Electronic Engineering Technology

Degree Awarded

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

Nature of 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.

General Education Foundations

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

F2A/F2B - Science & Technology

F3 - Math & Quantitative Skills

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 31-37
Curriculum Requirements

GEF Elective Requirements (5, 6, and 7) 9
ENGL 305 Technical Writing 3
MATH 315 Advanced Technical Mathematics 4
CHEM 115 Fundamentals of Chemistry 4
ECON 202 Principles of Macroeconomics (GEF 4) 3
ELET 315 Electronic Measurement and Instrumentation 4
ELET 337 Communication Systems 2 4
ELET 410 Control Systems Technology 3
ELET 420 Microprocessors and Digital Systems 4
ELET 426 Microprocessor-Based Data Acquisition and Control 4
ELET 436 Programmable Logic Controllers 4
GNET 410 C++ Programming for Technology 3
GNET 412 Project Management 3
GNET 489 Senior Seminar and Project 2

Select one of the following: 3
GNET 311 Software Tools for Engineering Technology
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

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<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
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<td>ELET 410</td>
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<td>ENGL 305</td>
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<td>MATH 261</td>
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Fourth Year

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<td>ELET 436</td>
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<td>GNET 489</td>
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<td>GNET 410</td>
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<td>Technical Elective</td>
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Major Learning Goals
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.