher

Total Hours: 24

**DEPARTMENT OF PSYCHOLOGY**

**Psychology**

**MINOR CODE - UT17**

A minimum grade of C- is required for all courses in the minor.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 101</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>PSYC 202</td>
<td>Research Methods in Psychology</td>
</tr>
<tr>
<td>PSYC 301</td>
<td>Biological Foundations of Behavior</td>
</tr>
<tr>
<td>or PSYC 302</td>
<td>Behavior Principles</td>
</tr>
</tbody>
</table>

Select one of the following courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 241</td>
<td>Introduction to Human Development</td>
</tr>
<tr>
<td>PSYC 281</td>
<td>Introduction to Abnormal Psychology</td>
</tr>
</tbody>
</table>

Select two of the following courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 331</td>
<td>History and Systems of Psychology</td>
</tr>
<tr>
<td>PSYC 343</td>
<td>Child and Adolescent Development</td>
</tr>
<tr>
<td>PSYC 351</td>
<td>Topics in Social Psychology</td>
</tr>
<tr>
<td>PSYC 363</td>
<td>Personality Theory</td>
</tr>
<tr>
<td>PSYC 382</td>
<td>Exceptional Children</td>
</tr>
<tr>
<td>PSYC 424</td>
<td>Learning and Behavior Theory</td>
</tr>
<tr>
<td>PSYC 474</td>
<td>Applied Behavior Analysis</td>
</tr>
</tbody>
</table>
DEPARTMENT OF SOCIAL SCIENCES AND PUBLIC ADMINISTRATION

Criminal Justice

MINOR CODE - UT21

A 2.0 GPA is required for all courses counted toward the minor.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 233</td>
<td>Juvenile Justice</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 421</td>
<td>Fraud Management: Legal/Ethical Issues</td>
<td>3</td>
</tr>
<tr>
<td>CJ 310</td>
<td>Law Enforcement Administration</td>
<td>3</td>
</tr>
<tr>
<td>CJ 320</td>
<td>Courts and Judicial Systems</td>
<td>3</td>
</tr>
<tr>
<td>CJ 410</td>
<td>Criminal Investigations</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 320</td>
<td>Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>POLS 313</td>
<td>American Constitutional Law</td>
<td>3</td>
</tr>
<tr>
<td>POLS 400</td>
<td>Terrorism and National Security</td>
<td>3</td>
</tr>
<tr>
<td>SOCA 302</td>
<td>Deviant Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SOCA 311</td>
<td>Social Research Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 15

Economics

MINOR CODE - UT05

Must have 18 credit hours and 9 hours must be 300 or 400 level courses

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 301</td>
<td>Intermediate Micro-Economic Theory</td>
<td>3</td>
</tr>
<tr>
<td>ECON 225</td>
<td>Elementary Business and Economics Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 331</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>ECON 401</td>
<td>Managerial Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 430</td>
<td>Collective Bargaining</td>
<td>3</td>
</tr>
<tr>
<td>ECON 441</td>
<td>Public Economics</td>
<td>3</td>
</tr>
<tr>
<td>Other ECON courses may be accepted with advisor approval.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 18

Political Science

MINOR CODE - UT16

Must have 15 credit hours and 9 hours must be 300 or 400 level courses.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 102</td>
<td>Introduction to American Government</td>
<td>3</td>
</tr>
<tr>
<td>POLS 260</td>
<td>Introduction to International Relations</td>
<td>3</td>
</tr>
<tr>
<td>POLS 319</td>
<td>Comparative Government</td>
<td>3</td>
</tr>
<tr>
<td>POLS 313</td>
<td>American Constitutional Law</td>
<td>3</td>
</tr>
<tr>
<td>POLS 400</td>
<td>Terrorism and National Security</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 18
## Sociology

**MINOR CODE - UT19**

Must have 15 hours of sociology courses and 9 hours must be in 300 or 400 level sociology courses.

A 2.0 GPA is required for all courses counted toward the minor.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCA 101 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Sociology (SOCA) Electives (must include at least 9 credit hours of upper division courses)</td>
<td></td>
</tr>
<tr>
<td>WGST 225 Women in Appalachia (may be included as part of the Sociology minor)</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 15

## DEPARTMENT OF SPORT STUDIES

### Sport Management

**MINOR CODE - UT20**

A minimum grade of C- is required for all courses in this minor.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCOR 350 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370 Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>SM 425 Sport Facility and Event Management</td>
<td>3</td>
</tr>
<tr>
<td>SM 485 Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>SM 486 Sport Marketing &amp; Sales</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>3</td>
</tr>
<tr>
<td>- SM 370 Sport Finance and Economics</td>
<td></td>
</tr>
<tr>
<td>- SM 380 History and Philosophy of Sport</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 18

## Interdisciplinary Studies B.A.

### General Education Foundations

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

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

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

**GEF Elective Requirements (1, 2, 3, 4, 5, 6, 7, and 8)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 101</td>
<td>Elementary Spanish 1</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 102</td>
<td>Elementary Spanish 2</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 203</td>
<td>Intermediate Spanish 1</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 204</td>
<td>Intermediate Spanish 2</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
<td>1</td>
</tr>
<tr>
<td>MDS 495</td>
<td>Independent Study</td>
<td>4</td>
</tr>
</tbody>
</table>

**Academic Discipline 1 Requirements (AD1)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD 1</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

**Academic Discipline 2 Requirements (AD2)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD 2</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

**Academic Discipline Restricted Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDS 199</td>
<td>Orientation to MDS</td>
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<td>MDS 389</td>
<td>Interdisciplinary Research Methods</td>
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<tr>
<td>MDS 489</td>
<td>Capstone</td>
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**Guided Electives**

<table>
<thead>
<tr>
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**Electives**

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**Total Hours**

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## Suggested Plan of Study

### First Year

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<td>3</td>
<td>ENGL 102 (GEF 1)</td>
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<td>SPAN 102</td>
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### Third Year

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### Fourth Year

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Interdisciplinary Studies B.S.

General Education Foundations

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

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

**General Education Foundations**

<table>
<thead>
<tr>
<th>Requirement</th>
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<td>F1 - Composition &amp; Rhetoric</td>
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<tr>
<td>ENGL 101 &amp; ENGL 102 or ENGL 103</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing</td>
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<tr>
<td>F2A/F2B - Science &amp; Technology</td>
<td>4-6</td>
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<tr>
<td>F3 - Math &amp; Quantitative Reasoning</td>
<td>3-4</td>
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<td>F4 - Society &amp; Connections</td>
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<td>F5 - Human Inquiry &amp; the Past</td>
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<td>F6 - The Arts &amp; Creativity</td>
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<td>F7 - Global Studies &amp; Diversity</td>
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<tr>
<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
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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**

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<thead>
<tr>
<th>Requirement</th>
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<td>MDS 495 Independent Study</td>
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Total Hours: 120

**Suggested Plan of Study**

**First Year**

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<th>Spring</th>
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Elective 1

Second Year

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15 15

Third Year

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<th>Hours</th>
<th>Spring</th>
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<td>MDS 389</td>
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14 15

Fourth Year

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<th>Fall</th>
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<th>Spring</th>
<th>Hours</th>
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<tbody>
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<td>4 MDS 489</td>
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<td>AD 1: Discipline 1 Requirement (5 of 6)</td>
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<tr>
<td>IA: Guided Elective</td>
<td>3 IA: Guided Elective</td>
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</table>

16 15

Total credit hours: 120

Psychology

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

CHAIR

• Gregory A. Lieving - Ph.D. Psychology

ASSOCIATE PROFESSOR

• Cynthia R. Hall - Ph.D. Psychology
General Education Foundations

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</tr>
<tr>
<td>ENGL 101 Introduction to Composition and Rhetoric</td>
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<tr>
<td>&amp; ENGL 102 and Composition, Rhetoric, and Research</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 103 Accelerated Academic Writing</td>
<td>3</td>
</tr>
<tr>
<td>F2A/F2B - Science &amp; Technology</td>
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<tr>
<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
<td>9</td>
</tr>
</tbody>
</table>

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

Restricted Electives selected from: ARHS, BIOL, CHEM, CS, CJ, ECON, HIST, MATH, MUSC, PHYS, POLS, PSYC, SOCA, FRNX, foreign language

Minimum 2.0 in each of the following: PSYC 101, 203, 204, 241, 301, 302, and 474

Minimum 2.0 cumulative average in PSYC courses

GEF Elective Requirements (5, 6, and 8) | 15 |
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<tbody>
<tr>
<td>ENGL 101 Introduction to Composition and Rhetoric</td>
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<tr>
<td>&amp; ENGL 102 and Composition, Rhetoric, and Research (GEF 1)</td>
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<tr>
<td>ENGL 305 Technical Writing</td>
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<tr>
<td>MATH 126 College Algebra (GEF 3)</td>
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<tr>
<td>BIOL 111 General Biology (GEF 2)</td>
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<td>BIOL 112 General Biology</td>
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<tr>
<td>CSAD 270 Effective Public Speaking</td>
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<td>SOCA 101 Introduction to Sociology</td>
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<td>PSYC 101 Introduction to Psychology (GEF 4)</td>
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<tr>
<td>PSYC 201 Psychology as a Profession</td>
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<td>PSYC 203 Research Methods &amp; Analysis 1</td>
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<td>PSYC 234 Drugs and Behavior</td>
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<td>PSYC 241 Introduction to Human Development</td>
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<td>PSYC 281 Introduction to Abnormal Psychology (GEF 7)</td>
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<td>PSYC 302 Behavior Principles</td>
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<td>PSYC 350 Topics in Social Psychology</td>
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<td>PSYC 362 Psychological Assessment</td>
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<td>PSYC 363 Personality Theory</td>
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<td>PSYC 382 Exceptional Children</td>
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<td>PSYC 401 Psychology Capstone Experience</td>
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<td>PSYC 424 Learning and Behavior Theory</td>
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<td>PSYC 474 Applied Behavior Analysis</td>
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Select one of the following: | 3 |
PSYC 491  Professional Field Experience
PSYC 493  Special Topics
PSYC 495  Independent Study
WVUE 191  First Year Seminar

Science Electives (BIOL, CHEM, CS, GEOL, MATH, PHYS, STAT)  9
Restricted Electives (six hours must be 300-400 level)  12
Open Electives  9

Total Hours  120

Suggested Plan of Study

First Year

<table>
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<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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16    16

Second Year

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<td>PSYC 281</td>
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<td>PSYC 350</td>
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16    16

Third Year

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16    12

Fourth Year

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| Restricted Electives | 9

15    13

Total credit hours: 120

Major Learning Outcomes

PSYCHOLOGY

Students completing the program will:

• Use the scientific approach to solve psychologically-relevant problems and to increase the knowledge base of psychology
• Demonstrate the diverse set of variables that influence behavior
• Demonstrate critical and ethical thinking skills
• Demonstrate grounding in the field of behavior analysis
• Demonstrate an appreciation of the specialized psychological needs in Appalachia
• Demonstrate effective communication skills.

Psychology Minor

MINOR CODE - UT17

A minimum grade of C- is required for all courses in the minor.

Required Courses

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>PSYC 202</td>
<td>Research Methods in Psychology</td>
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Select one of the following courses:

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<th>Course Code</th>
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<tr>
<td>PSYC 241</td>
<td>Introduction to Human Development</td>
</tr>
<tr>
<td>PSYC 281</td>
<td>Introduction to Abnormal Psychology</td>
</tr>
</tbody>
</table>

Select two of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 331</td>
<td>History and Systems of Psychology</td>
</tr>
<tr>
<td>PSYC 343</td>
<td>Child and Adolescent Development</td>
</tr>
<tr>
<td>PSYC 351</td>
<td>Topics in Social Psychology</td>
</tr>
<tr>
<td>PSYC 363</td>
<td>Personality Theory</td>
</tr>
<tr>
<td>PSYC 382</td>
<td>Exceptional Children</td>
</tr>
<tr>
<td>PSYC 424</td>
<td>Learning and Behavior Theory</td>
</tr>
<tr>
<td>PSYC 474</td>
<td>Applied Behavior Analysis</td>
</tr>
<tr>
<td>PSYC 491</td>
<td>Professional Field Experience</td>
</tr>
<tr>
<td>PSYC 493</td>
<td>Special Topics</td>
</tr>
<tr>
<td>PSYC 495</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

Total Hours 19

Public Service Administration

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. There is a built in practicum internship that gives the students job experience and allows them to apply the skills they have 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 perfect for continuing on to 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

• Thomas McGraw - MHA

ASSISTANT PROFESSORS

• Dr. Andrea Kay Kent - PhD Political Science
• Dr. Fahad Gill - PhD Economics
## General Education Foundations

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

### General Education Foundations

**F1 - Composition & Rhetoric**

- **ENGL 101**: Introduction to Composition and Rhetoric (3-6)
- **ENGL 102**: 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

**GEF Elective Requirements (2B, 5, 6, and 8)**

19

- **ENGL 101**: Introduction to Composition and Rhetoric (GEF 1) (6)
- **ENGL 102**: Composition, Rhetoric, and Research
- **ENGL 305**: Technical Writing
- **MATH 124**: Algebra with Applications (GEF 3)
- **CS 101**: Intro to Computer Applications
- **POLS 102**: Introduction to American Government (3)
- **POLS 220**: State and Local Government (3)
- **POLS 280**: Introduction to International Relations (GEF 7)
- **POLS 313**: American Constitutional Law (3)
- **POLS 480**: Seminar in Non-Profit Administration (3)
- **PSYC 101**: Introduction to Psychology (GEF 4)
- **SOCA 101**: Introduction to Sociology (3)
- **SOCA 207**: Social Problems in Contemporary America
- **SOCA 235**: Race and Ethnic Relations (3)
- **SOCA 305**: Social Stratification Social and Power in American Society (3)
- **SOCA 311**: Social Research Methods (3)
- **SOCA 333**: Sociology of Work and Work Places (3)
- **BCOR 370**: Managing Individuals & Teams (3)
- **ECON 201**: Principles of Microeconomics (3)
- **ECON 202**: Principles of Macroeconomics (3)
- **ECON 225**: Elementary Business and Economics Statistics (3)
- **or STAT 211**: Elementary Statistical Inference (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**: The Individual and the Organization (3)
- **WVUE 191**: First Year Seminar (1)
Restricted Electives (at least 3 hours must be 300 or 400 level)  15
Electives  3
Total Hours  120

Restricted Electives

ACCT 201  Principles of Accounting  3
ACCT 202  Principles of Accounting  3
ACCT 311  Intermediate Accounting  3
ACCT 312  Intermediate Accounting  3
ACCT 461  Accounting for Nonbusiness Entities  3
BCOR 320  Legal Environment of Business  3
BCOR 330  Information Systems and Technology  3
CSAD 270  Effective Public Speaking  3
CJ 101  Introduction to Criminal Justice  3
CJ 310  Law Enforcement Administration  3
CJ 320  Courts and Judicial Systems  3
ECON 301  Intermediate Micro-Economic Theory  3
ECON 331  Money and Banking  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
MILS 301  Military Science  3
MILS 302  Military Science  3
MILS 402  Military Science  3
PHIL 170  Introduction to Critical Reasoning  3
POLS 103  Global Political Issues  3
POLS 319  Comparative Government  3
POLS 400  Terrorism and National Security  3
SOCA 105  Introduction to Anthropology  3
SOCA 221  Families and Society  3
SOCA 302  Deviant Behavior  3
SOCA 327  Appalachian Culture  3
SOCA 360  Women and Men in Society  3
SOCA 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  Hours
ENGL 101 (GEF 1)  3  ENGL 102 (GEF 1)  3
MATH 124 (GEF 3)  3  CS 101  4
WVUE 191  1  SOCA 101  3
Elective  3  Restricted Elective  3
### Second Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BCOR 370</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>POLS 102</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>PSYC 101 (GEF 4)</td>
<td></td>
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<td>GEF 8</td>
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<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ECON 202</td>
<td></td>
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</tr>
<tr>
<td>ENGL 305</td>
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</tr>
<tr>
<td>HUMS 210</td>
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<td>POLS 220</td>
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<td>SOCA 260 (GEF 7)</td>
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#### Third Year

<table>
<thead>
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<tbody>
<tr>
<td>ECON 441</td>
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<tr>
<td>HUMS 320</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HUMS 480</td>
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<td>3</td>
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<td>SOCA 305</td>
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<td>GEF 5</td>
<td></td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 225 or STAT 211</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SOCA 207 or 235</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Restricted Elective</td>
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<td>3</td>
</tr>
<tr>
<td>Restricted Elective</td>
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<td>3</td>
</tr>
<tr>
<td>Restricted Elective (300 or 400 level)</td>
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<td>3</td>
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</tbody>
</table>

#### Fourth Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MANG 422</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>POLS 313</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SOCA 311</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>POLS 480</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Restricted Elective</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS 489</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Restricted Elective (300 or 400 level)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

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

#### Degree Offered

- Regents Bachelor of Arts

#### Nature of the Program

WVU Tech participates in the state-wide Regents Bachelor of Arts degree program. The 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.

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

Areas of Emphasis

WVU Tech encourages adult students 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 (SOCA), History (HIST), Music (MUSC), Psychology (PSYC), English (ENGL)
- Government - Economics (ECON), History (HIST), Sociology (SOCA), Political Science (POLS)
- Health Care Services - HUMS 320 Public Administration and HUMS 330 Intro to Health Care Organizations, 9 hours from Human Services (HUMS), SOCA 325 Illness/Health Care, and/or SOCA 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 (SOCA), Political Science (POLS)
- Sport Studies - Athletic career Education (ACE), Sport Management (SM). At least two courses each from ACE and SM.

For information, contact:

Frank D. Robbins, Program Coordinator
Nancy Nickell, Associate Program Coordinator
West Virginia University Institute of Technology
Learning Resource Center, Section 303
Beckley, WV 25801
(304) 929-1215
(304) 929-1685
Frank.Robbins@mail.wvu.edu
Nancy.Nickell@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.


Curriculum Requirements

WVU Tech GPA: Minimum 2.0 required.
Overall GPA: Minimum 2.0 required.

General Education

<table>
<thead>
<tr>
<th>Communication Skills</th>
<th>6</th>
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</thead>
<tbody>
<tr>
<td>Select courses fulfilling GEF 1 or courses fulfilling this outcome and approved by an advisor.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>Select courses fulfilling GEF 6 or 7, or courses fulfilling this outcome and approved by an advisor.</td>
</tr>
</tbody>
</table>

Social Science

| 6 |
Select courses fulfilling GEF 4 or 5, or courses fulfilling this outcome and approved by an advisor.

| Natural or Physical Science | 3 |

Select courses fulfilling GEF 2, or courses fulfilling this outcome and approved by an advisor.

| Mathematics, Statistics, or Computer Science | 3 |

Select courses fulfilling GEF 3, or courses fulfilling this outcome and approved by an advisor.

| Upper Division Courses (Must be at the 300 or 400 level) | 27 |

| Electives | 69 |

| Total Hours | 120 |

## AREAS OF EMPHASIS OFFERED

- Aviation Studies (p. 101)
- Business (p. 101)
- Creative Arts (p. 101)
- Cultural Studies (p. 101)
- Government (p. 101)
- Health Care Services (p. 102)
- Information Studies (p. 102)
- Marketing (p. 102)
- Organizational Management (p. 102)
- Sciences (p. 102)
- Social Sciences (p. 102)

## AVIATION STUDIES AREA OF EMPHASIS

A minimum grade of C is required in all AOE coursework.

| AVIA 489 Aviation Law | 3 |

| Upper-Division AVIA Courses | 12 |

| Total Hours | 15 |

## BUSINESS AREA OF EMPHASIS

Must have a C- grade or better in all AOE designated courses

300 or 400 level courses in the following subject areas: ACCT, ENTR, FIN, MANG, MKTG, ISYS

| Total Hours | 15 |

## CREATIVE ARTS AREA OF EMPHASIS

Must earn a C- grade or better in all designated AOE courses

300 or 400 level courses in the following subject areas: ENGL, MUSC, THET, and Languages

| Total Hours | 15 |

## CULTURAL STUDIES AREA OF EMPHASIS

Must have a C- grade or better in all AOE designated courses

300 or 400 level courses in the following subject areas: ENGL, HIST, PSYC, SOCA

| Total Hours | 15 |

## GOVERNMENT AREA OF EMPHASIS

Must earn a C- grade or better in all designated AOE courses

300 or 400 level courses in the following subject areas: ECON, HIST, POLS, SOCA

| Total Hours | 15 |
### HEALTH CARE SERVICES AREA OF EMPHASIS

Must earn a C- grade or better in all designated AOE courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS 320</td>
<td>Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 330</td>
<td>Health Insurance</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three of the following:

- 300 or 400 level courses in the following subject areas: HUMS
- SOCA 312 Death and Dying
- SOCA 325 Illness and Health Care

Total Hours: 15

### INFORMATION STUDIES AREA OF EMPHASIS

Must have a C- grade or better in all AOE designated courses

- 300 or 400 level courses in the following subject areas: ENGL, ISYS, MANG

Total Hours: 15

### MARKETING AREA OF EMPHASIS

Must earn a C- grade or better in all designated AOE courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

- 300 or 400 level courses in the following subject areas: MKTG

Total Hours: 15

### ORGANIZATIONAL MANAGEMENT AREA OF EMPHASIS

Must earn a C- grade or better in all designated AOE courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>MANG 422</td>
<td>The Individual and the Organization</td>
<td>3</td>
</tr>
</tbody>
</table>

- 300 or 400 level courses in the following subject areas: BCOR, MANG

Total Hours: 15

### SCIENCES AREA OF EMPHASIS

Must earn a C- grade or better in all designated AOE courses

- 300 or 400 level courses in the following subject areas: BIOL, CHEM, MATH, PHYS

Total Hours: 15

### SOCIAL SCIENCES AREA OF EMPHASIS

Must earn a C- grade or better in all designated AOE courses

- 300 or 400 level courses in the following subject areas: ECON, HIST, POLS, PSYC, SOCA

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

**Degree Offered**

- Bachelor of Science
Nature of the Program

WVU Tech offers a Bachelor of Science degree in Physical Education (BSPED) with majors in Athletic Coaching Education (ACE) and in Sport Management (SM) in the College of Business, Humanities and Social Sciences (BHSS). The SM 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.

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.

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

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

Minimum 2.0 in all major courses (except SM 167)

Minimum 2.5 cumulative average for graduation

<table>
<thead>
<tr>
<th>GEF Elective Requirements (2, 5, 6, and 8)</th>
<th>16</th>
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</thead>
<tbody>
<tr>
<td>WVUE 191 First Year Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Pre-Major Requirements

| ENGL 101 & ENGL 102                     | 6   |
| Principles of Human Communication       | 1   |
| Human Communication in the Interpersonal Context | 2   |
| Principles of Microeconomics            | 3   |
| Media and Society                       | 3   |
| Select one of the following (GEF 3):    | 3   |
| MATH 121 Intro Concepts Of Mathematics  |     |
| MATH 124 Algebra with Applications      |     |
| SM 167 Introduction to Sport Management (minimum grade of C-) | 3   |

Applied Area Requirements

<p>| SEP 271 Sport in American Society (GEF 8) | 3   |
| SEP 272 Psychological Perspectives of Sport (GEF 4) | 3   |
| CSAD 270 Effective Public Speaking        | 3   |
| SM 340 Sport Governance                   | 3   |
| SM 345 Technology in Sport Management     | 2   |
| SM 350 Leadership in Sport Management     | 2   |
| SM 355 Orientation in Sport Management    | 1   |
| SM 370 Sport Finance and Economics        | 3   |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>SM 375</td>
<td>Sport in the Global Market (GEF 7)</td>
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<tr>
<td>SM 380</td>
<td>History and Philosophy of Sport</td>
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<tr>
<td>SM 387</td>
<td>Issues in Sport Studies</td>
<td>3</td>
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<tr>
<td>SM 425</td>
<td>Sport Facility and Event Management</td>
<td>3</td>
</tr>
<tr>
<td>SM 426</td>
<td>Liability in Sport</td>
<td>3</td>
</tr>
<tr>
<td>SM 485</td>
<td>Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>SM 486</td>
<td>Sport Marketing &amp; Sales</td>
<td>3</td>
</tr>
<tr>
<td>SM 491</td>
<td>Professional Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro to Computer Applications</td>
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<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 320</td>
<td>Public Administration</td>
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<tr>
<td>ACE 256</td>
<td>Principles and Problems of Coaching</td>
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<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>MANG 330</td>
<td>Human Resource Management Fundamentals</td>
<td></td>
</tr>
<tr>
<td>MKTG 315</td>
<td>Buyer Behavior</td>
<td></td>
</tr>
<tr>
<td>SM 275</td>
<td>The Olympic Games</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

Total Hours: 120

**Suggested Plan of Study**

**First Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3</td>
<td>ENGL 102 (GEF 1)</td>
<td>3</td>
</tr>
<tr>
<td>SM 167</td>
<td>3</td>
<td>COMM 100</td>
<td>1</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>1</td>
<td>COMM 102</td>
<td>2</td>
</tr>
<tr>
<td>Elective</td>
<td>1</td>
<td>CS 101</td>
<td>4</td>
</tr>
<tr>
<td>GEF 2</td>
<td>4</td>
<td>GEF 5</td>
<td>3</td>
</tr>
<tr>
<td>GEF 3 (MATH 121 or higher)</td>
<td>3</td>
<td>GEF 6</td>
<td>3</td>
</tr>
</tbody>
</table>

15 16

**Second Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>3</td>
<td>JRL 101</td>
<td>3</td>
</tr>
<tr>
<td>CSAD 270</td>
<td>3</td>
<td>SEP 272 (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>3</td>
<td>Advisor Approved Elective</td>
<td>3</td>
</tr>
<tr>
<td>SEP 271 (GEF 8)</td>
<td>3</td>
<td>Advisor Approved Elective</td>
<td>3</td>
</tr>
<tr>
<td>SM 375 (GEF 7)</td>
<td>3</td>
<td>GEF 8</td>
<td>3</td>
</tr>
</tbody>
</table>

15 15

**Third Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCOR 350</td>
<td>3</td>
<td>SM 345</td>
<td>2</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>3</td>
<td>SM 350</td>
<td>2</td>
</tr>
<tr>
<td>HUMS 320</td>
<td>3</td>
<td>SM 355</td>
<td>1</td>
</tr>
<tr>
<td>SM 340</td>
<td>3</td>
<td>SM 380</td>
<td>3</td>
</tr>
<tr>
<td>SM 370</td>
<td>3</td>
<td>GEF 8</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15 14

**Fourth Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM 425</td>
<td>3</td>
<td>ACE 491</td>
<td>3</td>
</tr>
</tbody>
</table>

- 104 College of Business, Humanities and Social Sciences
SPORT STUDIES AREA OF EMPHASIS

Upper-Division ACE Coursework 6
Upper-Division SM Coursework 6
Upper-Division ACE or SM Coursework 3
Total Hours 15

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

Sport Management Minor

MINOR CODE - UT20

A minimum grade of C- is required for all courses in this minor.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCOR 350</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>SM 425</td>
<td>Sport Facility and Event Management</td>
<td>3</td>
</tr>
<tr>
<td>SM 485</td>
<td>Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>SM 486</td>
<td>Sport Marketing &amp; Sales</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM 370</td>
<td>Sport Finance and Economics</td>
<td>3</td>
</tr>
<tr>
<td>SM 380</td>
<td>History and Philosophy of Sport</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 18
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

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111 General Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 112 General Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL Electives (must include at least 9 credit hours of upper division courses)</td>
<td>16</td>
</tr>
<tr>
<td>Total Hours</td>
<td>24</td>
</tr>
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</table>

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

Computer Science

MINOR CODE - UT24

Student must earn a grade of C or better for each of the courses counted towards the minor.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 121 Computer Science 1</td>
<td>4</td>
</tr>
<tr>
<td>CS 122 Computer Science 2</td>
<td>4</td>
</tr>
<tr>
<td>Complete the requirements for one of the following tracks:</td>
<td>8-9</td>
</tr>
<tr>
<td>Programming Track</td>
<td></td>
</tr>
<tr>
<td>CS 201 Data Structures</td>
<td></td>
</tr>
<tr>
<td>CS 222 Intro Software Engineering</td>
<td></td>
</tr>
<tr>
<td>CS 310 Principles of Programming Languages</td>
<td></td>
</tr>
<tr>
<td>Systems Track</td>
<td></td>
</tr>
<tr>
<td>CS 231 Introduction to Computer Organization</td>
<td></td>
</tr>
<tr>
<td>CS 265 C Programming</td>
<td></td>
</tr>
<tr>
<td>CS 350 Computer System Concepts</td>
<td></td>
</tr>
<tr>
<td>Select two of the following courses:</td>
<td>6</td>
</tr>
<tr>
<td>CS 321 Introduction to Networking</td>
<td></td>
</tr>
<tr>
<td>CS 324 Database Management</td>
<td></td>
</tr>
<tr>
<td>CS 410 Compiler Construction</td>
<td></td>
</tr>
<tr>
<td>CS 450 Operating Systems Structure</td>
<td></td>
</tr>
<tr>
<td>CS 465 Cybersecurity Principles and Practice</td>
<td></td>
</tr>
<tr>
<td>CS 472 Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>22-23</td>
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</tbody>
</table>
DEPARTMENT OF MATHEMATICS

Mathematics

MINOR CODE - UT14

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 155</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 156</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 251</td>
<td>Multivariable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 261</td>
<td>Elementary Differential Equations</td>
<td>4</td>
</tr>
<tr>
<td>MATH 441</td>
<td>Applied Linear Algebra</td>
<td>3</td>
</tr>
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</table>

Select two of the following courses: 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 283</td>
<td>Concepts of Mathematics 2</td>
</tr>
<tr>
<td>MATH 300+ or 400+ Level Courses (excluding MATH 315)</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 25

DEPARTMENT OF PHYSICAL SCIENCES

Chemistry

MINOR CODE - UT04

A minimum overall GPA of 2.0 is required for this minor.

A minimum grade of D- is required for the courses in this minor.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 115 &amp; 115L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 116 &amp; 116L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 233 &amp; CHEM 235</td>
<td>Organic Chemistry and Organic Chemistry Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 234 &amp; CHEM 236</td>
<td>Organic Chemistry and Organic Chemistry Laboratory</td>
<td>4</td>
</tr>
</tbody>
</table>

Select two of the following courses: 8

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 215 &amp; 215L</td>
<td>Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 310 &amp; CHEM 313</td>
<td>Instrumental Analysis and Instrumental Analysis Laboratory</td>
</tr>
<tr>
<td>CHEM 346 &amp; CHEM 347</td>
<td>Physical Chemistry and Physical Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 348 &amp; CHEM 349</td>
<td>Physical Chemistry and Physical Chemistry Laboratory</td>
</tr>
<tr>
<td>Any CHEM course(s) at the 300-level or higher</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 24

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

Aerospace Engineering

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 Montgomery 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 Montgomery 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 155 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.

General Education Foundations

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

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

A minimum 2.0 GPA is required in all MAE courses.

<table>
<thead>
<tr>
<th>WVUE 191</th>
<th>First Year Seminar</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEF Elective Requirements (5, 6 and 7)</strong></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)</td>
<td>6</td>
</tr>
<tr>
<td>MATH 155</td>
<td>Calculus 1 (GEF 3; Minimum grade of C-)</td>
<td>4</td>
</tr>
<tr>
<td>MATH 156</td>
<td>Calculus 2 (GEF 8; Minimum grade of C-)</td>
<td>4</td>
</tr>
<tr>
<td>MATH 251</td>
<td>Multivariable Calculus (Minimum grade of C-)</td>
<td>4</td>
</tr>
<tr>
<td>MATH 261</td>
<td>Elementary Differential Equations (Minimum grade of C-)</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 111</td>
<td>Software Tools for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>General Physics (GEF 2; Minimum grade of C-)</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 112</td>
<td>General Physics</td>
<td>4</td>
</tr>
<tr>
<td>DRET 120</td>
<td>Drafting 1</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 115 &amp; 115L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)</td>
<td>4</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Macroeconomics (GEF 8)</td>
<td>3</td>
</tr>
<tr>
<td>MAE 241</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 242</td>
<td>Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 243</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MAE 320</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EE 221 &amp; EE 222</td>
<td>Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>MAE 215</td>
<td>Intro to Aerospace Engineering</td>
<td>3</td>
</tr>
<tr>
<td>MAE 244</td>
<td>Dynamics and Strength Laboratory</td>
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</tr>
<tr>
<td>MAE 316</td>
<td>Analysis-Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>MAE 331</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 335</td>
<td>Incompressible Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 336</td>
<td>Compressible Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 343</td>
<td>Intermediate Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MAE 345</td>
<td>Aerospace Structures</td>
<td>3</td>
</tr>
<tr>
<td>MAE 365</td>
<td>Flight Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 423</td>
<td>Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>MAE 426</td>
<td>Flight Vehicle Propulsion</td>
<td>3</td>
</tr>
<tr>
<td>MAE 434</td>
<td>Experimental Aerodynamics</td>
<td>2</td>
</tr>
<tr>
<td>MAE 456</td>
<td>Computer-Aided Design and Finite Element Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MAE 460</td>
<td>Automatic Controls</td>
<td>3</td>
</tr>
<tr>
<td>MAE 475</td>
<td>Flight Vehicle Design-Capstone</td>
<td>3</td>
</tr>
<tr>
<td>MAE 476</td>
<td>Space Flight and Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

### Technical Electives

| 6 |

**Total Hours**: 122

## Suggested Plan of Study

### First Year

#### Fall

<table>
<thead>
<tr>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beckley</td>
<td>Beckley</td>
<td></td>
</tr>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3 ENGL 102 (GEF 1)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 155 (GEF 3)</td>
<td>4 MATH 156 (GEF 8)</td>
<td>4</td>
</tr>
</tbody>
</table>
Biology

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 must be approved by 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, Calculus I and II 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.

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.

General Education Foundations

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 - Composition &amp; Rhetoric</td>
<td>3-6</td>
</tr>
<tr>
<td>ENGL 101 &amp; ENGL 102 or ENGL 103</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing</td>
</tr>
<tr>
<td>F2A/F2B - Science &amp; Technology</td>
<td>4-6</td>
</tr>
<tr>
<td>F3 - Math &amp; Quantitative Reasoning</td>
<td>3-4</td>
</tr>
<tr>
<td>F4 - Society &amp; Connections</td>
<td>3</td>
</tr>
<tr>
<td>F5 - Human Inquiry &amp; the Past</td>
<td>3</td>
</tr>
<tr>
<td>F6 - The Arts &amp; Creativity</td>
<td>3</td>
</tr>
<tr>
<td>F7 - Global Studies &amp; Diversity</td>
<td>3</td>
</tr>
<tr>
<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
<td>9</td>
</tr>
</tbody>
</table>

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

GEF Requirements

A minimum GPA of 2.0 is required in all BIOL, CHEM, PHYS, MATH, STAT, and PSYC courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)</td>
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<tr>
<td>ENGL 305</td>
<td>Technical Writing</td>
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<tr>
<td>MATH 126 &amp; MATH 128</td>
<td>College Algebra (GEF 3) Plane Trigonometry</td>
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<tr>
<td>CHEM 115 &amp; 115L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 2)</td>
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<tr>
<td>CHEM 116 &amp; 116L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)</td>
</tr>
<tr>
<td>CHEM 233 &amp; CHEM 235</td>
<td>Organic Chemistry and Organic Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 234 &amp; CHEM 236</td>
<td>Organic Chemistry and Organic Chemistry Laboratory</td>
</tr>
<tr>
<td>PHYS 101 &amp; PHYS 102</td>
<td>Introductory Physics 1 Introductory Physics 2</td>
</tr>
<tr>
<td>STAT 211</td>
<td>Elementary Statistical Inference</td>
</tr>
<tr>
<td>BIOL 111 &amp; BIOL 112</td>
<td>General Biology (GEF 8) General Biology (GEF 8)</td>
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<td>BIOL 225</td>
<td>Biology Methods</td>
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<td>BIOL 240</td>
<td>Microbiology</td>
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<td>Course Code</td>
<td>Course Title</td>
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<td>BIOL 303</td>
<td>Genetics</td>
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<td>BIOL 416</td>
<td>Cell Biology</td>
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<td>BIOL 461</td>
<td>Principles of Evolution</td>
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<td>BIOL 466</td>
<td>Ecology</td>
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<tr>
<td>BIOL 494</td>
<td>Seminar</td>
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<td>First Year Seminar</td>
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**Biology Electives**

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<th>Course Title</th>
<th>Hours</th>
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<tr>
<td>BIOL 336</td>
<td>Vertebrate Embryology</td>
<td></td>
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<tr>
<td>BIOL 343</td>
<td>Systematic Zoology</td>
<td></td>
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<tr>
<td>BIOL 347</td>
<td>Parasitology</td>
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<td>BIOL 354</td>
<td>Organismal Botany</td>
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<tr>
<td>BIOL 417</td>
<td>Biotechnology</td>
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<tr>
<td>BIOL 440</td>
<td>Comparative Anatomy</td>
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<tr>
<td>BIOL 452</td>
<td>Plant Taxonomy</td>
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**Botany Electives**

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<thead>
<tr>
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<th>Course Title</th>
<th>Hours</th>
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</thead>
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<tr>
<td>BIOL 354</td>
<td>Organismal Botany</td>
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<td>BIOL 452</td>
<td>Plant Taxonomy</td>
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**Zoology Electives**

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<td>BIOL 336</td>
<td>Vertebrate Embryology</td>
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<tr>
<td>BIOL 343</td>
<td>Systematic Zoology</td>
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<td>BIOL 347</td>
<td>Parasitology</td>
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<td>BIOL 440</td>
<td>Comparative Anatomy</td>
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**Restricted Electives**

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<td>Vertebrate Embryology</td>
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<td>BIOL 343</td>
<td>Systematic Zoology</td>
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<td>BIOL 347</td>
<td>Parasitology</td>
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<td>BIOL 440</td>
<td>Comparative Anatomy</td>
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**Electives**

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<th>Hours</th>
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**Exit Examination**

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**Community Service**

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Total Hours: 120

* Restricted electives are chosen from a list approved by the Biology Department. Please see your advisor for details.

## Suggested Plan of Study

### First Year

#### Fall

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 111 (GEF 8)</td>
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<td>4</td>
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<tr>
<td>ENGL 101 (GEF 1)</td>
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<td>3</td>
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<td>MATH 126 (GEF 3)</td>
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<td>3</td>
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<td>WVUE 191</td>
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<td>GEF 4</td>
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**Total Fall Hours:** 14

#### Spring

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<th>Hours</th>
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<tr>
<td>4 BIOL 112 (GEF 8)</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>3 ENGL 102 (GEF 1)</td>
<td></td>
<td>3</td>
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<tr>
<td>3 MATH 128</td>
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<td>3 GEF 6</td>
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</table>

**Total Spring Hours:** 16

### Second Year

#### Fall

<table>
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<tr>
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<th>Course Title</th>
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<tr>
<td>BIOL 225</td>
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<td>CHEM 115</td>
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<td>4</td>
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<tr>
<td>&amp; 115L (GEF 2)</td>
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<td>4</td>
</tr>
<tr>
<td>PHYS 101</td>
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<td>STAT 211</td>
<td></td>
<td>3</td>
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<td>GEF 7</td>
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**Total Fall Hours:** 17

#### Spring

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>3 BIOL 240</td>
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<tr>
<td>4 CHEM 116</td>
<td></td>
<td>4</td>
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<tr>
<td>&amp; 116L (GEF 8)</td>
<td></td>
<td>4</td>
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<tr>
<td>4 PHYS 102</td>
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<td>4</td>
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<td>3 ENGL 305</td>
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**Total Spring Hours:** 15

### Third Year

#### Fall

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tr>
<td>CHEM 233</td>
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<td>4</td>
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<tr>
<td>&amp; CHEM 235</td>
<td></td>
<td>4</td>
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</table>

**Total Fall Hours:** 4
Botany Elective  4 BIOL 461  3  
Zoology Elective  4 CHEM 234  4  & CHEM 236  
Elective  3 Restricted Elective  4  

### Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 416</td>
<td>4</td>
<td>BIOL 466</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 494</td>
<td>2</td>
<td>Biology Elective</td>
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<tr>
<td>Biology Elective</td>
<td>4</td>
<td>Restricted Elective</td>
<td>3</td>
</tr>
<tr>
<td>Restricted Elective</td>
<td>4</td>
<td>Electives</td>
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<td>14</td>
</tr>
</tbody>
</table>

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.

**Biology Minor**

**MINOR CODE - UT02**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th></th>
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<tbody>
<tr>
<td>BIOL 111</td>
<td>General Biology</td>
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<tr>
<td>BIOL 112</td>
<td>General Biology</td>
</tr>
<tr>
<td>BIOL Electives (must include at least 9 credit hours of upper division courses)</td>
<td>16</td>
</tr>
<tr>
<td>Total Hours</td>
<td>24</td>
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</tbody>
</table>

**Chemical Engineering**

**Degree Offered**

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

**Nature of the Program**

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 find employment in the energy, chemical, materials processing, biotechnology, and related industries. They may take positions in manufacturing, design, environmental affairs, technical service, and technical sales.
- Program graduates will progress into positions having significant professional responsibilities. These responsibilities may include management and supervisory duties, significant contributions on projects having value to the employer, and entrepreneurial activity.
- Program graduates will continue with advanced study. This may include graduate work in engineering, business, or the sciences, as well as the study of medicine or law.

### FACULTY

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

**PROFESSOR**
- Michael V. Minnick - Ph.D. (Clemson University)

**ASSISTANT PROFESSORS**
- Nathan Galinsky - Ph.D. (North Carolina State University)
- Kimberlyn Gray - Ph.D. (Louisiana Technical University)

### General Education Foundations

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

#### General Education Foundations

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>F1 - Composition &amp; Rhetoric</strong></td>
<td>3-6</td>
</tr>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td></td>
</tr>
<tr>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research</td>
<td></td>
</tr>
<tr>
<td>or ENGL 103</td>
<td></td>
</tr>
<tr>
<td>Accelerated Academic Writing</td>
<td></td>
</tr>
<tr>
<td><strong>F2A/F2B - Science &amp; Technology</strong></td>
<td>4-6</td>
</tr>
<tr>
<td><strong>F3 - Math &amp; Quantitative Reasoning</strong></td>
<td>3-4</td>
</tr>
<tr>
<td><strong>F4 - Society &amp; Connections</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>F5 - Human Inquiry &amp; the Past</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>F6 - The Arts &amp; Creativity</strong></td>
<td>3</td>
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<td><strong>F7 - Global Studies &amp; Diversity</strong></td>
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</tr>
<tr>
<td><strong>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</strong></td>
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</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td>31-37</td>
</tr>
</tbody>
</table>

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

**GEF Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
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<tr>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)</td>
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<td>MATH 155</td>
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<td>Calculus 1 (GEF 3)</td>
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<td>MATH 156</td>
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<td>Calculus 2 (GEF 8)</td>
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<td>MATH 251</td>
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<td>Multivariable Calculus</td>
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<td>CHEM 115 &amp; 115L</td>
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<tr>
<td>Fundamentals of Chemistry</td>
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<tr>
<td>and Fundamentals of Chemistry 1 - Laboratory (GEF 2)</td>
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<td>Course Code</td>
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<td>-------------</td>
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<td>CHEM 116</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory (GEF 8)</td>
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<tr>
<td>CHEM 233</td>
<td>Organic Chemistry and Organic Chemistry Laboratory</td>
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<td>PHYS 111</td>
<td>General Physics (GEF 8)</td>
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<td>PHYS 112</td>
<td>General Physics</td>
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<td>Effective Public Speaking (GEF 4)</td>
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<td>CHE 100</td>
<td>Introduction to Chemical Engineering</td>
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<td>CHE 211</td>
<td>Material Balances</td>
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<td>CHE 212</td>
<td>Energy Balances</td>
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<td>CHE 316</td>
<td>Transport Operations</td>
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<td>Transport Operations 2</td>
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<td>CHE 318</td>
<td>Particle Processing Operations</td>
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<td>CHE 320</td>
<td>Chemical Engineering Thermodynamics</td>
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<td>CHE 327</td>
<td>Kinetics and Reactor Design</td>
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<td>CHE 330</td>
<td>Modeling and Analysis</td>
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<td>CHE 357</td>
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<td>CHE 451</td>
<td>Unit Operations Laboratory 2</td>
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<td>CHE 457</td>
<td>Design Laboratory 3</td>
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<td>CHE 458</td>
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<td>ENGR 111</td>
<td>Software Tools for Engineers</td>
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<td>ENGR 401</td>
<td>Senior Engineering Seminar</td>
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**Advanced Science Electives**

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<td>BIOL 230</td>
<td>Human Anatomy and Physiology 1</td>
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<td>BIOL 231</td>
<td>Human Anatomy and Physiology 2</td>
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<td>BIOL 303</td>
<td>Genetics</td>
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<td>BIOL 336</td>
<td>Vertebrate Embryology</td>
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<td>BIOL 338</td>
<td>Behavioral Ecology</td>
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<td>BIOL 416</td>
<td>Cell Biology</td>
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<td>BIOL 417</td>
<td>Biotechnology</td>
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<td>BIOL 440</td>
<td>Comparative Anatomy</td>
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<td>BIOL 452</td>
<td>Plant Taxonomy</td>
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<td>BIOL 454</td>
<td>Immunology</td>
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<td>BIOL 461</td>
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<tr>
<td>PHYS 314</td>
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Any Advanced Chemistry Course from below

**Advanced Chemistry Electives**

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### Chemical Engineering Electives

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### General Electives

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### Total Hours

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### Suggested Plan of Study

#### First Year

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Major Learning Outcomes

CHEMICAL ENGINEERING

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

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Chemistry

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.

General Education Foundations

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<tr>
<th>F1 - Composition &amp; Rhetoric</th>
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<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric</td>
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<tr>
<td>&amp; ENGL 102</td>
<td>and Composition, Rhetoric, and Research</td>
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<tr>
<td>or ENGL 103</td>
<td>Accelerated Academic Writing</td>
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<td>F2A/F2B - Science &amp; Technology</td>
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<td>F3 - Math &amp; Quantitative Reasoning</td>
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<td>F4 - Society &amp; Connections</td>
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<td>F5 - Human Inquiry &amp; the Past</td>
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<td>F6 - The Arts &amp; Creativity</td>
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<tr>
<td>F7 - Global Studies &amp; Diversity</td>
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<tr>
<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
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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

A 2.0 GPA must be maintained in all CHEM courses.

**GEF Elective Requirements (4, 5, 6, and 7)**

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<tr>
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**Chemistry Electives (6 hours of 200+, 3 hours of 300+ level Chemistry elective)**

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**Restricted Electives**

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<td>CS 410</td>
<td>Compiler Construction</td>
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<td>CS 450</td>
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<td>CS 479</td>
<td>Advanced Computer Science Mathematics</td>
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<td>DRET 314</td>
<td>Computer Graphics</td>
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<tr>
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<td>Software Tools</td>
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<tr>
<td>EE 221</td>
<td>Introduction to Electrical Engineering</td>
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<tr>
<td>&amp; EE 222</td>
<td>and Introduction to Electrical Engineering Lab</td>
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<td>EE 223</td>
<td>Electrical Circuits</td>
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<td>EE 311</td>
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<td>EE 327</td>
<td>Signals and Systems 1</td>
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<td>EE 329</td>
<td>Signals and Systems 2</td>
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<td>EE 335</td>
<td>Electromechanical Energy Conversion and Systems</td>
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<td>and Electromechanical Energy Conversion and Systems Lab</td>
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<td>EE 345</td>
<td>Engineering Electromagnetics</td>
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<td>EE 411</td>
<td>Fundamentals of Control Systems</td>
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<td>EE 435</td>
<td>Introduction to Power Electronics</td>
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<td>EE 436</td>
<td>Power Systems Analysis</td>
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<td>EE 461</td>
<td>Introduction to Communications Systems</td>
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<td>ELET 315</td>
<td>Electronic Measurement and Instrumentation</td>
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<td>ELET 337</td>
<td>Communication Systems 2</td>
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<td>ELET 410</td>
<td>Control Systems Technology</td>
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<tr>
<td>ELET 420</td>
<td>Microprocessors and Digital Systems</td>
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<td>ELET 426</td>
<td>Microprocessor-Based Data Acquisition and Control</td>
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<td>ELET 436</td>
<td>Programmable Logic Controllers</td>
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<td>ENGR 101</td>
<td>Engineering Problem Solving 1</td>
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<td>Software Tools for Engineers</td>
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<td>Fundamentals of Engineering Review</td>
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<td>GNET 410</td>
<td>C++ Programming for Technology</td>
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<td>GNET 489</td>
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<td>INDT 302</td>
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<td>INDT 384</td>
<td>Robotics 1</td>
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<td>INDT 410</td>
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<td>INDT 420</td>
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<td>ISYS 101</td>
<td>Introduction to Information Systems 1</td>
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<td>ISYS 102</td>
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<td>ISYS 115</td>
<td>Discrete Structures</td>
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<td>ISYS 270</td>
<td>Linux</td>
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<td>ISYS 325</td>
<td>C#</td>
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<td>ISYS 366</td>
<td>e-Commerce</td>
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<tr>
<td>MAE 201</td>
<td>Applied Engineering Analysis</td>
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<td>MAE 215</td>
<td>Intro to Aerospace Engineering</td>
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</table>
MATH 283
MATH 341
MATH 441
MATH 448
MATH 451
MATH 452
MEET 316
MEET 435

Suggested Plan of Study

First Year

Fall

ENGL 101 (GEF 1) 3
MATH 155 (GEF 3) 4
CHEM 115 & 115L 4
WVUE 191 1
GEF 4 3

Spring

ENGL 102 (GEF 1) 3
MATH 156 (GEF 8) 4
CHEM 116 & 116L (GEF 8) 4
PHYS 111 (GEF 2) 4

Hours

15

Hours

15
## Second Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM 215 &amp; 215L</td>
<td>4</td>
<td>CHEM 234 &amp; 236</td>
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<td>CHEM 233 &amp; CHEM 235</td>
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<td>7</td>
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<td>MATH 251</td>
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<td>GEF 6</td>
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<td>PHYS 112 (GEF 8)</td>
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## Third Year

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<th>Hours</th>
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<tr>
<td>ENGL 305</td>
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<td>CHEM 310 &amp; 313</td>
<td>4</td>
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<tr>
<td>CHEM 346 &amp; CHEM 347</td>
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<td>CHEM 348 &amp; 349</td>
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<td>Restricted Elective</td>
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## Fourth Year

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<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHEM 422 &amp; CHEM 423</td>
<td>5</td>
<td>CHEM 490</td>
<td>1</td>
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<tr>
<td>CHEM 494</td>
<td></td>
<td>1 CHEM 497</td>
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<td>Chemistry Elective</td>
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<tr>
<td>Restricted Elective</td>
<td>3</td>
<td>Restricted Elective</td>
<td>3</td>
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<tr>
<td>Assessment Examination</td>
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<td>GEF 5</td>
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<td><strong>Total</strong></td>
<td>15</td>
<td><strong>14</strong></td>
<td></td>
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</tbody>
</table>

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.

### Chemistry Minor

**MINOR CODE - UT04**

A minimum overall GPA of 2.0 is required for this minor.

A minimum grade of D- is required for the courses in this minor.

#### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 115 &amp; 115L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 116 &amp; 116L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 233 &amp; 235</td>
<td>Organic Chemistry and Organic Chemistry Laboratory</td>
<td>4</td>
</tr>
</tbody>
</table>
CHEM 234 & CHEM 236: Organic Chemistry and Organic Chemistry Laboratory 4

Select two of the following courses: 8

- CHEM 215 & 215L: Introductory Analytical Chemistry and Introductory Analytical Chemistry Laboratory
- CHEM 310 & CHEM 313: Instrumental Analysis and Instrumental Analysis Laboratory
- CHEM 346 & CHEM 347: Physical Chemistry and Physical Chemistry Laboratory
- CHEM 348 & CHEM 349: Physical Chemistry and Physical Chemistry Laboratory

Any CHEM course(s) at the 300-level or higher

Total Hours 24

Civil Engineering

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.

Engineering students get a sound basic knowledge of science and a set of core 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 project.

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 11 courses having design components for a total of 17.5 credit hours of design. 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) must contain a minimum total of two credit hours of 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 which involves 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, cost analysis and estimating, and scheduling.

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 their careers and, as a result, will possess their capabilities to move to positions having increased leadership, mentoring, and management responsibilities.

FACULTY

CHAIR
• Steven Leftwich - P.E., P.S., Ph.D.

PROFESSOR
• Steven Leftwich - P.E., P.S., Ph.D.

ASSOCIATE PROFESSORS
• Brian Dickman - P.E., Ph.D.
• Guillermo Hahn - 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.

General Education Foundations

<table>
<thead>
<tr>
<th>F1 - Composition &amp; Rhetoric</th>
<th>3-6</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td></td>
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<tr>
<td>&amp; ENGL 102</td>
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</tr>
<tr>
<td>or ENGL 103</td>
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</table>

Introduction to Composition and Rhetoric
and Composition, Rhetoric, and Research
Accelerated Academic Writing

| F2A/F2B - Science & Technology | 4-6 |
| F3 - Math & Quantitative Reasoning | 3-4 |
| F4 - Society & Connections     | 3  |
| F5 - Human Inquiry & the Past  | 3  |
| F6 - The Arts & Creativity     | 3  |
| F7 - Global Studies & Diversity| 3  |
| F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree) | 9  |

Total Hours: 31-37

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

Curriculum Requirements

<table>
<thead>
<tr>
<th>GEF Requirements</th>
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<tr>
<td>WVUE 191</td>
<td>1</td>
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<tr>
<td>DRET 120</td>
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<td>ENGL 101 &amp; ENGL 102</td>
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<td>ENGL 305</td>
<td>3</td>
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<tr>
<td>ECON 401</td>
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<td>GEOL 312</td>
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Managerial Economics (GEF 4)
Geology

A minimum overall 2.0 GPA is required.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>ENGR 111</td>
<td>Software Tools for Engineers</td>
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<td>ENGR 401</td>
<td>Senior Engineering Seminar</td>
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<tr>
<td>ENGR 402</td>
<td>Fundamentals of Engineering Review</td>
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</tr>
<tr>
<td>MAE 241</td>
<td>Statics</td>
<td>3</td>
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<tr>
<td>MAE 242</td>
<td>Dynamics</td>
<td>3</td>
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<tr>
<td>MAE 243</td>
<td>Mechanics of Materials</td>
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<tr>
<td>MAE 331</td>
<td>Fluid Mechanics</td>
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<tr>
<td>MATH 155</td>
<td>Calculus 1 (GEF 3)</td>
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<td>MATH 156</td>
<td>Calculus 2 (GEF 8)</td>
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<td>MATH 251</td>
<td>Multivariable Calculus</td>
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<td>MATH 261</td>
<td>Elementary Differential Equations</td>
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<td>MATH 448</td>
<td>Probability and Statistics</td>
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<td>Fundamentals of Chemistry</td>
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<td>CE 204</td>
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<td>Construction Materials</td>
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<td>Transportation Engineering</td>
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<td>Introductory Soil Mechanics</td>
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<td>CE 361</td>
<td>Structural Analysis 1</td>
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<td>CE 421</td>
<td>Hydraulic Engineering</td>
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<td>CE 479</td>
<td>Integrated Civil Engineering Design-Capstone</td>
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<td>CE Electives (select one from each area)</td>
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<td>CE 461</td>
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<td>CE 464</td>
<td>Timber Design</td>
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<tr>
<td>CE 497</td>
<td>Research</td>
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<tr>
<td>Any other 300 or 400 level CE course*</td>
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<tr>
<td>Environmental/Water Resources</td>
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<td>CE 422</td>
<td>Advanced Hydraulic Engineering</td>
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<td>CE 425</td>
<td>Engineering Hydrology</td>
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<td>CE 444</td>
<td>Advanced Sanitary Engineering</td>
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<td>CE 446</td>
<td>Solid Waste Management</td>
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<td>Geotechnical</td>
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<td>CE 451</td>
<td>Foundation Engineering</td>
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<td>CE 452</td>
<td>Groundwater and Seepage</td>
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<td>CE 453</td>
<td>Earthwork Design</td>
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<td>CE 462</td>
<td>Reinforced Concrete Design</td>
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<td>CE 463</td>
<td>Steel Design</td>
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<td>Transportation</td>
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<td>CE 411</td>
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<td>CE 431</td>
<td>Highway Engineering</td>
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<td>CE 432</td>
<td>Traffic Engineering</td>
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<tr>
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</table>

Total Hours: 125

* Out of these nine hours of electives (3 hours of required CE elective and 6 hours of Technical Electives), there must be at least 2 hours of ABET design content.
## Technical Electives

Any 300 or 400 level CE course

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<td>CHEM 215</td>
<td>Introductory Analytical Chemistry</td>
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<td>CHEM 233</td>
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<td>Applied Linear Algebra</td>
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<td>Thermodynamics</td>
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<td>MAE 340</td>
<td>Vibrations</td>
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<tr>
<td>MAE 445</td>
<td>Computer Applications in Engineering</td>
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<td>MAE 456</td>
<td>Computer-Aided Design and Finite Element Analysis</td>
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<tr>
<td>PHYS 112</td>
<td>General Physics</td>
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## Suggested Plan of Study

### First Year

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours Fall</th>
<th>Hours Spring</th>
<th>Hours Summer</th>
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<tbody>
<tr>
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### Second Year

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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

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

• Stephen Goodman - 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.

<table>
<thead>
<tr>
<th>General Education Foundations</th>
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<tr>
<td>F1 - Composition &amp; Rhetoric</td>
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<td>ENGL 101</td>
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<td>&amp; ENGL 102</td>
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<tr>
<td>or ENGL 103</td>
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<tr>
<td>Introduction to Composition and Rhetoric</td>
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<tr>
<td>and Composition, Rhetoric, and Research</td>
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<tr>
<td>Accelerated Academic Writing</td>
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<tr>
<td>F2A/F2B - Science &amp; Technology</td>
<td>4-6</td>
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<tr>
<td>F3 - Math &amp; Quantitative Reasoning</td>
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<td>F4 - Society &amp; Connections</td>
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<tr>
<td>F5 - Human Inquiry &amp; the Past</td>
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<tr>
<td>F6 - The Arts &amp; Creativity</td>
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<tr>
<td>F7 - Global Studies &amp; Diversity</td>
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<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
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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

A minimum GPA of 2.0 is required in all CHEM, ENGR, CS, CPE, EE, MATH, PHYS, ENGL 305, and all technical elective courses.

<table>
<thead>
<tr>
<th>Curriculum Requirements</th>
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<td>MATH 251</td>
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<td>Multivariable Calculus</td>
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<td>Elementary Differential Equations</td>
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<td>MATH 378</td>
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<td>Discrete Mathematics</td>
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<td>General Physics (GEF 2)</td>
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<td>CPE 320</td>
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<td>Course</td>
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<td>CS 201</td>
<td>Data Structures</td>
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<td>CS 222</td>
<td>Intro Software Engineering</td>
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<td>CS 321</td>
<td>Introduction to Networking</td>
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<td>EE 221</td>
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<td>Capstone Project - Implementation</td>
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**Computer Engineering Electives**

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<tr>
<td>CPE 442</td>
<td>Introduction to Digital Computer Architecture</td>
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<td>CPE 450</td>
<td>Introduction to Microelectronics Circuits</td>
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<td>CPE 455</td>
<td>VLSI Design</td>
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<td>CPE 462</td>
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<td>Special Topics</td>
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**Technical Electives**

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<td>BIOL 231</td>
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<td>BIOL 233</td>
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<td>BIOL 240</td>
<td>Microbiology</td>
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<td>BIOL 303</td>
<td>Genetics</td>
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<td>CHEM 215</td>
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<td>Analysis of Algorithms</td>
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<td>Principles of Programming Languages</td>
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<td>Cybersecurity Principles and Practice</td>
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**Total Hours**

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CS 472  Artificial Intelligence  3
CS 475  Game Development  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) Course
Any EE (Electrical Engineering) Course

Business Technical Electives

No more than one course (3 credits) can be used from this list.
ACCT 201  Principles of Accounting  3
ACCT 202  Principles of Accounting  3
BCOR 350  Principles of Marketing  3
BCOR 360  Supply Chain Management  3
BCOR 370  Managing Individuals & Teams  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  The Individual and the Organization  3
MKTG 315  Buyer Behavior  3
MKTG 325  Marketing Research  3
MKTG 485  Global Marketing  3

Suggested Plan of Study

First Year

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16  16

Second Year

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<td>EE 224</td>
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<td>EE 222</td>
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<td>CS 201</td>
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<td>CPE 272</td>
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17  16
### Third Year

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<tr>
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<th>Hours Spring</th>
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<tbody>
<tr>
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Total credit hours: 126

### Major Learning Outcomes

#### COMPUTER ENGINEERING

- **Engineering Science**: Students will attain an ability to apply knowledge of mathematics, science, and engineering.
- **Engineering Experimentation**: Students will attain an ability to design and conduct experiments, as well as to analyze and interpret data.
- **Engineering Design**: Students will attain 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.
- **Teamwork**: Students will attain an ability to function on multidisciplinary teams.
- **Problem Solving**: Students will attain an ability to identify, formulate, and solve engineering problems.
- **Engineering Ethics**: Students will attain an understanding of professional and ethical responsibility.
- **Effective Communication**: Students will attain an ability to communicate effectively.
- **Impact of Engineering**: Students will attain the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- **Life-long Learning**: Students will attain a recognition of the need for, and an ability to engage in life-long learning.
- **Contemporary Issues**: Students will attain a knowledge of contemporary issues.
- **Modern Tools**: Students will attain an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

### Computer Science

#### 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
- Don Smith - M.S. (West Virginia University); M.A. (Marshall University)

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

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

ASSISTANT PROFESSORS
- Bhanukiran Gurijala - Ph.D. (University of Texas)
- Sanish Rai - Ph.D. (Georgia State 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.

General Education Foundations

F1 - Composition & Rhetoric 3-6
ENGL 101 & ENGL 102 Introduction to Composition and Rhetoric
or ENGL 103 Accelerated Academic Writing

F2A/F2B - Science & Technology 4-6
BIOL 111 General Biology
BIOL 112 General Biology
CHEM 111 Survey of Chemistry 1
& 111L and Survey of Chemistry 1 - Laboratory

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

A minimum GPA of 2.0 is required.

GEF Elective Requirements (2, 5, 6, 7, and 8) 20
Laboratory Science, GEF 2 and 8 (a total of 8 credit hours required) - Students may select any of the two courses from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111</td>
<td>General Biology</td>
</tr>
<tr>
<td>BIOL 112</td>
<td>General Biology</td>
</tr>
<tr>
<td>CHEM 111</td>
<td>Survey of Chemistry 1</td>
</tr>
<tr>
<td>&amp; 111L</td>
<td>and Survey of Chemistry 1 - Laboratory</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CHEM 112</td>
<td>Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory</td>
</tr>
<tr>
<td>CHEM 115</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory</td>
</tr>
<tr>
<td>CHEM 116</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>Introductory Physics 1</td>
</tr>
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<td>PHYS 102</td>
<td>Introductory Physics 2</td>
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<tr>
<td>PHYS 111</td>
<td>General Physics</td>
</tr>
<tr>
<td>PHYS 112</td>
<td>General Physics</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)</td>
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<tr>
<td>ENGL 102</td>
<td>Technical Writing</td>
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<tr>
<td>MATH 155</td>
<td>Calculus 1 (GEF 3)</td>
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<td>MATH 156</td>
<td>Calculus 2</td>
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<td>MATH 251</td>
<td>Multivariable Calculus</td>
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<tr>
<td>MATH 441</td>
<td>Applied Linear Algebra</td>
</tr>
<tr>
<td>MATH 448</td>
<td>Probability and Statistics</td>
</tr>
<tr>
<td>ECON 401</td>
<td>Managerial Economics (GEF 4)</td>
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<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
</tr>
<tr>
<td>CS 121</td>
<td>Computer Science 1</td>
</tr>
<tr>
<td>CS 122</td>
<td>Computer Science 2</td>
</tr>
<tr>
<td>CS 201</td>
<td>Data Structures</td>
</tr>
<tr>
<td>CS 220</td>
<td>Discrete Mathematics</td>
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<tr>
<td>CS 221</td>
<td>Analysis of Algorithms</td>
</tr>
<tr>
<td>CS 222</td>
<td>Intro Software Engineering</td>
</tr>
<tr>
<td>CS 231</td>
<td>Introduction to Computer Organization</td>
</tr>
<tr>
<td>CS 265</td>
<td>C Programming</td>
</tr>
<tr>
<td>CS 310</td>
<td>Principles of Programming Languages</td>
</tr>
<tr>
<td>CS 321</td>
<td>Introduction to Networking</td>
</tr>
<tr>
<td>CS 324</td>
<td>Database Management</td>
</tr>
<tr>
<td>CS 355</td>
<td>Computer Concepts</td>
</tr>
<tr>
<td>CS 410</td>
<td>Compiler Construction</td>
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<tr>
<td>CS 450</td>
<td>Operating Systems Structure</td>
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<tr>
<td>CS 479</td>
<td>Advanced Computer Science Mathematics</td>
</tr>
<tr>
<td>CS 480</td>
<td>Capstone Project - Design</td>
</tr>
<tr>
<td>CS 481</td>
<td>Capstone Project - Implementation</td>
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<tr>
<td>**</td>
<td>** Computer Science Electives (Students may select from 300-400 Level Computer Science (CS) courses except CS 491)</td>
</tr>
<tr>
<td>**</td>
<td>** Technical Electives (See approved list)</td>
</tr>
<tr>
<td>**</td>
<td>** General Electives (Students are free to choose any college level course to fulfill this requirement)</td>
</tr>
<tr>
<td>**</td>
<td>** Total Hours</td>
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</table>

**Approved Technical Electives**

**Accounting**

- ACCT 201 Principles of Accounting
- ACCT 202 Principles of Accounting

**Biology**

- BIOL 111 General Biology **
- BIOL 112 General Biology **

**Chemistry**

- CHEM 111 Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory **
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CHEM 112 &amp; 112L</td>
<td>Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory **</td>
</tr>
<tr>
<td>CHEM 115 &amp; 115L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory **</td>
</tr>
<tr>
<td>CHEM 116 &amp; 116L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory **</td>
</tr>
</tbody>
</table>

** Computer Engineering
- CPE 271 Introduction to Digital Logic Design

** Computer Science
- CS 300+ or 400+ (Except CS 491)

** Electrical Engineering
- EE 221 Introduction to Electrical Engineering
- EE 223 Electrical Circuits
- MAE 241 Statics
- MAE 242 Dynamics
- MAE 243 Mechanics of Materials
- MAE 331 Fluid Mechanics
- ISYS 270 Linux
- ISYS 325 C#
- ISYS 366 e-Commerce
- MATH 261 Elementary Differential Equations

** Physics
- PHYS 101 Introductory Physics 1 **
- PHYS 102 Introductory Physics 2 **
- PHYS 111 General Physics **
- PHYS 112 General Physics **

** 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

<table>
<thead>
<tr>
<th>Semester</th>
<th>Fall Hours</th>
<th>Spring Hours</th>
<th>Total Hours</th>
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<tbody>
<tr>
<td>Fall</td>
<td>ENGL 101 (GEF 1)</td>
<td>3 ENGL 102 (GEF 1)</td>
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<tr>
<td></td>
<td>CS 121</td>
<td>4 CS 122</td>
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<tr>
<td></td>
<td>WVUE 191</td>
<td>1 GEF 6</td>
<td>3</td>
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<td></td>
<td>General Elective</td>
<td>3 GEF 7</td>
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<tr>
<td></td>
<td>GEF 5</td>
<td>3 GEF 8</td>
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### Second Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Fall Hours</th>
<th>Spring Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>MATH 155 (GEF 3)</td>
<td>4 MATH 156</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CS 201</td>
<td>3 CS 220</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CS 231</td>
<td>3 CS 222</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CS 265</td>
<td>2 CS 310</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEF 2 (Laboratory Science)</td>
<td>4 GEF 8 (Laboratory Science)</td>
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<td>**17</td>
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### Third Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Fall Hours</th>
<th>Spring Hours</th>
<th>Total Hours</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ECON 401 (GEF 4)</td>
<td>3 ENGL 305</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 251</td>
<td>4 MATH 441</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CS 221</td>
<td>3 CS 324</td>
<td>3</td>
</tr>
</tbody>
</table>
Major Learning Outcomes

COMPUTER SCIENCE

The BS degree in Computer Science 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 ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- An ability to apply design and development principles in the construction of software systems of varying complexity.

Computer Science Minor

MINOR CODE - UT24

Student must earn a grade of C or better for each of the courses counted towards the minor.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CS 121</td>
<td>Computer Science 1</td>
<td>4</td>
</tr>
<tr>
<td>CS 122</td>
<td>Computer Science 2</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete the requirements for one of the following tracks: 8-9

Programming Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 201</td>
<td>Data Structures</td>
</tr>
<tr>
<td>CS 222</td>
<td>Intro Software Engineering</td>
</tr>
<tr>
<td>CS 310</td>
<td>Principles of Programming Languages</td>
</tr>
</tbody>
</table>

Systems Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CS 231</td>
<td>Introduction to Computer Organization</td>
</tr>
<tr>
<td>CS 265</td>
<td>C Programming</td>
</tr>
<tr>
<td>CS 350</td>
<td>Computer System Concepts</td>
</tr>
</tbody>
</table>

Select two of the following courses: 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 321</td>
<td>Introduction to Networking</td>
</tr>
<tr>
<td>CS 324</td>
<td>Database Management</td>
</tr>
<tr>
<td>CS 410</td>
<td>Compiler Construction</td>
</tr>
<tr>
<td>CS 450</td>
<td>Operating Systems Structure</td>
</tr>
<tr>
<td>CS 465</td>
<td>Cybersecurity Principles and Practice</td>
</tr>
</tbody>
</table>
Construction Management

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.

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.

General Education Foundations

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

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

| WVUE 191 | First Year Seminar | 1 |
| GEF Requirements (1, 6, and 7) | 12 |
| PHYS 101 | Introductory Physics 1 (GEF 2) | 4 |
| MATH 126 | College Algebra (GEF 3) | 3 |
| ECON 225 | Elementary Business and Economics Statistics (GEF 4) | 3 |
| PHIL 170 | Introduction to Critical Reasoning (GEF 5) | 3 |
| ECON 201 | Principles of Microeconomics (GEF 8) | 3 |
| MATH 128 | Plane Trigonometry (GEF 8) | 3 |
| PHYS 102 | Introductory Physics 2 (GEF 8) | 4 |
| ENGL 305 | Technical Writing | 3 |
### Construction Management Core Coursework

**Minimum grade of C in all CMGT courses is required.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMGT 101</td>
<td>Introduction to Construction Management</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 110</td>
<td>Computer Applications for Construction</td>
<td>4</td>
</tr>
<tr>
<td>CMGT 120</td>
<td>Analytical Techniques for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 150</td>
<td>Construction Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 210</td>
<td>Statics &amp; Strength of Materials</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 220</td>
<td>Construction Methods &amp; Materials 1</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 225</td>
<td>Construction Methods &amp; Materials 2</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 230</td>
<td>Construction Survey &amp; Layout</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 240</td>
<td>Soils &amp; Foundations for Constructors</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 250</td>
<td>Structural Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 320</td>
<td>Mechanical Building Systems</td>
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</tr>
<tr>
<td>CMGT 330</td>
<td>Electrical Building Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 340</td>
<td>Construction Planning &amp; Scheduling</td>
<td>3</td>
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<tr>
<td>CMGT 350</td>
<td>Construction Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 360</td>
<td>Construction Law &amp; Contract Administration</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 370</td>
<td>Construction Safety &amp; Production Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 380</td>
<td>Residential Construction Practice</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 410</td>
<td>Construction Finance &amp; Cost Control</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 420</td>
<td>Management of Construction Operations</td>
<td>3</td>
</tr>
<tr>
<td>CMGT 430</td>
<td>Commercial Construction Practice</td>
<td>3</td>
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<tr>
<td>CMGT 440</td>
<td>Heavy Construction Practice</td>
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<tr>
<td>CMGT 460</td>
<td>Management of the Construction Firm</td>
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**Construction Management Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CMGT 450</td>
<td>Industrial Construction Practice</td>
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<tr>
<td>CMGT 465</td>
<td>BIM in Construction Management</td>
<td></td>
</tr>
<tr>
<td>CMGT 466</td>
<td>Marketing Construction Services</td>
<td></td>
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<tr>
<td>CMGT 467</td>
<td>Facilities Management</td>
<td></td>
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<tr>
<td>CMGT 468</td>
<td>Temporary Structures</td>
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**Business Electives (Approved by advisor)**

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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
</table>

**Total Hours**

121

### Suggested Plan of Study

#### First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3 ENGL 102 (GEF 1)</td>
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<td>MATH 126 (GEF 3)</td>
<td>3 MATH 128 (GEF 8)</td>
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<tr>
<td>CMGT 101</td>
<td>3 CMGT 120</td>
<td>4</td>
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<tr>
<td>CMGT 110</td>
<td>1 CMGT 150</td>
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<tr>
<td>WVUE 191</td>
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#### Second Year

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<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<td>ECON 201 (GEF 8)</td>
<td>3 ECON 225 (GEF 4)</td>
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<td>PHIL 170 (GEF 5)</td>
<td>3 PHYS 102 (GEF 8)</td>
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<td>CMGT 210</td>
<td>3 CMGT 225</td>
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<td>CMGT 220</td>
<td>3 CMGT 240</td>
<td>3</td>
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<tr>
<td>CMGT 230</td>
<td>3 CMGT 250</td>
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<tbody>
<tr>
<td></td>
<td>15</td>
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<td>16</td>
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</table>
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. More specifically:

1. Construction project management from pre-design through commissioning;
2. Project life-cycle and sustainability;
3. Health and safety, accident prevention, and regulatory compliance;
4. Law, contract documents administration, and dispute prevention and resolution;
5. Materials, labor and methods of construction;
6. Finance and accounting principles;
7. Planning and scheduling;
8. Cost management including plan reading, quantity take offs and estimating;
9. Project delivery methods;
10. Leadership and managing people;
11. Business and communication skills required for professional practice.

Electrical Engineering

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**

- Naomi Bowles - BA

**FACULTY**

**CHAIR**

- Stephen Goodman - Ph.D.

**PROFESSORS**

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

**ASSISTANT PROFESSORS**

- Kenan Hatipoglu - Ph.D.
- Charan Litchfield - Ph.D.
- Swamy Ponpandi - 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.

**General Education Foundations**

<table>
<thead>
<tr>
<th>F1 - Composition &amp; Rhetoric</th>
<th>3-6</th>
</tr>
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<tbody>
<tr>
<td>ENGL 101</td>
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<tr>
<td>&amp; ENGL 102</td>
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<tr>
<td>or ENGL 103</td>
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**F2A/F2B - Science & Technology**

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**F3 - Math & Quantitative Reasoning**

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**F4 - Society & Connections**

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**F5 - Human Inquiry & the Past**

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**F6 - The Arts & Creativity**

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</table>

**F7 - Global Studies & Diversity**

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</table>

**F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)**

<table>
<thead>
<tr>
<th>9</th>
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<tbody>
<tr>
<td></td>
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**Total Hours**

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<tr>
<th>31-37</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

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

A minimum GPA of 2.0 is required in all CHEM, ENGR, CS, CPE, EE, MATH, PHYS, ENGL 305, and all technical elective courses.

**GEF Elective Requirements (5, 6, and 7)**  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>Technical Writing</td>
<td>3</td>
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<tr>
<td>MATH 155</td>
<td>Calculus 1 (GEF 3)</td>
<td>4</td>
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<tr>
<td>MATH 156</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 251</td>
<td>Multivariable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 261</td>
<td>Elementary Differential Equations</td>
<td>4</td>
</tr>
<tr>
<td>MATH 441</td>
<td>Applied Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 115 &amp; 115L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>General Physics (GEF 8)</td>
<td>4</td>
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<tr>
<td>PHYS 112</td>
<td>General Physics (GEF 8)</td>
<td>4</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
<td>1</td>
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<tr>
<td>CPE 271 &amp; CPE 272</td>
<td>Introduction to Digital Logic Design and Digital Logic Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CPE 320 &amp; CPE 321</td>
<td>Microprocessor Systems and Microprocessor Systems Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>CS 112</td>
<td>Computer Science - Engineers 1</td>
<td>3</td>
</tr>
<tr>
<td>ECON 401</td>
<td>Managerial Economics (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 101</td>
<td>Engineering Problem Solving 1</td>
<td>2</td>
</tr>
<tr>
<td>EE 200</td>
<td>Software Tools</td>
<td>2</td>
</tr>
<tr>
<td>EE 221 &amp; EE 222</td>
<td>Introduction to Electrical Engineering and Introduction to Electrical Engineering Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>EE 223 &amp; EE 224</td>
<td>Electrical Circuits and Electrical Circuits Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>EE 311</td>
<td>Junior Instrumentation Lab</td>
<td>1</td>
</tr>
<tr>
<td>EE 327</td>
<td>Signals and Systems 1</td>
<td>3</td>
</tr>
<tr>
<td>EE 329</td>
<td>Signals and Systems 2</td>
<td>3</td>
</tr>
<tr>
<td>EE 335 &amp; EE 336</td>
<td>Electromechanical Energy Conversion and Systems and Electromechanical Energy Conversion and Systems Lab</td>
<td>4</td>
</tr>
<tr>
<td>EE 345</td>
<td>Engineering Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EE 365 &amp; EE 366</td>
<td>Analog Electronics and Analog Electronics Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>EE 411</td>
<td>Fundamentals of Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EE 412</td>
<td>Automatic Control Lab</td>
<td>1</td>
</tr>
<tr>
<td>EE 436</td>
<td>Power Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EE 461</td>
<td>Introduction to Communications Systems</td>
<td>3</td>
</tr>
<tr>
<td>EE 480</td>
<td>Capstone Project - Design</td>
<td>3</td>
</tr>
<tr>
<td>EE 481</td>
<td>Capstone Project - Implementation</td>
<td>3</td>
</tr>
<tr>
<td>EE 400</td>
<td>Community Service</td>
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</table>

**EE/CPE Electives (Select two of the following):**  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPE 421</td>
<td>Embedded Systems</td>
<td></td>
</tr>
</tbody>
</table>
### Technical Electives (See approved list)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 230</td>
<td>Human Anatomy and Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 231</td>
<td>Human Anatomy and Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 233</td>
<td>Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 240</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 303</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 215</td>
<td>Introductory Analytical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 233</td>
<td>Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 235</td>
<td>Organic Chemistry Laboratory</td>
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<tr>
<td>CS 201</td>
<td>Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 221</td>
<td>Analysis of Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CS 222</td>
<td>Intro Software Engineering</td>
<td>3</td>
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<tr>
<td>CS 264</td>
<td>Data Base Management</td>
<td>3</td>
</tr>
<tr>
<td>CS 310</td>
<td>Principles of Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>CS 321</td>
<td>Introduction to Networking</td>
<td>3</td>
</tr>
<tr>
<td>CS 324</td>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>CS 355</td>
<td>Computer Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CS 410</td>
<td>Compiler Construction</td>
<td>3</td>
</tr>
<tr>
<td>CS 450</td>
<td>Operating Systems Structure</td>
<td>3</td>
</tr>
<tr>
<td>CS 454</td>
<td>Cryptology</td>
<td>3</td>
</tr>
<tr>
<td>CS 456</td>
<td>Digital Image Processing</td>
<td>3</td>
</tr>
<tr>
<td>CS 465</td>
<td>Cybersecurity Principles and Practice</td>
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</tr>
<tr>
<td>CS 470</td>
<td>Introduction to Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CS 472</td>
<td>Artificial Intelligence</td>
<td>3</td>
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<tr>
<td>CS 475</td>
<td>Game Development</td>
<td>3</td>
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<tr>
<td>MATH 341</td>
<td>Introduction to Algebraic Structures</td>
<td>3</td>
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<tr>
<td>MATH 378</td>
<td>Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 381</td>
<td>Introduction to Analysis and Topology</td>
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</tr>
<tr>
<td>MATH 420</td>
<td>Numerical Analysis 1</td>
<td>3</td>
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<tr>
<td>MATH 441</td>
<td>Applied Linear Algebra</td>
<td>3</td>
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<tr>
<td>MATH 448</td>
<td>Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 451</td>
<td>Introduction to Real Analysis 1</td>
<td>3</td>
</tr>
<tr>
<td>MATH 452</td>
<td>Introduction to Real Analysis 2</td>
<td>3</td>
</tr>
<tr>
<td>MATH 456</td>
<td>Complex Variables</td>
<td>3</td>
</tr>
<tr>
<td>MAE 241</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 242</td>
<td>Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 243</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MAE 320</td>
<td>Thermodynamics</td>
<td>3</td>
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<tr>
<td>MAE 321</td>
<td>Applied Thermodynamics</td>
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**Total Hours:** 125
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAE 331</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 407</td>
<td>Power Plant Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 314</td>
<td>Introductory Modern Physics</td>
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</tr>
<tr>
<td>Any CPE</td>
<td>(Computer Engineering) Course</td>
<td></td>
</tr>
<tr>
<td>Any EE</td>
<td>(Electrical Engineering) Course</td>
<td></td>
</tr>
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</table>

### Business Technical Electives

No more than one course (3 credits) can be used from this list.

- ACCT 201  Principles of Accounting  3
- ACCT 202  Principles of Accounting  3
- BCOR 350  Principles of Marketing       3
- BCOR 360  Supply Chain Management       3
- BCOR 370  Managing Individuals & Teams  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 The Individual and the Organization  3
- MKTG 315 Buyer Behavior                 3
- MKTG 325 Marketing Research             3
- MKTG 485 Global Marketing               3

### Suggested Plan of Study

**First Year**

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>3 ENGL 102</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>MATH 155</td>
<td>4 MATH 156</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 115</td>
<td>4 ENGR 101</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS 112</td>
<td>3 GEF 5</td>
<td>3</td>
<td></td>
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<tr>
<td>WVUE 191</td>
<td>1 GEF 6</td>
<td>3</td>
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<td></td>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>Spring</strong></td>
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**Second Year**

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<tr>
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<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 251</td>
<td>4 MATH 261</td>
<td>4</td>
<td></td>
<td></td>
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<tr>
<td>PHYS 111</td>
<td>4 PHYS 112</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE 200</td>
<td>2 EE 223</td>
<td>4</td>
<td>&amp; EE 224</td>
<td></td>
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<tr>
<td>EE 221</td>
<td>4 CPE 271</td>
<td>4</td>
<td>&amp; CPE 272</td>
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<tr>
<td>GEF 7</td>
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<td>3</td>
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<td><strong>Total</strong></td>
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**Third Year**

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<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 448</td>
<td>3 ENGL 305</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>CPE 320</td>
<td>4 MATH 441</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE 327</td>
<td>3 EE 311</td>
<td>1</td>
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<td></td>
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<td><strong>Total</strong></td>
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### Fourth Year

<table>
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<tr>
<th>Course</th>
<th>Fall Hours</th>
<th>Spring Hours</th>
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</thead>
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<tr>
<td>EE 411 &amp; EE 412</td>
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<td>3</td>
</tr>
<tr>
<td>EE 436</td>
<td>3</td>
<td>0</td>
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<tr>
<td>EE 461</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>EE 480</td>
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</tr>
<tr>
<td>EE/CPE Elective</td>
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<td>3</td>
</tr>
</tbody>
</table>

| EE/CPE Elective         | 3          | 3            |
| Technical Elective      | 3          | 3            |

**Total credit hours: 125**

### Major Learning Outcomes

**ELECTRICAL ENGINEERING**

- **Engineering Science**: Students will attain an ability to apply knowledge of mathematics, science, and engineering.
- **Engineering Experimentation**: Students will attain an ability to design and conduct experiments, as well as to analyze and interpret data.
- **Engineering Design**: Students will attain 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.
- **Teamwork**: Students will attain an ability to function on multidisciplinary teams.
- **Problem Solving**: Students will attain an ability to identify, formulate, and solve engineering problems.
- **Engineering Ethics**: Students will attain an understanding of professional and ethical responsibility.
- **Effective Communication**: Students will attain an ability to communicate effectively.
- **Impact of Engineering**: Students will attain the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- **Life-long Learning**: Students will attain a recognition of the need for, and an ability to engage in life-long learning.
- **Contemporary Issues**: Students will attain a knowledge of contemporary issues.
- **Modern Tools**: Students will attain an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

### Electronic Engineering Technology

#### Degree Offered

- Bachelor of Science in Electronic Engineering Technology (B.S.E.E.T.)

#### Nature of the Program

The Bachelor of Science in Electronic Engineering Technology program is a plus-two program that builds on two-year Electrical or Electronics Engineering Technology programs. An associate of science degree in Electrical or Electronics Engineering Technology or the equivalent is required for entrance into the program. Graduates of associate of science degree Electrical/Electronic Engineering Technology programs may enter the program directly as juniors based on an evaluation of their transcripts. In all cases, an evaluation of transfer credits will be conducted to validate course requirements. This evaluation determines if additional lower division courses will be required to meet the prerequisites of upper division courses in the curriculum.

The B.S.E.E.T. program is designed to produce applications-oriented graduates with an electronics background to fulfill the demands created by rapidly changing technology. Technical specialty courses in the curriculum emphasize process control, instrumentation, communications, and microprocessor applications. Course offerings are designed to be consistent with the evolution of energy-related and computer-based industrial needs of the state and region.

The Bachelor of Science Electronic Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.
Careers in Electronic Engineering Technology

The program prepares graduates with the technical and managerial skills necessary to enter careers in the design, application, installation, manufacturing, testing, operation, oversight, and maintenance of electrical or electronic systems. Baccalaureate degree graduates are also prepared for development and implementation of new electrical/electronic systems.

Job titles of recent graduates have included: Electronic Technician, System Representative II, Service Engineer, Engineering Technician, Maintenance Technician, Foreman/Supervisor/ Manager, Electrical Engineer, Sales Engineer, Process Engineer, Design Engineer, Instrumentation Engineer, Control Systems Engineer, Quality Assurance Manager.

Plus-Two Baccalaureate Transfer Options

Students who have completed course work or associate degree programs in engineering-oriented programs at other institutions and wish to continue their studies toward a Bachelor of Science degree in engineering technology may do so. For more information, contact the Chair of the Engineering Technology Department.

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.

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

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

<table>
<thead>
<tr>
<th>GEF Elective Requirements (5, 6, and 7)</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 305 Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 315 Advanced Technical Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 115 Fundamentals of Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>&amp; 115L Fundamentals of Chemistry 1 - Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>ECON 202 Principles of Macroeconomics (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>ELET 315 Electronic Measurement and Instrumentation</td>
<td>4</td>
</tr>
<tr>
<td>ELET 337 Communication Systems 2</td>
<td>4</td>
</tr>
<tr>
<td>ELET 410 Control Systems Technology</td>
<td>3</td>
</tr>
<tr>
<td>ELET 420 Microprocessors and Digital Systems</td>
<td>4</td>
</tr>
<tr>
<td>ELET 426 Microprocessor-Based Data Acquisition and Control</td>
<td>4</td>
</tr>
<tr>
<td>ELET 436 Programmable Logic Controllers</td>
<td>4</td>
</tr>
<tr>
<td>GNET 410 C++ Programming for Technology</td>
<td>3</td>
</tr>
<tr>
<td>GNET 412 Project Management</td>
<td>3</td>
</tr>
<tr>
<td>GNET 489 Senior Seminar and Project</td>
<td>2</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>3</td>
</tr>
<tr>
<td>GNET 311 Software Tools for Engineering Technology</td>
<td>3</td>
</tr>
</tbody>
</table>
MANG 386  Business Statistics
MATH 261  Elementary Differential Equations
Mathematics (300+ or 400+ level)
Technical Specialty Electives  **  3
Technical Electives  **  4
INDT 384  Robotics 1
MATH 261  Elementary Differential Equations
MEET 435  Energy Conversion Systems

Total Hours  64

* All requirements of the General Education Foundations curriculum must be met. Some of these requirements are normally satisfied by courses taken for the AS degree.

** To be approved by advisor. See advisor for approved electives. One technical elective will be selected from the following courses: INDT 384, MATH 261, MEET 435 or any CS 200+ or EE 300+ level course approved by both departments. Exceptions require department chair consent. Other technical specialty electives may be selected from the other ELET courses or courses in other Engineering Technology fields or in engineering fields if prerequisite knowledge is sufficient. A minimum of 40 semester hours of upper division courses is required.

Suggested Plan of Study

Third Year

Fall Hours  Spring Hours

CHEM 115  & 115L  4 ELET 337  4
ECON 202 (GEF 4)  3 ELET 410  3
ENGL 305  3 Select one of the following:
ELET 315  4 GNET 311
MATH 315  4 MANG 386
Mathematics (300+ or 400+ level)
Technical Specialty Elective  3
GEF 5  3

18  16

Fourth Year

Fall Hours  Spring Hours

ELET 420  4 ELET 426  4
ELET 436  4 GNET 489  2
GNET 410  3 Technical Elective  4
GNET 412  3 GEF 6  3
GEF 7  3

17  13

Total credit hours: 64

Major Learning Outcomes

ELECTRONIC ENGINEERING TECHNOLOGY

Our graduates will be able to:

• Apply principles of mathematics and science to perform technical calculations and solve electronic engineering technology problems.
• Demonstrate the ability to identify, formulate, and present creative solutions to technical problems.
• Perform competently in a laboratory setting.
• Operate modern computational tools for problem solving, including scientific calculators, computers, and appropriate software.
• Demonstrate the ability to communicate and function effectively with members of multidisciplinary teams.
• Demonstrate a general knowledge of professional ethical responsibility toward employers, customers, and society.
• Recognize the need for obtaining additional education, training, or certification as a means of maintaining and improving the skills necessary for career advancement and personal fulfillment.
• Demonstrate ability to building, operate, test, and maintain electrical/electronic systems while applying skills in circuit analysis and design, computer programming, analog and digital electronics, and microcomputers.
• Apply principles of chemistry and physics along with advanced mathematics for electrical/electronic circuit design and analysis.
• Demonstrate project management techniques on electronic engineering projects.
• Apply principles of advanced mathematics to electrical/electronic systems.
• Demonstrate knowledge of control and instrumentation systems, power systems, communication systems, or computer systems.
• Demonstrate knowledge of the impact of engineering technology solutions in a societal context.
• Apply written, oral, and graphical communication in the class work, and proper use of references.

Engineering Technology

Degree Offered

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

Nature of the Program

The Bachelor of Science in Engineering Technology (B.S.E.T.) is a plus-two program that builds on and complements associate degrees earned in a variety of engineering technology areas. The program is unique in its nature and overall design since it provides an opportunity to choose a plan to study toward a baccalaureate degree which best meets the student’s needs. Entrance requirements to this program include an associate of science degree in an engineering technology program with appropriate course work, including physical sciences and mathematics (through analytic geometry with calculus).

As students enter the program, an evaluation of their transcript will be made. This evaluation determines if additional lower division courses will be required to meet the prerequisites of the program. Current areas of emphasis are civil, environmental and mechanical engineering technology.

The student, with the assistance and approval of the advisor and Chair of the Engineering Technology department, can select technical specialty elective courses for the program chosen. Selected technical specialty courses can be taken in mechanical, civil, and electrical/electronics engineering technology; as well as industrial technology, and selected engineering courses, depending on the program of study. Also, some mathematics, science, and management courses may be approved.

All students must meet the degree requirements of the institution and the General Education Foundations curriculum for graduation. A minimum of 40 semester hours of upper-division courses is required. If a computer programming course using a technical language has already been completed, a technical elective may be substituted for the C++ programming course.

Plus-Two Baccalaureate Transfer Options

Students who have completed course work or associate degree programs in engineering - oriented programs at other institutions and wish to continue their studies toward a Bachelor of Science degree may do so. Students must satisfy all General Education Foundations and program specific requirements to be eligible for the award of this degree. For more information, contact the Chair of the Engineering Technology Department.

• Civil (p. 147)
• Environmental (p. 148)
• Mechanical (p. 149)

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.

General Education Foundations

<table>
<thead>
<tr>
<th>F1 - Composition &amp; Rhetoric</th>
<th>3-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric</td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
<td>and Composition, Rhetoric, and Research</td>
</tr>
<tr>
<td>or ENGL 103</td>
<td>Accelerated Academic Writing</td>
</tr>
<tr>
<td>F2A/F2B - Science &amp; Technology</td>
<td>4-6</td>
</tr>
<tr>
<td>F3 - Math &amp; Quantitative Reasoning</td>
<td>3-4</td>
</tr>
<tr>
<td>F4 - Society &amp; Connections</td>
<td>3</td>
</tr>
<tr>
<td>F5 - Human Inquiry &amp; the Past</td>
<td>3</td>
</tr>
<tr>
<td>F6 - The Arts &amp; Creativity</td>
<td>3</td>
</tr>
</tbody>
</table>
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 - Engineering Technology: Civil**

<table>
<thead>
<tr>
<th>GEF Requirements</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 305</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 312</td>
<td>3</td>
</tr>
<tr>
<td>MATH 315</td>
<td>4</td>
</tr>
<tr>
<td>CIET 320</td>
<td>3</td>
</tr>
<tr>
<td>CIET 325</td>
<td>3</td>
</tr>
<tr>
<td>CIET 330</td>
<td>3</td>
</tr>
<tr>
<td>CIET 382</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>CIET 355</td>
<td>3</td>
</tr>
<tr>
<td>MATH 261</td>
<td></td>
</tr>
<tr>
<td>MATH 300+ Elective</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>DRET 314</td>
<td>3</td>
</tr>
<tr>
<td>MAE 455</td>
<td></td>
</tr>
<tr>
<td>GNET 489</td>
<td>2</td>
</tr>
<tr>
<td>INDT 302</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>INDT 420</td>
<td>3</td>
</tr>
<tr>
<td>CIET 493</td>
<td></td>
</tr>
<tr>
<td>MEET 316</td>
<td>3</td>
</tr>
<tr>
<td>Technical Specialty Electives</td>
<td>15</td>
</tr>
<tr>
<td>Advanced CAD Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td>63</td>
</tr>
</tbody>
</table>

* All requirements of the General Education Foundations curriculum must be met. Some of these requirements are normally satisfied by courses taken for the AS degree.

** To be approved by advisor. Selected Civil Engineering courses may be taken with the approval of both the advisor and the Chair of Civil Engineering, if prerequisites are met. A minimum of 40 semester hours of upper division courses is required.

**Suggested Plan of Study**

**Third Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 305</td>
<td>3</td>
<td>GEOL 312</td>
<td>3</td>
</tr>
<tr>
<td>MATH 315</td>
<td>4</td>
<td>CIET 325</td>
<td>3</td>
</tr>
<tr>
<td>CIET 382</td>
<td>3</td>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>MEET 316</td>
<td>3</td>
<td>CIET 355</td>
<td>3</td>
</tr>
<tr>
<td>Technical Specialty Elective</td>
<td>3</td>
<td>MATH 261</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MATH 300+ Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GNET 489</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INDT 302</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INDT 420</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CIET 493</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MEET 316</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td>Dynamics</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Technical Specialty Elective</td>
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</tr>
</tbody>
</table>

| Total              | 16          | 15              |       |
### Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEF 6</td>
<td>3 INDT 420</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIET 320</td>
<td>3 GNET 489</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>INDT 302</td>
<td>3 GEF 7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DRET 314</td>
<td>3 Technical Specialty Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Technical Specialty Elective</td>
<td>3 Technical Specialty Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Advanced CAD Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total credit hours: 63</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

### Curriculum Requirements Engineering Technology: Environmental

<table>
<thead>
<tr>
<th>GEF Requirements</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 240</td>
<td>Microbiology</td>
</tr>
<tr>
<td>CHEM 116 &amp; 116L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory</td>
</tr>
<tr>
<td>CHEM 215</td>
<td>Introductory Analytical Chemistry</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>GEOL 312</td>
<td>Geology</td>
</tr>
<tr>
<td>MATH 315</td>
<td>Advanced Technical Mathematics</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>Introductory Physics 1</td>
</tr>
<tr>
<td>CIET 330</td>
<td>Computer Applications in Hydraulics and Hydrology</td>
</tr>
<tr>
<td>CIET 325</td>
<td>Codes, Contracts, and Cost Analysis</td>
</tr>
<tr>
<td>CIET 382</td>
<td>Environmental Engineering Technology</td>
</tr>
<tr>
<td>CE 425</td>
<td>Engineering Hydrology</td>
</tr>
<tr>
<td>CE 446</td>
<td>Solid Waste Management</td>
</tr>
<tr>
<td>CHE 201</td>
<td>Material and Energy Balances 1</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>3</td>
</tr>
<tr>
<td>DRET 314</td>
<td>Computer Graphics</td>
</tr>
<tr>
<td>MAE 455</td>
<td>Computer Aided Drafting and Design</td>
</tr>
<tr>
<td>GNET 412</td>
<td>Project Management</td>
</tr>
<tr>
<td>GNET 489</td>
<td>Senior Seminar and Project</td>
</tr>
<tr>
<td>Technical Specialty Electives</td>
<td>9</td>
</tr>
</tbody>
</table>

**Total Hours 69**

* All requirements of the General Education Foundations curriculum must be met. Some of these requirements are normally satisfied by courses taken for the AS degree.

** To be approved by advisor. See advisor for approved electives. A minimum of 40 semester hours of upper division courses is required.

### Suggested Plan of Study

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 116 &amp; 116L</td>
<td>4 GEF 5</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>4 GEF 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 315</td>
<td>4 GEF 5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENGL 305</td>
<td>4 GEF 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIET 382</td>
<td>3 CIET 325</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CIET 325</td>
<td>3 Technical Specialty Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIET 330</td>
<td>3 Technical Specialty Elective</td>
<td>3</td>
<td></td>
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</tbody>
</table>

**Total credit hours: 63**
### Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 425</td>
<td>3 GEF 7</td>
<td>3 3 GEF 7</td>
<td>3</td>
</tr>
<tr>
<td>CHE 201</td>
<td>3 Technical Specialty Elective</td>
<td>3 3 Technical Specialty Elective</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 215</td>
<td>3 CE 446</td>
<td>3 GNET 489</td>
<td>2</td>
</tr>
<tr>
<td>DRET 314</td>
<td>3 CHEM 215</td>
<td>3 BIOL 240</td>
<td>4</td>
</tr>
<tr>
<td>GNET 412</td>
<td>15</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Total credit hours: 69

### Curriculum Requirements - Engineering Technology: Mechanical

#### GEF Requirements

- **ENGL 305**  Technical Writing  3

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRET 314</td>
<td>Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 455</td>
<td>Computer Aided Drafting and Design</td>
<td></td>
</tr>
<tr>
<td>MATH 315</td>
<td>Advanced Technical Mathematics</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAE 242</td>
<td>Dynamics</td>
</tr>
<tr>
<td>MEET 316</td>
<td>Dynamics</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GNET 308</td>
<td>Advanced Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>MANG 386</td>
<td>Business Statistics</td>
<td></td>
</tr>
<tr>
<td>MATH 261</td>
<td>Elementary Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 300+ Elective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEET 435</td>
<td>Energy Conversion Systems</td>
<td>3</td>
</tr>
<tr>
<td>GNET 410</td>
<td>C++ Programming for Technology</td>
<td>3</td>
</tr>
<tr>
<td>GNET 412</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>GNET 489</td>
<td>Senior Seminar and Project</td>
<td>2</td>
</tr>
<tr>
<td>INDT 308</td>
<td>Automated Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>INDT 354</td>
<td>Industrial Materials</td>
<td>3</td>
</tr>
<tr>
<td>INDT 302</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>INDT 410</td>
<td>Plant Equipment and Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>Technical Specialty Elective</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 63

* All requirements of the General Education Foundations curriculum must be met. Some of these requirements are normally satisfied by courses taken for the AS degree.

** To be approved by advisor. The student's overall program must include a sequence of courses in at least three of the following areas: manufacturing processes, mechanical design, engineering materials, solid mechanics, fluid mechanics, electro-mechanical devices and controls or industrial operations. MAE courses may be taken with the approval of both the Advisor and the Chair of Mechanical Engineering, if prerequisites are met.

### Suggested Plan of Study

#### Third Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRET 314</td>
<td>3 GEF 7</td>
<td>3 3 GEF 7</td>
<td>3</td>
</tr>
<tr>
<td>MATH 315</td>
<td>4 Select one of the following:</td>
<td>3 4 Select one of the following:</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>3 GNET 308</td>
<td>3 GNET 489</td>
<td>2</td>
</tr>
<tr>
<td>MEET 316</td>
<td>3 MANG 386</td>
<td>3 MANG 386</td>
<td>3</td>
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</tbody>
</table>
GNET 412 3  MATH 261
MATH 300+ Elective
INDT 308 3
INDT 354 3
MEET 435 3

16 15

Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEF 6</td>
<td>3 GEF 4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3 GEF 5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GNET 410</td>
<td>3 INDT 410</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>INDT 302</td>
<td>3 Technical Specialty Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Technical Specialty Elective</td>
<td>3 Technical Specialty Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GNET 489</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15 17

Total credit hours: 63

**Major Learning Outcomes**

**ENGINEERING TECHNOLOGY: CIVIL**

**PROGRAM OBJECTIVES**

Graduates of the BSET-Civil program will be able to achieve the following career and professional accomplishments:

1. Demonstrate an awareness of contemporary social and economic issues, and the relationship of those issues to their professional civil engineering practice.
2. Demonstrate the need to maintain their technical skills and develop new ones through personal development and life-long learning.
3. Capable of conveying technical information through their proficiency in written and spoken communication skills
4. Demonstrate an appreciation and understanding for cultural and ethnic diversity in the workplace.
5. Demonstrate an understanding of professional and ethical responsibilities to their field and to society.
6. Able to acquire and maintain successful employment using their skills in applied civil engineering technology.

**STUDENT LEARNING OUTCOMES**

Upon completion of the BSET program in Civil Engineering Technology, graduates will be able to:

1. Use appropriate tools to acquire data and analyze problems, including software and lab equipment.
2. Apply the principles of mathematics, science and engineering technology to perform technical calculations and solve for civil engineering technology problems.
3. Perform competently in a laboratory setting.
4. Solve problems and design components, systems or processes appropriate to civil engineering technology.
5. Demonstrate effective skills in the development and presentation of team projects utilizing written, oral and graphical communication skills as well as proper use of references.
6. Function effectively in a team.
7. Generate creative and realistic solutions to defined problems and projects.
8. Exhibit knowledge and skills consistent with expectations of a practicing engineering technologist, including professional development and continuous improvement.
9. Demonstrate a general knowledge of professional and ethical responsibility toward employers, customers, and society.
10. Demonstrate knowledge of the impact of civil engineering technology solutions in a societal context.
11. Utilize computer software to prepare technical reports.
12. Conduct standardized construction/civil engineering materials experiments.
13. Utilize surveying methods for land measurement and/or construction layout.
14. Conduct basic structural analysis including forces and stresses in elementary structural systems.
15. Plan and prepare several engineering management documents, design and construction documents such as specifications, contracts, change orders, engineering drawings, and construction schedules.
16. Perform economic analysis and cost analysis related to design, construction, operations, and maintenance of systems in civil specialties.
17. Select appropriate engineering materials and practices.
18. Perform standard analysis and design in the following sub-discipline: Structures, Geotechnical, construction, transportation, or environmental.

ENGINEERING TECHNOLOGY: ENVIRONMENTAL

Graduates should be able to apply analysis, design, development, implementation and/or oversight of environmental systems and processes using:

1. Technical core topics related to fluids, environmental chemistry and processes, applied thermodynamics, geology and biology.
2. Technical specialty areas of environmental analysis and systems design, physical chemistry, organic chemistry and microbiology.
3. Physics principles having an emphasis in applied mechanics, technical topics in physics/chemistry/biology, and application to environmental systems and processes.
4. Advanced mathematics to solve technical problems.

ENGINEERING TECHNOLOGY: MECHANICAL

PROGRAM OBJECTIVES

Graduates of the BSET-Mechanical program will be able to achieve the following career and professional accomplishments:

1. Demonstrate an awareness of contemporary social and economic issues, and the relationship of those issues to their professional mechanical engineering practice.
2. Demonstrate the need to maintain their technical skills and develop new ones through personal development and life-long learning.
3. Capable of conveying technical information through their proficiency in written and spoken communication skills.
4. Demonstrate an appreciation and understanding for cultural and ethnic diversity in the workplace.
5. Demonstrate an understanding of professional and ethical responsibilities to their field and to society.
6. Able to acquire and maintain successful employment using their skills in applied mechanical engineering technology.

STUDENT LEARNING OUTCOMES

Upon completion of the BSET program in Mechanical Engineering Technology, graduates will be able to:

1. Operate modern computational tools, including computers and machines for technical problem solving.
2. Apply the principles mathematics and science to solve mechanical engineering technology problems.
3. Perform competently in a laboratory setting.
4. Demonstrate ability to design systems, components, or processes for mechanical engineering technology application.
5. Function effectively in a team.
6. Identify and address various aspects of design.
7. Demonstrate competency in written, oral and graphical communication skills.
8. Recognize the need for additional education, training or certification as a means of maintaining and improving the skills necessary for career advancement and personal fulfillment.
9. Demonstrate a general knowledge of professional ethical responsibility toward employers, customers, and society.
10. Exhibit a broad education and knowledge of contemporary issues in a global and societal context.
11. Demonstrate the ability to solve technical problems involving energy, heat transfer, and engineering mechanics.
12. Demonstrate knowledge of plant maintenance, scheduling, and operation as well as safety.
13. Design and build mechanical engineering components using contemporary automated machines.
14. Utilize appropriate software including CAD, to solve mechanical engineering problems.

Industrial Technology

Degree Offered

- Bachelor of Science

Nature of the Program

The Bachelor of Science in Industrial Technology is mainly a plus-two program that builds upon and complements associate degrees earned in industrial technology or similar areas. The program is designed to prepare individuals for a wide range of entry-level industrial positions. The program provides a comprehensive education in technology, supplemented by selected professional, industrial, and related academic studies. The program is designed to prepare graduates with a broad range of knowledge and skills necessary for both lateral and vertical mobility at their workplace.
As a student enters the program, an evaluation of their transcript will be completed. The evaluation will determine if additional lower division courses will be required to meet the prerequisites. All students must meet the General Education Foundations curriculum requirements of the institution for graduation.

Prospective students include graduates of associate degree programs such as:

- Civil Engineering Technology
- Drafting & Design Engineering Technology
- Electrical Engineering Technology
- Mechanical Engineering Technology
- General Studies (with advance approval of program of study by Chair of Engineering Technology)
- Industrial Technology programs at other institutions meeting departmental approval may enter the program directly as juniors based on an evaluation of their transcripts. In all cases, an evaluation of transfer credits will be conducted to validate course requirements. This evaluation determines if additional lower division courses will be required to meet the prerequisites of upper division courses in the curriculum.

**Careers in Industrial Technology**

Baccalaureate degree graduates are typically involved in the analysis, design, development, implementation, and/or oversight of more advanced systems and processes.

**Plus-Two Baccalaureate Transfer Options**

Students who have completed course work or associate degree programs in industrial programs at other institutions and wish to continue their studies toward a bachelor of science degree in industrial technology may do so. For more information, contact the Chair of the Engineering Technology Department.

**General Education Foundations**

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

**General Education Foundations**

<table>
<thead>
<tr>
<th>F1 - Composition &amp; Rhetoric</th>
<th>3-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 &amp; ENGL 102 or ENGL 103</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing</td>
</tr>
</tbody>
</table>

| 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**

<table>
<thead>
<tr>
<th>GEF Requirements</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>WVUE 191</td>
<td>First Year Seminar</td>
</tr>
<tr>
<td>ENGL 101 &amp; ENGL 102</td>
<td>Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1)</td>
</tr>
<tr>
<td>ENGL 305</td>
<td>Technical Writing (GEF 3)</td>
</tr>
<tr>
<td>MATH 126</td>
<td>College Algebra</td>
</tr>
<tr>
<td>MATH 128</td>
<td>Plane Trigonometry (GEF 8)</td>
</tr>
<tr>
<td>MATH 155</td>
<td>Calculus 1 (GEF 8)</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>CHEM 115 &amp; 115L</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>Introductory Physics 1 (GEF 2)</td>
</tr>
<tr>
<td>PHYS 102</td>
<td>Introductory Physics 2 (GEF 8)</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>BCOR 320</td>
<td>Legal Environment of Business</td>
</tr>
<tr>
<td>BCOR 360</td>
<td>Supply Chain Management</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>Managing Individuals &amp; Teams</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro to Computer Applications</td>
</tr>
<tr>
<td>DRET 120</td>
<td>Drafting 1</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>DRET 314</td>
<td>Computer Graphics</td>
</tr>
<tr>
<td>MAE 455</td>
<td>Computer Aided Drafting and Design</td>
</tr>
<tr>
<td>ENGR 111</td>
<td>Software Tools for Engineers</td>
</tr>
<tr>
<td>GNET 412</td>
<td>Project Management</td>
</tr>
<tr>
<td>GNET 489</td>
<td>Senior Seminar and Project</td>
</tr>
<tr>
<td>GNET 495</td>
<td>Independent Study</td>
</tr>
<tr>
<td>INDT 302</td>
<td>Industrial Safety</td>
</tr>
<tr>
<td>INDT 308</td>
<td>Automated Manufacturing</td>
</tr>
<tr>
<td>INDT 354</td>
<td>Industrial Materials</td>
</tr>
<tr>
<td>INDT 410</td>
<td>Plant Equipment and Maintenance</td>
</tr>
<tr>
<td>INDT 420</td>
<td>Construction Technology</td>
</tr>
<tr>
<td>MAE 240</td>
<td>Manufacturing Processes</td>
</tr>
<tr>
<td>Technical Specialty Elective *</td>
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<tr>
<td>Technical Elective</td>
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</tr>
<tr>
<td>Total Hours</td>
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</tbody>
</table>

* Subject to approval of the advisor. Selected engineering courses may be taken with the approval of the advisor, the Chair of Engineering Technology Department, and the Chair of the engineering department offering the course, if prerequisite material covered is judged to be sufficient.

## Suggested Plan of Study

### First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3</td>
<td>ENGL 102 (GEF 1)</td>
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</tr>
<tr>
<td>WVUE 191</td>
<td>1</td>
<td>ENGR 111</td>
<td>3</td>
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<tr>
<td>DRET 120</td>
<td>2</td>
<td>MATH 128 (GEF 8)</td>
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<td>MATH 126 (GEF 3)</td>
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<td>MAE 240</td>
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<td>Technical Elective</td>
<td>3</td>
<td>GEF 4</td>
<td>3</td>
</tr>
<tr>
<td>GEF 5</td>
<td>3</td>
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<td><strong>Total</strong></td>
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### Second Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CS 101</td>
<td>4</td>
<td>DRET 314</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>3</td>
<td>ACCT 202</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 101 (GEF 2)</td>
<td>4</td>
<td>CHEM 115 &amp; 115L</td>
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<tr>
<td>MATH 155 (GEF 8)</td>
<td>4</td>
<td>PHYS 102 (GEF 8)</td>
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</tr>
<tr>
<td>Technical Elective</td>
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<td><strong>Total</strong></td>
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Third Year

<table>
<thead>
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<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BCOR 320</td>
<td>3</td>
<td>INDT 308</td>
<td>3</td>
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<tr>
<td>ENGL 305</td>
<td>3</td>
<td>INDT 354</td>
<td>3</td>
</tr>
<tr>
<td>INDT 302</td>
<td>3</td>
<td>INDT 420</td>
<td>3</td>
</tr>
<tr>
<td>BCOR 370</td>
<td>3</td>
<td>BCOR 360</td>
<td>3</td>
</tr>
<tr>
<td>Technical Speciality Elective</td>
<td>3</td>
<td>Technical Speciality Elective</td>
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<tr>
<td></td>
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<tr>
<td>15</td>
<td></td>
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</table>

Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GNET 412</td>
<td>3</td>
<td>GNET 489</td>
<td>2</td>
</tr>
<tr>
<td>GNET 495</td>
<td>2</td>
<td>INDT 410</td>
<td>3</td>
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<tr>
<td>Technical Speciality Elective</td>
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<td>Technical Speciality Elective</td>
<td>3</td>
</tr>
<tr>
<td>Technical Speciality Elective</td>
<td>3</td>
<td>Technical Speciality Elective</td>
<td>3</td>
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<tr>
<td>GEF 6</td>
<td>3</td>
<td>GEF 7</td>
<td>3</td>
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<tr>
<td>14</td>
<td></td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Total credit hours: 120

Major Learning Outcomes

INDUSTRIAL TECHNOLOGY

Graduates of the bachelor’s degree program in Industrial Technology are prepared for a broad range of technical careers. Graduates apply the technologies of materials, manufacturing processes, automation, CAD/CAM, production operations, maintenance, power, electro-mechanical systems, industrial organization and management, project management, and safety to the solution of problems in industry.

Information Systems

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 Security. Those courses are supplemented by highly specialized Business Management courses such as Visual Basic for Business applications, Business Information Systems, and Business Statistics. 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
• Don Smith - M.S. (West Virginia University); M.A. (Marshall University)

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

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

ASSISTANT PROFESSORS
• Bhanukiran Gurijala - Ph.D. (University of Texas)
• Sanish Rai - Ph.D. (Georgia State University)

General Education Foundations

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

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General Education Foundations

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 - Composition &amp; Rhetoric</td>
<td>3-6</td>
</tr>
<tr>
<td>ENGL 101 Introduction to Composition and Rhetoric</td>
<td>6</td>
</tr>
<tr>
<td>&amp; ENGL 102 and Composition, Rhetoric, and Research (GEF 1)</td>
<td></td>
</tr>
<tr>
<td>or ENGL 103 Accelerated Academic Writing</td>
<td></td>
</tr>
<tr>
<td>F2A/F2B - Science &amp; Technology</td>
<td>4-6</td>
</tr>
<tr>
<td>F3 - Math &amp; Quantitative Reasoning</td>
<td>3-4</td>
</tr>
<tr>
<td>F4 - Society &amp; Connections</td>
<td>3</td>
</tr>
<tr>
<td>F5 - Human Inquiry &amp; the Past</td>
<td>3</td>
</tr>
<tr>
<td>F6 - The Arts &amp; Creativity</td>
<td>3</td>
</tr>
<tr>
<td>F7 - Global Studies &amp; Diversity</td>
<td>3</td>
</tr>
<tr>
<td>F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)</td>
<td>9</td>
</tr>
<tr>
<td>Total Hours</td>
<td>31-37</td>
</tr>
</tbody>
</table>

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

GEF Elective Requirements (2, 5, 6, 7, and 8)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Science, GEF 2 and 8 (a total of 8 credit hours required) - Students may select two four-credit-hour BIOL, CHEM, PHSC, or PHYS courses with lab.</td>
<td>20</td>
</tr>
<tr>
<td>ENGL 101 Introduction to Composition and Rhetoric</td>
<td>6</td>
</tr>
<tr>
<td>&amp; ENGL 102 and Composition, Rhetoric, and Research (GEF 1)</td>
<td></td>
</tr>
<tr>
<td>ENGL 305 Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 124 Algebra with Applications (GEF 3)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 150 Applied Calculus (GEF 8)</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191 First Year Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ACCT 201 Principles of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 202 Principles of Macroeconomics (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>MANG 386 Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MANG 420 Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>A minimum GPA of 2.0 is required in all CS and ISYS courses.</td>
<td></td>
</tr>
<tr>
<td>CS 121 Computer Science 1</td>
<td>4</td>
</tr>
<tr>
<td>CS 122 Computer Science 2</td>
<td>4</td>
</tr>
<tr>
<td>CS 222 Intro Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>CS 231</td>
<td>Introduction to Computer Organization</td>
</tr>
<tr>
<td>CS 321</td>
<td>Introduction to Networking</td>
</tr>
<tr>
<td>CS 324</td>
<td>Database Management</td>
</tr>
<tr>
<td>CS 365</td>
<td>Computer Languages</td>
</tr>
<tr>
<td>CS 465</td>
<td>Cybersecurity Principles and Practice</td>
</tr>
<tr>
<td>CS 480</td>
<td>Capstone Project - Design</td>
</tr>
<tr>
<td>CS 481</td>
<td>Capstone Project - Implementation</td>
</tr>
<tr>
<td>CS 491</td>
<td>Professional Field Experience</td>
</tr>
<tr>
<td>ISYS 101</td>
<td>Introduction to Information Systems 1</td>
</tr>
<tr>
<td>ISYS 102</td>
<td>Introduction to Information Systems 2</td>
</tr>
<tr>
<td>ISYS 115</td>
<td>Discrete Structures</td>
</tr>
<tr>
<td>ISYS 270</td>
<td>Linux</td>
</tr>
<tr>
<td>ISYS 325</td>
<td>C#</td>
</tr>
<tr>
<td>ISYS 366</td>
<td>e-Commerce</td>
</tr>
<tr>
<td><strong>Technical Electives (See approved list)</strong></td>
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</tr>
<tr>
<td>ISYS 101</td>
<td>Introduction to Information Systems 1</td>
</tr>
<tr>
<td>ISYS 102</td>
<td>Introduction to Information Systems 2</td>
</tr>
<tr>
<td>ISYS 115</td>
<td>Discrete Structures</td>
</tr>
<tr>
<td>ISYS 270</td>
<td>Linux</td>
</tr>
<tr>
<td>ISYS 325</td>
<td>C#</td>
</tr>
<tr>
<td>ISYS 366</td>
<td>e-Commerce</td>
</tr>
<tr>
<td>300-400 Level Electives (Students are free to choose any 300-400 college level courses to fulfill this requirement)</td>
<td>6</td>
</tr>
<tr>
<td><strong>General Electives (Students are free to choose any college level course to fulfill this requirement)</strong></td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Hours** 120

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

**Approved Technical Electives**

**Accounting**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Principles of Accounting</td>
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**Biology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
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<tbody>
<tr>
<td>BIOL 111</td>
<td>General Biology &quot;</td>
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<td>BIOL 112</td>
<td>General Biology &quot;</td>
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</table>

**Chemistry**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111</td>
<td>Survey of Chemistry 1</td>
</tr>
<tr>
<td>&amp; 111L</td>
<td>and Survey of Chemistry 1 - Laboratory &quot;</td>
</tr>
<tr>
<td>CHEM 112</td>
<td>Survey of Chemistry 2</td>
</tr>
<tr>
<td>&amp; 112L</td>
<td>and Survey of Chemistry 2 - Laboratory &quot;</td>
</tr>
<tr>
<td>CHEM 115</td>
<td>Fundamentals of Chemistry</td>
</tr>
<tr>
<td>&amp; 115L</td>
<td>and Fundamentals of Chemistry 1 - Laboratory &quot;</td>
</tr>
<tr>
<td>CHEM 116</td>
<td>Fundamentals of Chemistry</td>
</tr>
<tr>
<td>&amp; 116L</td>
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</table>

**Computer Science**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CS 265</td>
<td>C Programming</td>
</tr>
<tr>
<td>CS 300-400 Level *</td>
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**Economics**

<table>
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<tbody>
<tr>
<td>ECON 201</td>
<td>Principles of Microeconomics</td>
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**Physical Science**

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<tbody>
<tr>
<td>PHSC 101</td>
<td>Introductory Physical Science 1 &quot;</td>
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<tr>
<td>PHSC 102</td>
<td>Introductory Physical Science 2 &quot;</td>
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**Physics**

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<tr>
<td>PHYS 101</td>
<td>Introductory Physics 1 &quot;</td>
</tr>
<tr>
<td>PHYS 102</td>
<td>Introductory Physics 2 &quot;</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>General Physics &quot;</td>
</tr>
<tr>
<td>PHYS 112</td>
<td>General Physics &quot;</td>
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</table>

" 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.

## Suggested Plan of Study

### First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3</td>
<td>ENGL 102 (GEF 1)</td>
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<tr>
<td>MATH 124 (GEF 3)</td>
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<td>MATH 150 (GEF 8)</td>
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<tr>
<td>CS 121</td>
<td>4</td>
<td>CS 122</td>
<td>4</td>
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<tr>
<td>ISYS 101</td>
<td>3</td>
<td>ISYS 102</td>
<td>3</td>
</tr>
<tr>
<td>WVUE 191</td>
<td>1</td>
<td>Elective</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
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### Second Year

<table>
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<td>ACCT 201</td>
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<td>ECON 202 (GEF 4)</td>
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<td>ISYS 115</td>
<td>3</td>
<td>ISYS 324</td>
<td>3</td>
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<td>Elective</td>
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<td>ISYS 270</td>
<td>3</td>
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<tr>
<td>GEF 5</td>
<td>3</td>
<td>GEF 6</td>
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### Third Year

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CS 321</td>
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<td>ENGL 305</td>
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<td>ISYS 325</td>
<td>3</td>
<td>CS 365</td>
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<tr>
<td>MANG 386</td>
<td>3</td>
<td>ISYS 366</td>
<td>3</td>
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<td>Technical Elective</td>
<td>3</td>
<td>Laboratory Science</td>
<td>4</td>
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<tr>
<td>GEF 2</td>
<td>3</td>
<td>GEF 8</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>Total</strong></td>
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### Fourth Year

<table>
<thead>
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<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CS 480</td>
<td>2</td>
<td>CS 465</td>
<td>3</td>
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<td>MANG 420</td>
<td>3</td>
<td>CS 481</td>
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<tr>
<td>300-400 Level Elective</td>
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<td>CS 491</td>
<td>4</td>
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<tr>
<td>Technical Elective</td>
<td>3</td>
<td>300-400 Level Elective</td>
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<tr>
<td>GEF 7</td>
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<td>Technical Elective</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

Total credit hours: 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

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.

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

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

<table>
<thead>
<tr>
<th>GEF Requirements</th>
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<tbody>
<tr>
<td>ENGL 101</td>
<td>6</td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
<td></td>
</tr>
<tr>
<td>WVUE 191</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to Composition and Rhetoric</td>
<td></td>
</tr>
<tr>
<td>and Composition, Rhetoric, and Research (GEF 1)</td>
<td></td>
</tr>
<tr>
<td>First Year Seminar</td>
<td></td>
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A minimum GPA of a 2.0 is required in all major coursework

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 305</td>
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<tr>
<td>PHYS 111</td>
<td>4</td>
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<tr>
<td>MATH 155</td>
<td>4</td>
</tr>
<tr>
<td>MATH 156</td>
<td>4</td>
</tr>
<tr>
<td>Technical Writing</td>
<td></td>
</tr>
<tr>
<td>General Physics (GEF 2)</td>
<td></td>
</tr>
<tr>
<td>Calculus 1 (GEF 3)</td>
<td></td>
</tr>
<tr>
<td>Calculus 2 (GEF 8)</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>MATH 251</td>
<td>Multivariable Calculus</td>
</tr>
<tr>
<td>MATH 261</td>
<td>Elementary Differential Equations</td>
</tr>
<tr>
<td>MATH 283</td>
<td>Concepts of Mathematics 2</td>
</tr>
<tr>
<td>MATH 341</td>
<td>Introduction to Algebraic Structures</td>
</tr>
<tr>
<td>MATH 441</td>
<td>Applied Linear Algebra</td>
</tr>
<tr>
<td>MATH 448</td>
<td>Probability and Statistics</td>
</tr>
<tr>
<td>MATH 451</td>
<td>Introduction to Real Analysis 1</td>
</tr>
<tr>
<td>MATH 452</td>
<td>Introduction to Real Analysis 2</td>
</tr>
<tr>
<td>MATH 496</td>
<td>Senior Thesis</td>
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<tr>
<td>CS 121</td>
<td>Computer Science 1</td>
</tr>
<tr>
<td>CS 122</td>
<td>Computer Science 2</td>
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<tr>
<td>MATH Elective (300+ or 400+ level; except MATH 315)</td>
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<tr>
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**Technical Electives**

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<tbody>
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<td>BIOL 111</td>
<td>General Biology</td>
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<tr>
<td>BIOL 112</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 230</td>
<td>Human Anatomy and Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 231</td>
<td>Human Anatomy and Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 240</td>
<td>Microbiology</td>
<td>4</td>
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<tr>
<td>CE 204</td>
<td>Surveying</td>
<td>3</td>
</tr>
<tr>
<td>CHE 201</td>
<td>Material and Energy Balances 1</td>
<td>3</td>
</tr>
<tr>
<td>CHE 202</td>
<td>Material and Energy Balances 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 111</td>
<td>Survey of Chemistry 1 and Survey of Chemistry 1 - Laboratory</td>
<td>4</td>
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<tr>
<td>CHEM 112</td>
<td>Survey of Chemistry 2 and Survey of Chemistry 2 - Laboratory</td>
<td>4</td>
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<tr>
<td>CHEM 115</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory</td>
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<td>CHEM 116</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 2 - Laboratory</td>
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<td>CPE 271</td>
<td>Introduction to Digital Logic Design</td>
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<td>CPE 272</td>
<td>Digital Logic Laboratory</td>
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<tr>
<td>CS 201</td>
<td>Data Structures</td>
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<td>CS 222</td>
<td>Intro Software Engineering</td>
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<td>CS 231</td>
<td>Introduction to Computer Organization</td>
<td>3</td>
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<tr>
<td>EE 221</td>
<td>Introduction to Electrical Engineering</td>
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<td>EE 222</td>
<td>Introduction to Electrical Engineering Laboratory</td>
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<td>EE 223</td>
<td>Electrical Circuits</td>
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<tr>
<td>MAE 240</td>
<td>Manufacturing Processes</td>
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</tr>
<tr>
<td>MAE 241</td>
<td>Statics</td>
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<td>MAE 242</td>
<td>Dynamics</td>
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<td>MAE 243</td>
<td>Mechanics of Materials</td>
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<td>MAE 320</td>
<td>Thermodynamics</td>
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<tr>
<td>PHYS 112</td>
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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 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

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 101 (GEF 1)</td>
<td>3</td>
<td>3 ENGL 102 (GEF 1)</td>
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<td>WVUE 191</td>
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<td>1 MATH 156 (GEF 8)</td>
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<td>MATH 155 (GEF 3)</td>
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<td>4 CS 122</td>
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<td>4 GEF 4</td>
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Second Year

<table>
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<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 283</td>
<td>3</td>
<td>3 MATH 261</td>
<td>4</td>
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<tr>
<td>MATH 251</td>
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<td>4 MATH Elective (300-400 level)</td>
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<td>PHYS 111 (GEF 2)</td>
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<td>4 Technical Elective (GEF 8)</td>
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<td>GEF 5</td>
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Third Year

<table>
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<tr>
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<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 305</td>
<td>3</td>
<td>3 MATH 341</td>
<td>3</td>
</tr>
<tr>
<td>MATH 448</td>
<td></td>
<td>3 MATH 441</td>
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<tr>
<td>GEF 6</td>
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<td>3 Technical Elective</td>
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<td>3 GEF 7</td>
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<td>3 Elective</td>
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Fourth Year

<table>
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<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MATH 451</td>
<td>3</td>
<td>3 MATH 452</td>
<td>3</td>
</tr>
<tr>
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<td>3</td>
<td>3 MATH 496</td>
<td>2</td>
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</tr>
<tr>
<td>GEF 8</td>
<td></td>
<td>3 Elective</td>
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</tr>
<tr>
<td>Elective</td>
<td></td>
<td>3 Elective</td>
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</tr>
<tr>
<td></td>
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</tbody>
</table>

Total credit hours: 120

Major Learning Outcomes

MATHEMATICS

The graduates of the Mathematics program:

- Will be critical thinkers and problem solvers.
- Will be able to understand the concepts, solve the problems, and prove theorems in at least three of the four major areas of mathematics - Algebra, Analysis, Applied Mathematics, and Geometry/Topology.
- Will be able to develop computer programs to implement computational algorithms.
- Will be able to communicate effectively.
Mathematics Minor

MINOR CODE - UT14

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 155</td>
<td>Calculus 1</td>
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<tr>
<td>MATH 156</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 251</td>
<td>Multivariable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 261</td>
<td>Elementary Differential Equations</td>
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</tr>
<tr>
<td>MATH 441</td>
<td>Applied Linear Algebra</td>
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Select two of the following courses:

<table>
<thead>
<tr>
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<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MATH 283</td>
<td>Concepts of Mathematics 2</td>
<td>6</td>
</tr>
<tr>
<td>MATH 300+ or 400+ Level Courses (excluding MATH 315)</td>
<td>6</td>
<td></td>
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</table>

Total Hours: 25

Mechanical Engineering

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 practice-oriented 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](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.

<table>
<thead>
<tr>
<th>General Education Foundations</th>
<th>3-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Introduction to Composition and Rhetoric</td>
</tr>
<tr>
<td>&amp; ENGL 102</td>
<td>and Composition, Rhetoric, and Research</td>
</tr>
<tr>
<td>or ENGL 103</td>
<td>Accelerated Academic Writing</td>
</tr>
</tbody>
</table>

| 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**

| WVUE 191 | First Year Seminar | 1 |
| DRET 120 | Drafting 1 | 2 |

**GEF Elective Requirements (5, 6, and 7)**

<p>| ENGL 101 &amp; ENGL 102 | Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research (GEF 1) | 6 |
| ENGL 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 |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 115</td>
<td>Fundamentals of Chemistry and Fundamentals of Chemistry 1 - Laboratory (GEF 8)</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>General Physics (GEF 2)</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 112</td>
<td>General Physics (GEF 8)</td>
<td>4</td>
</tr>
<tr>
<td>ECON 401</td>
<td>Managerial Economics (GEF 4)</td>
<td>3</td>
</tr>
<tr>
<td>EE 221</td>
<td>Introduction to Electrical Engineering</td>
<td>4</td>
</tr>
<tr>
<td>&amp; EE 222</td>
<td>and Introduction to Electrical Engineering Laboratory</td>
<td></td>
</tr>
<tr>
<td>ENGR 111</td>
<td>Software Tools for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 401</td>
<td>Senior Engineering Seminar</td>
<td>1</td>
</tr>
<tr>
<td>MAE 201</td>
<td>Applied Engineering Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MAE 240</td>
<td>Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>MAE 241</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 242</td>
<td>Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 243</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MAE 320</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 321</td>
<td>Applied Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 331</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 332</td>
<td>Experimental Methods</td>
<td>1</td>
</tr>
<tr>
<td>MAE 333</td>
<td>Mechanical Measurements</td>
<td>1</td>
</tr>
<tr>
<td>MAE 340</td>
<td>Vibrations</td>
<td>3</td>
</tr>
<tr>
<td>MAE 342</td>
<td>Dynamics of Machines</td>
<td>3</td>
</tr>
<tr>
<td>MAE 405</td>
<td>Senior Mechanical Engineering Lab</td>
<td>1</td>
</tr>
<tr>
<td>MAE 410</td>
<td>Materials Science (GEF 2)</td>
<td>4</td>
</tr>
<tr>
<td>MAE 419</td>
<td>Heat Transfer Lab</td>
<td>1</td>
</tr>
<tr>
<td>MAE 423</td>
<td>Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>MAE 454</td>
<td>Machine Design and Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>MAE 455</td>
<td>Computer Aided Drafting and Design</td>
<td>3</td>
</tr>
<tr>
<td>MAE 456</td>
<td>Computer-Aided Design and Finite Element Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MAE 460</td>
<td>Automatic Controls</td>
<td>3</td>
</tr>
<tr>
<td>MAE 480</td>
<td>System Design 1</td>
<td>3</td>
</tr>
<tr>
<td>MAE 481</td>
<td>Systems Design 2</td>
<td>3</td>
</tr>
<tr>
<td>Technical Electives (see below)</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>125</td>
</tr>
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</table>

**Technical Electives**

**Mechanical, Structural, and Energy Oriented**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAE 407</td>
<td>Power Plant Engineering</td>
<td>3</td>
</tr>
<tr>
<td>MAE 425</td>
<td>Internal Combustion Engines</td>
<td>3</td>
</tr>
<tr>
<td>MAE 427</td>
<td>Heating, Ventilating, and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>MAE 428</td>
<td>Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 429</td>
<td>Theory of Turbomachines</td>
<td>3</td>
</tr>
<tr>
<td>MAE 440</td>
<td>Industrial Hydraulics:Components and Circuits Design</td>
<td>3</td>
</tr>
<tr>
<td>MAE 463</td>
<td>Advanced Machine Design</td>
<td>3</td>
</tr>
<tr>
<td>MAE 493</td>
<td>Special Topics (Applied Computational Fluid Dynamics)</td>
<td>3</td>
</tr>
<tr>
<td>MAE 493</td>
<td>Special Topics (Student Engineering Practice)</td>
<td>3</td>
</tr>
<tr>
<td>MAE 493</td>
<td>Special Topics (Topics in CAD/CAM/CAE)</td>
<td>3</td>
</tr>
<tr>
<td>CE 361</td>
<td>Structural Analysis 1</td>
<td>4</td>
</tr>
<tr>
<td>CE 421</td>
<td>Hydraulic Engineering</td>
<td>4</td>
</tr>
<tr>
<td>EE 427</td>
<td>Introduction to Robotics</td>
<td>3</td>
</tr>
<tr>
<td>EE 335</td>
<td>Electromechanical Energy Conversion and Systems</td>
<td>4</td>
</tr>
<tr>
<td>&amp; EE 336</td>
<td>and Electromechanical Energy Conversion and Systems Lab</td>
<td></td>
</tr>
<tr>
<td>EE 493</td>
<td>Special Topics (Alternative Energy Resources)</td>
<td>3</td>
</tr>
</tbody>
</table>
### Digital Hardware and Software Oriented
- **ENGR 493**: Special Topics (Microprocessors for Non-Electrical Engineers/Comp. Engineers) 3
- **CPE 271**: Introduction to Digital Logic Design 4
- & **CPE 272**: and Digital Logic Laboratory
- **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 Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGL 101 (GEF 1)</strong></td>
<td><strong>ENGL 102 (GEF 1)</strong></td>
</tr>
<tr>
<td><strong>MATH 155 (GEF 3)</strong></td>
<td><strong>MATH 156 (GEF 8)</strong></td>
</tr>
<tr>
<td><strong>CHEM 115 &amp; 115L (GEF 8)</strong></td>
<td><strong>ENGR 111</strong></td>
</tr>
<tr>
<td><strong>DRET 120</strong></td>
<td><strong>MAE 241</strong></td>
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<td><strong>WVUE 191</strong></td>
<td><strong>GEF 5</strong></td>
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<table>
<thead>
<tr>
<th>Total Hours</th>
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</thead>
<tbody>
<tr>
<td>14</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Second Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MATH 251</strong></td>
<td><strong>MATH 261</strong></td>
</tr>
<tr>
<td><strong>PHYS 111 (GEF 2)</strong></td>
<td><strong>PHYS 112 (GEF 8)</strong></td>
</tr>
<tr>
<td><strong>MAE 240</strong></td>
<td><strong>MAE 201</strong></td>
</tr>
<tr>
<td><strong>MAE 242</strong></td>
<td><strong>MAE 320</strong></td>
</tr>
<tr>
<td><strong>MAE 243</strong></td>
<td><strong>MAE 331</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Total Hours</th>
<th>Total Hours</th>
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<tbody>
<tr>
<td>17</td>
<td>17</td>
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</table>

#### Third Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EE 221 &amp; EE 222</strong></td>
<td><strong>ENGL 305</strong></td>
</tr>
<tr>
<td><strong>MAE 321</strong></td>
<td><strong>ECON 401 (GEF 4)</strong></td>
</tr>
<tr>
<td><strong>MAE 333</strong></td>
<td><strong>MAE 332</strong></td>
</tr>
<tr>
<td><strong>MAE 342</strong></td>
<td><strong>MAE 340</strong></td>
</tr>
<tr>
<td><strong>MAE 480</strong></td>
<td><strong>MAE 419</strong></td>
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<td></td>
<td><strong>MAE 423</strong></td>
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<td></td>
<td><strong>MAE 460</strong></td>
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<table>
<thead>
<tr>
<th>Total Hours</th>
<th>Total Hours</th>
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<tbody>
<tr>
<td>14</td>
<td>17</td>
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</tbody>
</table>
Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Hours Spring</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAE 405</td>
<td>1 ENGR 401</td>
<td>1</td>
</tr>
<tr>
<td>MAE 455</td>
<td>3 MAE 410 (GEF 2)</td>
<td>4</td>
</tr>
<tr>
<td>MAE 480</td>
<td>3 MAE 456</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3 MAE 481</td>
<td>3</td>
</tr>
<tr>
<td>GEF 6</td>
<td>3 Technical Elective</td>
<td>3</td>
</tr>
<tr>
<td>GEF 7</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Total credit hours: 125</td>
<td></td>
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</tr>
</tbody>
</table>

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
- 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 BSN program is offered on WVU’s Morgantown, Beckley and Potomac State campuses.

The curriculum includes courses in humanities, social sciences, basic sciences and nursing science. These courses are taken in conjunction with nursing clinical courses. Students apply their learning to actual client, family and community situations that warrant nursing intervention. In keeping with the University’s commitment to improving health care for all West Virginians, all health sciences students complete a rural clinical practice as part of the degree requirements. Nursing students complete the rural clinical practice experience during their senior year.

Throughout the academic and clinical experiences, students will focus on the the five core competencies that provide the framework for the BSN curriculum, including: critical thinking, nursing interventions, professional role, caring, and communication which are outlined in more detail in our Student Handbook (https://nursing.hsc.wvu.edu/students/resources/student-handbooks).

Our BSN pass rates for first-time test takers on the national licensure exam in 2018 was 100%.

Progression Plans

Depending on when you are admitted to the BSN program, the progression plan you follow in your time at WVU can vary slightly. Please view the different progression plans (p. 168) for more information. The BSN program is six semesters of clinical nursing courses after completion of all pre-requisite courses.

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 failure of the nursing program. For additional information on laptop compatibility for school of nursing, please email csheaves@mail.wvu.edu

ADMINISTRATION

CHAIR

- Crystal Sheaves - PhD, RN, APRN, FNP-BC
  West Virginia University

FACULTY

CHAIR

- Crystal Sheaves - PhD, RN, APRN, FNP-BC
  West Virginia University

ASSISTANT PROFESSORS

- Barbara Douglas - MSN, RN
  Wright State University
- Mindy Harris - MSN, RN, NE-BC
  Marshall University
- Peggy Lambert Fink - PhD, RN, APRN, FNP-BC
  West Virginia University
- James Messer - MSN, RN
  University of Phoenix
- Hillary Parcell - MSN, RN
Marshall University
• Robin Spencer - MSN, RN
Marshall University

INSTRUCTOR
• Cynthia Clark - MSN, RN
Chamberlain College
• Dana Froble - MSN, RN, APRN, FNP-BC
Marshall University
• Kelly Morton - MSN, RN
Capella University

Admissions

HIGH SCHOOL SENIORS DIRECT ADMISSION INFORMATION

Direct admission to the School of Nursing is based on a combination of cumulative high school GPA and ACT or SAT scores, plus Math SAT or ACT scores. Please be advised direct admit spots are limited and may reach capacity, and therefore additional students will be restricted from entry. To be admitted directly to the program as an incoming freshman, a student must have:

• GPA of 3.8 or higher and an ACT composite score of 26 with Math of 22 or SAT EBRW 1240 and Math with 540
• GPA of 3.6-3.79 and an ACT composite score of 28 with Math of 22 or SAT EBRW 1310 and Math and 540

Students admitted directly to the Nursing program must maintain a 3.0 GPA throughout the nursing program, beginning with the first semester at WVU. If a student’s GPA falls below 3.0, he/she will be placed on probation for one semester. If the student’s GPA remains below 3.0 for a second semester, the student will be dismissed from the nursing program. **Directly admitted students must complete all prerequisite freshman courses in the Progression plan with a grade of “C” or better by the end of summer session of the freshman year. If required courses are not completed satisfactorily by that time, the student will be moved to “Pre-Nursing” status and will be required to reapply for admission to the School of Nursing.**

HIGH SCHOOL SENIORS PRE-NURSING ADMISSIONS INFORMATION

Pre-Nursing majors [https://nursing.hsc.wvu.edu/students/undergraduate-programs/bachelor-of-science/application-information/pre-nursing](https://nursing.hsc.wvu.edu/students/undergraduate-programs/bachelor-of-science/application-information/pre-nursing) may apply to become nursing majors after one semester of college level work. Admission is based on a combination of cumulative high school GPA and ACT or SAT scores, plus Math SAT or ACT scores.

Students with a high school GPA less than a 3.2 will be admitted to WVU through CLASS.

• GPA of 3.2 or higher and an ACT composite score of 23 and Math of 22 or SAT EBRW 1140 and Math and 540

APPLY TO THE SCHOOL OF NURSING (HIGH SCHOOL STUDENTS)

Once you have reviewed the qualifications you can begin the application process [https://admissions.wvu.edu/how-to-apply/first-time-freshmen](https://admissions.wvu.edu/how-to-apply/first-time-freshmen). Students currently in high school, that have a TASC/GED and students that have not attended a college or university after graduating from high school should select a student type of Freshman on the application. The direction admission program occurs for the fall semester until the freshmen class is filled. Applicants are encouraged to apply early to avoid admission deferment.

[Check the status](http://appstatus.wvu.edu) of your WVU Tech application.

**Please note:** Due to a high volume of qualified applicants, West Virginia University has temporarily closed direct-admission for 2019 first-time freshman to the School of Nursing – Morgantown campus. Eligible candidates will be admitted to the pre-nursing program.

Direct-admissions for 2019 first-time freshman to the WVU School of Nursing Beckley and Keyser campuses are still being accepted.

COLLEGE STUDENTS ADMISSION INFORMATION

High school students not eligible for direct admission and college students from other majors may apply for admission after one semester or more of college course work. Admission consideration in this case is dependent upon:

• Minimum cumulative GPA of at least 3.0 on a 4.0 scale on all college work attempted
• Minimum cumulative GPA of 3.0 on a 4.0 scale for the pre-requisite courses
• Completion of each of the pre-requisite courses with a grade of “C” or better prior to enrollment
Prerequisites: English Composition - ENG 101 (3 cr.), Introduction to Psychology - PSYC 101 (3 cr.), Introduction to Nursing - NSG 100 (2 cr.), College Algebra - MATH 124 or 126 (3 cr.), Chemistry with lab - CHEM 111 or 115 (4 cr.), Chemistry with lab - CHEM 112 or 116 (4 credits), General Biology with lab - BIOL 111 (4 cr.). Anatomy and Physiology - BIOL 230 (4 cr.).

Note: Statistics is in the freshman progression plan but is not a pre-requisite for admission to sophomore year. Introduction to Human Development and Nutrition, and Intro to Anthropology are no longer pre-requisites and are taken later in the program. SOCA 105 is a required course, but may be taken after formally entering the nursing program.

Students who fail to take the required prerequisite courses in the freshman year will be ineligible for admission consideration until their sophomore year. Once beginning the nursing program, students must complete six semesters (fall and spring) of clinical coursework beginning with NSG 211 Health Assessment. Please see the progression plans for further information.

APPLY TO THE SCHOOL OF NURSING (COLLEGE STUDENTS)

Once you have completed your first semester of classes and reviewed the qualifications, you can begin the application process (https://westvirginia.force.com/TX_SiteLogin?startURL=%2FTargetX_Portal__PB) to apply to the School of Nursing. To begin the process, click Sign Up to enter your first and last name and email address and then SUBMIT. You will then receive an email with a link to set your password to start the application. Select the campus you would like to apply to (Morgantown, Keyser, or Beckley) and click start application.

Choose Internal Application if you are a current WVU student on any of the three campuses or have attended WVU on any of the three campuses. Choose Nursing BSN, Fall 2019 and answer remaining questions. Remember to hit SUBMIT when completed.

Choose HSC Transfer or Second Degree if you are not a current WVU student. Choose Nursing BSN, Fall 2019 and answer remaining questions. Remember to hit SUBMIT when completed.

• The application period for the Fall term opens on December 1 and closes on January 15. All transcripts must be received no later than January 31.
• The application period for the Spring term (Morgantown Only) opens on January 16 and closes on May 15. All transcripts must be received no later than May 31.

Applications are only available during the periods specified.

NURSING TRANSFER STUDENTS

College students currently enrolled in a nationally accredited nursing program may request transfer of previously completed nursing courses to WVU School of Nursing BSN program using the steps below.

QUALIFICATIONS

• Space available in class.
• A minimum GPA of 3.0 on all college work attempted.
• A minimum GPA of 3.0 on all nursing course work attempted.
• All nursing and pre-requisite non-nursing courses (https://nursing.hsc.wvu.edu/students/undergraduate-programs/bachelor-of-science/application-information/transfer-students) must have been passed with a grade of “C” or higher.
• Statement of good standing from program in which currently enrolled.
• Send syllabi of previously completed nursing courses for review to determine whether courses are transferrable. Syllabi may be sent electronically to nursing@hsc.wvu.edu.

THREE CAMPUSES. ONE CHOICE. ONE APPLICATION.

The BSN program is available on three campuses: Morgantown, Beckley, and Potomac State and we’ve made it easy to apply to the campus of your choice. Simply submit one application per term for the BSN program and your one campus preference. (Submitting multiple applications for the same term to different campuses may cause a processing delay in your application.)

ACCEPTANCE

Applicants are notified of admissions decisions via email in April for those starting in the fall semester, and July for those who start in the spring semester.

ORIENTATION

Students are required to attend an orientation session prior to the start of fall semester classes. Students will receive additional information through their WVU Portal (https://portal.wvu.edu) account.

Note: Any student who has been dismissed from the West Virginia University School of Nursing or any other nursing program will not be readmitted or considered for admission to 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.

**General Education Foundations**

<table>
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<tr>
<th>Requirement</th>
<th>Discipline</th>
<th>Course Code</th>
<th>Course Title</th>
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<td>F3 - Math &amp; Quantitative Reasoning</td>
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<td>STAT</td>
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<td>BiOL 240</td>
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<td>NSG 412</td>
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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**

A minimum grade of C- is required in all coursework except GEF 5 and GEF 6

<table>
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NSG 450  Alterations in Mental Health  4
NSG 460  Care of the Critically Ill Patient  4
NSG 486  NCLEX Review  1
WVUE 191  First Year Seminar  1

Nursing Electives
- NSG 400  Spirituality and Health
- NSG 480  Core Concepts in Gerontological Nursing
- NSG 481  Cardiac 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 123

Suggested Plan of Study

First Year

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Third Year

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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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