

# Electronics and Computer Technology

## Associate of Applied Science Electrical/Electronic Engineering Technology Electronics and Computer Technology

The field of electrical engineering technology touches our everyday lives in ways that most of us rarely think about: everything from turning on a lamp to computer control of microwaves, TVs, smart technologies (cell phones and the likes), telecommunications, video games, automobiles, biomedical equipment, industrial automation, and space exploration. Given the widespread use of electronic devices and the control of these devices by embedded controllers and computers, there will virtually always be a demand for the repair of today's devices and the design and development of future applications.

### Career Opportunities

More than ever, there is a demand for a prepared workforce with the scientific and technical training necessary to help American industry to maintain a competitive edge in the world market. Students who are interested in electronics and computer technology can pursue a two-year associate's degree or four-year bachelor's degree. Graduates with the bachelor's degree may work creating scientific and engineering advances or producing high-quality products and are more likely than the technician to take on a project-leadership role after a year or two of experience.

Graduates with an associate's degree can enter industry as a member of an engineering team working with other engineers, technologists, and other engineering technicians. Technicians are often involved in the maintenance, repair, installation, industrial application, testing, trouble-shooting, sales, and field service of electrical and computer systems, and are expected to keep up with the latest technological advancements.

Typical job titles include: electrical or electronic engineer or technician,

field service engineer, or field service technician.

### Employment Outlook

The U.S. Dept. of Labor expects the number of jobs related to electronics and computer engineering technology to reflect slow to modest growth into 2022, but above average growth in electronics-based specialty areas such as biomedical technology. But, as our industrial footprint is so expansive and our need for consumer devices so broad, successful graduates can expect to find employment in one or more of the many fields related to this degree.

### Curriculum Program Requirements

#### Communications (6 hours minimum)

English  
Speech Communications

#### BG Perspective Courses (6 hours minimum)

Choose courses from the following sections, with no more than one course from each section:

Social and Behavioral Sciences  
Arts and Humanities  
Cultural Diversity

#### Mathematics and Science (14 hours minimum)

College Algebra, Trigonometry, and Pre-calculus  
[Based on placement tests, additional MATH courses may be required, but may not count toward graduation.]  
Pre-calculus  
Physics I  
Physics II or Chemistry  
Electronics and Computer Technology

#### Major (41 hours minimum)

Energy, Power, Instrumentation & Control  
Electric Circuits  
Electronic Circuits  
Digital Electronic Components and Systems  
Real-Time Microcomputer Systems for  
Digital Computer Analysis  
Programmable Logic Controllers

Human Machine Interface (HMI)  
Basic Computer-aided Design  
Solid Modeling  
Networking Fundamentals  
Introduction to Programming (Visual Basic)  
Introduction to Object-oriented Programming (C++)  
Microcomputer Systems

### For Further Information

Philip Weinsier, Ed.D.  
Associate Professor and Program Director  
319 George Mylander Hall  
BGSU Firelands  
One University Drive  
Huron, Ohio 44839  
419-433-5560 ext. 2-0628  
email: [philipw@bgsu.edu](mailto:philipw@bgsu.edu)

Debralee Divers, Director  
Enrollment Management & Student  
Retention Services  
419-433-5560 ext. 2-0629  
email: [divers@bgsu.edu](mailto:divers@bgsu.edu)

Cheryl L. Chafee, Asst. Director  
Admissions and Financial Aid  
419-433-5560 ext. 2-0683  
email: [cchafee@bgsu.edu](mailto:cchafee@bgsu.edu)

Web site: [www.firelands.bgsu.edu](http://www.firelands.bgsu.edu)

### Your University Opportunity

BGSU Firelands, located in Huron, Ohio, is a regional campus and one of the seven undergraduate colleges of Bowling Green State University. We offer many of the advantages and resources of a major university, but in a smaller, more personal environment.

Generally, students are able to complete at least two years of coursework toward most of the 200-degree programs at BGSU before transferring to the main campus, or to another college or university.

BGSU Firelands offers students a wireless environment campus wide. Kiosks and public-access computers located in most campus buildings provide easy Internet access. In addition, there are several on-campus computer labs with a variety of computers and software programs.

The library, containing more than 30,000 volumes, is computer-linked to the more than 4 million items available through BGSU's libraries to provide excellent research opportunities.

Academic advisors work individually with students to plan their degree programs and small class sizes allow students to have close, personal contact with their professors. Free tutoring is readily available through the Teaching and Learning Center. Scholarships, grants and loans are available to assist students with tuition.

**NOTE:** Information in this guide is subject to change without notice. To learn more about the official program of study for Electronics and Computer Technology, please check the undergraduate catalog online at [www.bgsu.edu/catalog.html](http://www.bgsu.edu/catalog.html)