Electromechanical Technology

Associate of Applied Science
Electrical/Electronic Engineering Technology

Electromechanical Technology

The field of electromechanical technology has revolutionized the way we live. Our entire economy and culture depend on such systems as electromagnetic induction for power generation; transformers for the delivery of electricity to homes, businesses and industry; motors, drives and programmable logic controllers for industrial process control, hydraulics and pneumatics for the transmission and control of forces and velocities. These systems can be found in virtually every kind of technology we use, from automotive, aircraft and spacecraft to agricultural and offshore-technology industries.

Career Opportunities

Students who are interested in electromechanical technology can pursue a four-year bachelor’s degree or a two-year associate’s degree. The demand for technologists with the bachelor’s degree who can make informed decisions based on technical knowledge and experience is increasing. A student with a two-year associate’s degree will enter industry and work with engineers, technologists, and other engineering technicians. Technicians are often involved in the manufacture, testing, trouble-shooting, sales, and field service of electrical, electronic, and computer systems, and are expected to keep up with the latest technological advancements. Typical job titles include: industrial electronic systems technician, electrical technician, electronic technician, installation technician, automation specialist, field-service representative, technical representative, and engineering technician.

Employment Outlook

The U.S. Dept. of Labor expects the number of jobs related to electromechanical technology to grow roughly 4% 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 coursework from the following sections, with no more than one from each section:
- Social and Behavioral Sciences
- Arts and Humanities
- Cultural Diversity
- Natural Sciences

Mathematics and Science (5 hours minimum)
- College Algebra & Trigonometry
- Pre-calculus
- [Based on placement tests, additional MATH courses may be required, but may not count toward graduation.]
- Pre-calculus

Electromechanical Technology Major (48 hours minimum)
- Energy, Power, Instrumentation & Control
- Electric Circuits
- Electronic Circuits
- Digital Electronic Components and Systems
- Programmable Logic Controllers
- Human Machine Interface (HMI)
- Basic Computer-aided Design
- Solid Modeling
- [Another eight courses must be chosen from the following elective courses.]
- Introduction to Lean Processes/Systems
- Applied Statistics
- Six Sigma Systems
- Electric Machinery and Controls
- Metallic Materials and Processes
- Fluid Power Transmission
- Technology Systems in Society

Technical Writing
- Introduction to Programming (Visual Basic)
- Introduction to Object-oriented Programming (C++)
- Computer Organization
- Network and Internet Principles
- Microcomputer Systems

For Further Information

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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.
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 Electromechanical Technology, please check the undergraduate catalog online at www.bgsu.edu/catalog.html