ELECTRICAL AND COMPUTER ENGINEERING TECHNOLOGY, B.S.

Begin Campus: Any Penn State Campus

End Campus: Erie

Program Description

This major prepares graduates for careers in such varied areas as electronics, microprocessors, computer hardware and software, communications, instrumentation and control, and power. The major consists of two options, one in Electrical Engineering Technology, the other in Computer Engineering Technology. Both options provide education in applied mathematics, physics, electrical and electronic circuit analysis and design, microprocessors, instrumentation and quality control. The Electrical Engineering Technology option provides specialty education in control theory, communication systems, and power systems. The Computer Engineering Technology option provides specialty education in software development, embedded computer systems, and networking. Both options in the major culminate with a capstone design project involving an actual design or manufacturing problem, often sponsored by industry. Graduates may qualify as engineering technologists working side-by-side with engineers, scientists, and other skilled workers in these capacities. Occupations include electrical and electronic systems design, microprocessor applications, instrumentation and control, computer programming, electrical testing, plant engineering, quality control, management, and technical sales and service.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org (http://www.abet.org).

What is Electrical and Computer Engineering Technology?

The study of electrical and computer engineering technology (ECET) offers a strong education in electrical and electronic systems design, computer programming, microprocessor applications, automation, programmable logic controllers, instrumentation and control, and electrical testing. ECET is different from traditional theory-based electrical engineering degree programs, and also unlike skills-based programs that are focused on repair and maintenance. The applied nature of ECET offers not only working knowledge of the foundational theories of engineering, but also the hands-on laboratory focus that enables students to analyze, design, and implement the many uses of electrical and computer systems. The degree program is industry focused and emphasizes solving real-world problems in the workplace.

You Might Like This Program If...

- You're fascinated by what's inside electrical and computer systems.
- You're interested in knowing how electrical and computer systems work, how to design new systems, and how to test existing systems.
- You're looking for a hands-on applied engineering discipline.
- You're interested in both engineering and computing—and in the application of these two disciplines in solving real-world problems.