



ENGINEERING TECHNOLOGY

Automation Engineering Technology

Careers

Automation 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 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 and development, process design or production. Others work with programmable logic controllers (PLCs), a hot field in the area of automation engineering technology that involves working with special-purpose computers to synchronize all of the technologies used for a manufacturing process. PLC professionals program set up and use these special-purpose computers.

Automation engineering technology is applied to a wide variety of systems such as communications and process controls. Automation engineering technicians combine fundamental principles of mechanical engineering technology with knowledge of electrical and electronic circuits to design, develop, test and manufacture electrical and computer controlled mechanical systems, which are becoming the foundation of operation in industry.

The automation industry is a branch of the electronics field and is one of the fastest growing areas of our national and international high-technology economy. It combines the fields of electronics, electrical, and mechanics and includes the interaction and control of motors, computers, pneumatics, hydraulics and other processes used in manufacturing.

The program prepares students to work as automation and robotics engineering technologists in all phases of industry where the control of production, distribution and/or manufacturing is conducted by an automated process.

Graduates of the Automation Engineering Technology program may develop and test industrial process control systems, supervise the building and testing of prototypes, or supervise and conduct the installation and operation of such systems. They may calibrate operating systems and components, or write specifications, schedules and reports in addition to controlling schedules and budgets. They may carry out research under the direction of scientists or engineers, or set up and operate specialized test equipment to test, diagnose and analyze performance. They may troubleshoot and offer suggestions for improvement and functionality of automated control systems.

Job Outlook

Overall engineering employment is expected to grow by 11 percent over the 2008–18 decade, about as fast as the average for all occupations.

Employers will rely on engineers to increase productivity and expand output of goods and services. New technologies continue to improve the design process, enabling engineers to produce and analyze various product designs much more rapidly than in the past.

Earnings

In the Federal Government, mean annual salaries for engineers ranged from \$81,085 in agricultural engineering to \$126,788 in ceramic engineering in March 2009. As a group, engineers earn some of the highest average starting salaries among those holding bachelor's degrees.

Related Careers

- Electronic Engineer
- Manufacturing Engineer



*Lorain County
Community College*

Real Education. **Real** Jobs. A **Real** Future.

(800) 995-LCCC
www.lorainccc.edu

Automation Engineering Technology Careers

Educational Opportunities in Automation Engineering Technology at LCCC

Lorain County Community College has articulation agreements with colleges and universities including programs offered by Lorain County Community College's University Partnership.

Associate of Applied Science in Automated Engineering Technology – Maintenance/Repair

The Automation Engineering Technologies degree trains students to repair, troubleshoot, and maintain automated equipment commonly used in industry such as robots and computer numerical control equipment (CNC).

Associate of Applied Science in Automated Engineering Technology – Systems Specialist

Integration is a key word in advanced technologies: combining different automated equipment, such as robots, into coordinated systems that complete specific tasks like loading/unloading machines, sorting, inspecting, and assembling parts. The automation engineering technologies program trains students to be systems specialist.

Concentration of abilities for installing and operating robots and other industrial material handling and processing technologies, as well as engineer and program equipment for systems integration.

Other Educational Opportunities in Engineering Technology at LCCC

- Associate of Applied Science Programs
- Alternative Energy Technology – Wind Turbine
- Automation Engineering Technology – Maintenance/Repair
- Automation Engineering Technology – Systems Specialist
- Electronic Engineering Technology – Applied Electronics
- Computer Engineering Technology – Computer and Digital Forensics
- Computer Engineering Technology – Industrial Computing Applications Specialist
- Electronic Engineering Technology – Computer Maintenance and Networking
- Electric Power Utility Technology – Overhead Line Technology
- Electric Power Utility Technology – Substation Technology
- Manufacturing Engineering Technology – Computer Aided Machining

- Manufacturing Engineering Technology – Mechanical Design
- Manufacturing Engineering Technology – Quality Assurance
- Welding Technology

One Year Technical Certificate / Certificate of Proficiency

Short-Term Technical Certificate/ Certificate of Completion

Educational Opportunities at LCCC through its University Partnership

Cleveland State University

Bachelor of Science in Electrical Engineering Technology

The Electrical Engineering Technology is a two-year upper-division program leading to a bachelor of science in electrical engineering technology degree. A bachelor of science in engineering technology graduate is qualified to work in positions requiring the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities, as stated by ABET.

The University of Akron

Bachelor of Science in Automated Manufacturing Engineering Technology

Many manufacturing companies in Ohio and nationwide are providing career opportunities for highly trained professionals in the field of production supervision and management, quality assurance, production control, manufacturing, and plant engineering -- all positions filled by graduates of The University of Akron's bachelor of science in automated manufacturing Engineering Technology program.

Ohio University

Master of Science in Engineering- Engineering Management

The Russ College of Engineering offers a graduate program of study with an emphasis in engineering management. The degree conferred is a Master of Science in Engineering. This program is designed for, but not limited to, individuals holding undergraduate degrees in engineering, chemistry, physics, or other technical degrees.

You will develop the appropriate skills for the management of technology-based companies. The program includes courses emphasizing the skills required of technology managers including coursework in information technology, supply chain management, finance, and statistics. Typically, two courses will be offered each quarter until completion.

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 N Abbe Road
Elyria, OH 44035
www.lorainccc.edu