

Electrical Engineering Technology

Careers

Engineering technicians use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance. Their work is more limited in scope and more practically oriented than that of scientists and engineers. Many engineering technicians assist engineers and scientists, especially in research and development. Others work in quality control—inspecting products and processes, conducting tests, or collecting data. In manufacturing, they may assist in product design, development, or production.

Engineering technicians who work in research and development build or set up equipment, prepare and conduct experiments, collect data, calculate or record the results, and help engineers or scientists in other ways, such as making prototype versions of newly designed equipment. They also assist in design work, often using computer-aided design equipment.

Most engineering technicians specialize in certain areas, learning skills and working in the same disciplines as engineers. Occupational titles, therefore, tend to follow the same structure as those of engineers.

Job Outlook

Overall employment of engineering technicians is expected to grow seven percent between 2006 and 2016, about as fast as the average for all occupations. Competitive pressures will force companies to improve and update manufacturing facilities and product designs, resulting in more jobs for engineering technicians. Growth of engineering technician employment in some design functions may be dampened by increasing globalization of the development process. However, much of the work of engineering technicians requires on-site presence, so demand for engineering technicians within the U.S. should continue to grow—particularly in the environmental, civil, and industrial specialties. Because engineering technicians work closely with engineers, employment of engineering technicians is often influenced by the same local and national economic conditions that affect engineers. As a result, the employment outlook varies with industry and specialization.

Earning Potential

Median annual earnings of wage-and-salary electrical and electronics engineering technicians were \$50,660 in May 2006. The middle 50 percent earned between \$39,270 and \$60,470. The lowest 10 percent earned less than \$30,120, and the highest 10 percent earned more than \$73,200.

Related Careers

- Computer Systems Specialist
- Computer Maintenance Technician
- Field Service Representative
- Installation Technician
- Field Engineer
- Systems Integrator and Applications Specialist

Electrical Engineering Technology Careers

Educational Opportunities in Electrical Engineering Technology at LCCC

Associate of Applied Science in Electronic Engineering Technology – Applied Electronics

The Applied Electronics program is structured to provide a student with an application-oriented, electronic/electrical background, extensive hands-on laboratory experience, and the use of standard and specialized test equipment.

The Applied Electronics major is approved by the Federal Aviation Administration as a part of the College Training Initiative, through which students are eligible for part-time (work-study) employment with the FAA or full-time employment after graduation.

Associate of Applied Science in Electronic Engineering Technology – Computer Maintenance and Networking

The computer maintenance and networking program provides a solid foundation in the principles of electronics, with an emphasis on the installation, maintenance, and repair of computer systems, networks, and associated equipment. Along with a broad, general electronics background, students are given comprehensive information and training in computer system structure, peripheral device operation, installation procedures, and troubleshooting practices through this extensive, hands-on oriented curriculum.

Certificate of Proficiency in Electronic Engineering Technology – Computer Maintenance and Networking

This program is designed to provide students with the knowledge and practical skills to install, upgrade, and maintain personal computer systems and networks.

Certificate of Completion in Computer Maintenance and Networking

The Computer Maintenance and Networking (CMNW) certificate of completion is designed to provide the student with the knowledge and practical skills necessary for entry-level employment in the areas of installation, upgrading and maintaining personal computer systems and networks.

A+ Certification Preparation Available at LCCC

A+ certification is a widely accepted certification that demonstrates expert knowledge of hardware technologies. This is an excellent certification for anyone looking to enter into the world of information technology.

A+ certification requires you to demonstrate knowledge of installing, configuring, upgrading, troubleshooting and repairing desktop systems. The LCCC A+ certification requires completion of only two courses, and credits can apply toward LCCC's Computer Maintenance and Networking certificate of completion, certificate of proficiency and associate's degree programs.

Educational Opportunities at LCCC through it University Partnership

Ohio University

Master of Science in Engineering (Engineering Management)

This program is designed for, but not limited to, individuals holding undergraduate degrees in engineering, chemistry, physics or other technical degrees. Typically, two courses will be offered each quarter until completion.

The University of Toledo

Bachelor of Science in Computer Science and Engineering

The Computer Science and Engineering (CSE) is an interdisciplinary field, which deals with the design, construction, operation, and maintenance of computing hardware and software. In this program, students explore the interaction between modern computer science and related technologies that have evolved the mathematical and design principles of engineering into the development of modern computing system.

Bachelor of Science in Computer Science and Engineering Technology

The program in Computer Science and Engineering Technology (CSET) includes hardware and software aspects of both computer design and computer applications. Computer design emphasizes the structure of computers and requires expertise in computational applications, digital design, microcomputer systems and computer architectures. Computer applications emphasizes the use of computer software in engineering technology and requires both low-level and high-level programming techniques, the use of mathematical algorithms, and a general knowledge of computer operating systems.

About Lorain County Community College

Lorain County Community College continues to experience enrollment growth because attending LCCC is the most economical way to reach educational goals that help graduates become valuable players in the future economic growth of the county and region. Because of the variety and quality of learning opportunities LCCC provides, enrollment has grown 78 percent since 2000.

Lorain County Community College, which opened in 1963, is one of Ohio's leading colleges delivering credit programs at its Elyria campus and outreach centers in downtown Elyria, Lorain, Wellington and Brunswick. Plus more than 200 courses are offered via distance-learning education options, and the Associate of Arts degree can be completed entirely online.

Students can choose from more than 80 educational programs. Students can complete the first half — and sometimes more — of a bachelor's degree through LCCC's University Partnership, which brings eight universities to the LCCC campus offering 40 bachelor's and master's degree programs. Students can upgrade, retrain and improve current life skills.

In addition to providing a great education for those who enter college with aspirations of a degree, LCCC helps those who have changed their career goals, who want to broaden their horizons, and who want to return to work. LCCC provides learning and training for those who want to move up but find they need new or improved skills for the kind of professional opportunities they seek.

LCCC faculty is recognized locally and nationally for their work as professors and in other areas. They all have advanced degrees and real world experience and understand their primary responsibility at LCCC is to teach classes.

LCCC is fully accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, which is the regional accrediting authority for Ohio colleges and universities. Since opening its doors, LCCC has served more than 300,000 people. More than six million students enroll annually in credit courses at America's community colleges, representing about 46 percent of all students in higher education and about 56 percent of all first-time college entrants.



*Lorain County
Community College*



**The University
Partnership**

of Lorain County Community College

1005 Abbe Road North
Elyria, OH 44035
www.lorainccc.edu