



Engineering Careers

Engineering is the art of applying scientific and mathematical principles, experience, judgment and common sense to make things that benefit people. Engineers design bridges and important medical equipment, as well as processes for cleaning up toxic spills and systems for mass transit. In other words, engineering is the process of producing a technical product or system to meet a specific need.

Engineers have many different types of jobs to choose from, including research, design, analysis, development, testing, and sales positions. If you are interested in discovering new knowledge, you might consider a career as a research engineer. If you are imaginative and creative, design engineering may be for you. The work of analytical engineers most closely resembles what you do in your mathematics and science classes. If you like laboratory courses and conducting experiments, look into becoming a development engineer. Sales engineering could be a good choice if you have good communications skills and like working with people.

Engineering work is also organized by traditional academic fields of study. The five largest of these are chemical, civil, electrical, industrial, and mechanical engineering. There are also more specialized engineering fields, including aerospace, ocean, nuclear, biomedical, and environmental engineering.

Is a Career in Engineering for You? Where would you like to be in 10 years? Designing spacecraft to explore the Milky Way? Building environmentally safe systems to power cities? Saving lives through new laser applications? Choose a career in engineering and help make these great things happen!

Engineers are problem solvers, people who search for quicker, better, less expensive ways to use the forces and materials of nature to meet tough challenges. Throughout the ages, from the building of the Egyptian pyramids to the landing on the moon, engineers have been the shapers of progress.

There are several websites that give you a better understanding of what it's like to improve the world through engineering, whether an engineering career is right for you, and if so, how to select the appropriate undergraduate program, and how to pay for it. As you plan your future, think of helping to shape the 21st century—consider choosing a career in engineering!

Most engineers specialize. More than 25 major specialties are recognized by professional societies, and the major branches have numerous subdivisions. Some examples include structural, environmental, and transportation engineering, which are subdivisions of civil engineering; and ceramic, metallurgical, and polymer engineering, which are subdivisions of materials engineering. Engineers also may specialize in one industry, such as motor vehicles, or in one field of technology, such as turbines or semiconductor materials.

Job Outlook

Engineers have traditionally been concentrated in slower growing or declining manufacturing industries, in which they will continue to be needed to design, build, test, and improve manufactured products. However, increasing employment of engineers in faster growing service industries should generate most of the employment growth.

Earnings

Earnings for engineers vary significantly by specialty, industry, and education. Variation in median earnings and in the earnings distributions for engineers in various specialties is especially significant. In the Federal Government, mean annual salaries for engineers ranged from \$75,144 in agricultural engineering to \$107,546 in ceramic engineering in 2007.

As a group, engineers earn some of the highest average starting salaries among those holding bachelor's degrees. The average starting salary offers for engineers, according to a 2007 survey by the National Association of Colleges and Employers.



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Educational Opportunities in Engineering at LCCC

Associate of Science

The associate of science is for students who want to pursue bachelor's degrees in engineering by completing the first two or more years at LCCC. Students completing the associate of science degree may transfer with junior (or higher) standing to the four-year university or college of their choice. The associate of science is intended for students who wish to complete the first two or more years of a bachelor's program at LCCC in a program field such as engineering.

Other Opportunities in Engineering

Certificate of Completion

- Electronic Engineering Technology - Computer Maintenance and Networking
- Manufacturing Engineering Technology - Computer-Aided Design
- Manufacturing Engineering Technology - Computer-Aided Machining/Manufacturing Processes

Certificate of Proficiency

- Computer Maintenance and Networking
- Manufacturing Engineering Technology - Computer Aided Design Operator
- Manufacturing Engineering Technology - Computer-Aided Machining Operator
- Manufacturing Engineering Technology - Quality Control
- Manufacturing Engineering Technology - Quality Assurance

Associate of Applied Science

- Automation Engineering Technology - Systems Specialist
- Automation Engineering Technology - Maintenance/Repair
- Electronic Engineering Technology - Applied Electronics
- Electronic Engineering Technology - Computer Maintenance and Networking
- Manufacturing Engineering Technology - Computer Aided Machining
- Manufacturing Engineering Technology - Mechanical Design

Related Educational Opportunities through LCCC's University Partnership

The University of Toledo

Bachelor of Computer Science and Engineering

A bachelor's degree program in computer science and engineering is available from the University Partnership at LCCC. This program, offered by the University of Toledo, covers an interdisciplinary field, which deals with the design, construction, operation and maintenance of computing hardware and software.

Bachelor of Science - 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.

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

This program is designed for, but not limited to, individuals holding undergraduate degrees in engineering, chemistry, physics, or other technical degrees.

About Lorain County Community College

Lorain County Community College is one of Ohio's leading colleges delivering distance learning education via the Internet. The College has expanded its delivery of its programs and services through the opening of the Learning Center at St. Joseph Community Center in Lorain, the LCCC Wellington Center, Lorain County Growth Partnership in downtown Elyria and the Midpoint Campus Center in Brunswick. Partnerships with Lorain County's K-12 school districts have also led to important developments for the community. More than 1300 high school students participate in the Post Secondary Enrollment Options program by enrolling in LCCC classes, making LCCC the state's largest community college provider of PSEO. More than 35 percent of Lorain County's top high school graduates choose to attend LCCC.

LCCC is one of Ohio's fastest growing colleges because of the variety of learning opportunities it provides. Students can choose from more than 80 educational programs. Students can complete the first half — and sometimes more — of a bachelor's degree. The University Partnership brings eight universities to the LCCC campus offering 37 bachelor's and master's degree programs. With the University Partnership at LCCC, the College partners with the state's finest universities to bring the best in bachelor's and master's degree programs right to the LCCC campus. Students can earn degrees that get them jobs immediately. Students can upgrade, retrain and improve current life skills. Students can learn in the classroom, at home and over the Internet.

LCCC offers a complete college experience. We understand that there's more to college life than attending classes. We offer many of the programs, sports, and activities available at large four-year universities and colleges. But, students will not have to stand in line behind juniors and seniors in the classroom, on the playing field, or in leadership positions. Students can immediately act in a play, sing in a musical group, serve as editor for the college newspaper, plan social activities, compete on the playing field, or set policy as a student government member.

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. Classes are small. Individual attention is plentiful.

An LCCC education, prepares students for real jobs and real futures. To find out more, call (800) 995-LCCC or visit LCCC's Connections Center, the Learning Center at St. Joseph Community Center in Lorain, the LCCC Learning Center in Wellington, the Lorain County Growth Partnership in downtown Elyria or the Midpoint Campus Center in Brunswick for all of your enrollment service needs, including admissions, registration, advising and counseling.



**Lorain County
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**The University
Partnership**

of Lorain County Community College

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