

Engineer Your Career.

Do you love math
or science?

Do you like figuring out
how things work?

**Do you want to make the
world a better place?**



Become an engineer.



**ENGINEERS
FOUNDATION OF OHIO**

Advancing Engineering Education in Ohio

Engineers make the future.

Design new and innovative infrastructure like airports, roads, and bridges to help people and goods get from place to place safely and efficiently.

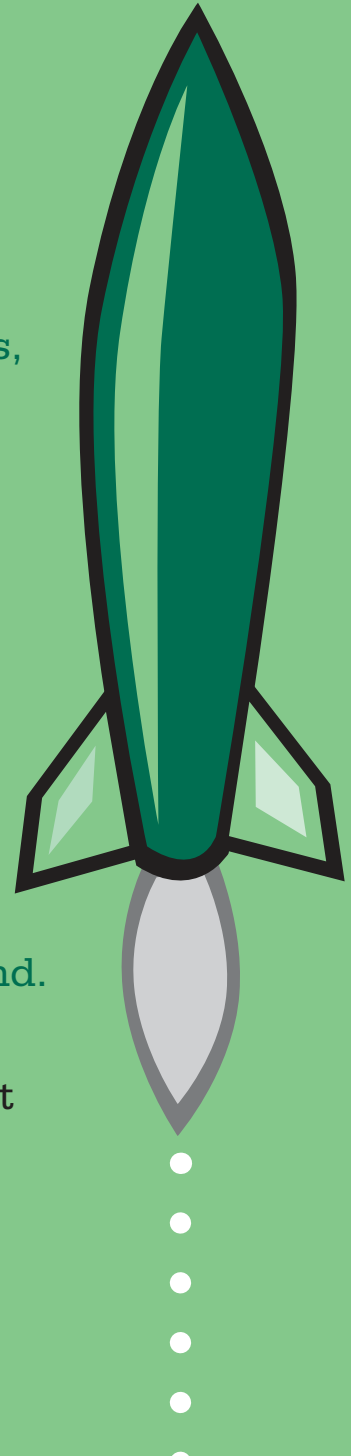
Develop medical treatments that could cure cancer or help paralyzed people walk again.

Create computer programs that train soldiers, medical personnel, and emergency responders through virtual reality.

Discover ways to provide cheap, clean, and plentiful energy and drinking water to even the most remote spots on the planet.

Build aircraft that carry humans to Mars — and beyond.

Make buildings that are earthquake-proof, cars that protect passengers in accidents, or gadgets that don't break when you drop them.



**ENGINEERS
FOUNDATION OF OHIO**

Advancing Engineering Education in Ohio

No matter what you like to do, you can make a difference.

- Researchers** develop new scientific principles and methods.
- Engineers** apply science and math to solve specific problems in our world.
- Technologists** work alongside engineers to implement engineering ideas.
- Technicians** solve technical problems — building or setting up equipment, running tests, monitoring quality, and improving efficiency.
- Skilled craftspeople** build prototypes for testing or production machinery and otherwise do hands-on work.

To major in engineering in college, take these classes in high school:

Math	3 years
Science	3 years
English	4 years
Social Studies	3 years
Foreign Language	2 years
Art	1 year

The kind of degree you need depends on what you want to do.

- An **associate's degree** is required for most technician and technologist jobs. It takes about two years at a technical or community college or four years at a university.
- A **bachelor's degree** is required for most engineering jobs. It takes 4 or 5 years at a college or university.
- A **master's degree** may be required by some employers. It takes another 1 or 2 years after college.
- A **doctoral degree** qualifies you to teach or conduct research. It takes 3 or 4 years after earning a master's degree.

You'll get a great salary.

On average, engineers make more money per year than those in most other occupations. The average salary for U.S. engineers with 1 year of experience is \$55,730. (Average U.S. salary for all occupations at all experience levels is \$45,230.)

What you make will depend on which branch of engineering you choose. Here are the average salaries for all U.S. engineers in 2011:

Aeronautical & Aerospace \$105,488

Aeronautical engineers design and build airplanes and other vehicles that stay in Earth's atmosphere. Aerospace engineers — rocket scientists! — design and build spacecraft.

Chemical * \$114,996

Chemical engineers apply chemistry and physics to create new substances and materials.

Civil * \$85,151

Civil engineers find ways to make better roads, bridges, railways, airports, and other vital infrastructure.

Control Systems \$101,206

Control systems engineering look at how mechanisms and systems work to make them more effective and efficient.

Electrical * \$102,652

Electrical engineers create the circuits and other systems that power our homes, cars, airplanes, computers, and smart devices.

Environmental \$90,246

Environmental engineers focus on using natural resources such as air, water, and land safely and sustainably.

Industrial * \$113,275

Industrial engineers use math and physics to make systems of all kinds — manufacturing, industrial, social — more effective and efficient.

Manufacturing \$94,318

Manufacturing engineers study how to make the best machines, tools, equipment, and processes.

Mechanical * \$100,404

Mechanical engineers make new and better machines, from cars and bicycles to factory equipment and home appliances.

Structural \$85,902

Structural engineers figure out how to make structures (not just buildings, but also machines, medical equipment and cars) carry loads without breaking.

*Areas of study offered at Ohio University's Fritz J. and Dolores H. Russ College of Engineering and Technology

Source: NSPE Engineering Income & Salary Survey, 2011



2010 - 2020

Projected increase in employment
of biomedical engineers, 2010–2020

U.S. Department of Labor,
Bureau of Labor Statistics

+25
MAJOR
+18
MINOR

More than 25
major engineering
specialties and
85+ minor ones
are recognized by
professional societies

Facts & Figures

\$55,730

Average salary for U.S.
engineers with 1 year
of experience

NSPE Engineering Income &
Salary Survey, 2011

2.3 MILLION

Total architecture and engineering jobs
in the U.S. during 2010

U.S. Department of Labor, Bureau of Labor Statistics

\$87,979

Average salary for all
engineers in Ohio

NSPE Engineering
Income & Salary Survey, 2011



Projected growth
in architectural
and engineering
labor force,
2010–2020

U.S. Department of Labor,
Bureau of Labor Statistics

Types of engineering degree
programs offered by Ohio
colleges and universities

Types of engineering
technology degree programs
offered by Ohio colleges
and universities

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Get a great engineering education in Ohio.

18 Ohio colleges and universities offer nationally and/or internationally accredited engineering degree programs. Visit <https://www.abet.org/accreditation/find-programs/>

Engineering Degrees Offered by Ohio Universities

For the most accurate degree information, check with individual schools.

	Aeronautical/ Aerospace/ Astronautical	Aviation	Biomedical/ Bioengineering	Chemical	Civil	Computer/ Computer Science	Electrical	Engineering Mgmt
Air Force Institute of Technology						M*	M*	M*
University of Akron			B*	B*, M, D	B*, M, D	B*, M, D	B*, M, D	M
Bowling Green State University		B				B, M		
Case Western Reserve University	B*		B*	B*, M, D	B*, M, D	B*, M, D	B*, M, D	M
Cedarville University						B*	B*	
Central State University					B	B		
University of Cincinnati	B*, M, D		B*, M, D	B*, M, D	B*, M, D	B*, M, D	B*, M, D	
Cleveland State University			M, D	B*, M	B*, M	B*, M	B*, M	
University of Dayton	M, D		M	B*, M	B*, M	B*	B*, M, D	M
Kent State University	B	B				B, M, D		
Marietta College								
Miami University		B	M	B*		B*, M	B*	
Ohio Northern University					B*	B*	B*	
The Ohio State University	B*, M, D	B	M, D	B*, M, D	B*, M, D	B*, M, D	B*, M, D	
Ohio University		B	M	B*, M, D	B*, M, D	B*, M, D	B*, M, D	M
University of Toledo			B*, M, D	B*	B*, M	B*, M	B*, M	
Wright State University			B*, M			B*, M, D	B*, M	
Youngstown State University				B*, M	B*, M	B, M	B*, M	

Key:

- B Bachelor's degree
- B* ABET accredited bachelor's degree
- M Master's degree
- D Doctoral degree

ABET, Ohio Board of Regents, school Web sites

Engineering Degrees...continued

For the most accurate degree information, check with individual schools.

	Engineering Mechanics	Environmental	Industrial & Systems	Integrated/ General	Materials	Mechanical	Specialty (see list)
Air Force Institute of Technology				D		B*, M	
University of Akron							
Bowling Green State University							
Case Western Reserve University	M, D			B, M	B*, M, D	B*, M, D	B*, M, D
Cedarville University						B*	
Central State University							B*
University of Cincinnati	M	B*, M, D		M	B*, M, D	B*, M, D	M, D
Cleveland State University	M	M	M	D		B*, M	M
University of Dayton	M				M, D	B*, M, D	
Kent State University							B*
Marietta College							
Miami University						B*	B*
Ohio Northern University						B*	
The Ohio State University		B*	B*, M, D		B*, M, D	B*, M, D	B*, M, D
Ohio University			B*, M, D			B*, M	
University of Toledo		M, D		M		B*, M	
Wright State University			B*, M, D	D	B*, M	B*, M	B*, M
Youngstown State University			B*, M		B, M	B*, M	

Specialty degrees:

Case Western Reserve University: Ceramics, M, D;
Fluid & Thermal, M, D; Engineering Physics, B*
Central State University: Manufacturing, B*
University of Cincinnati: Metallurgical, M, D
Cleveland State University: Software, M
University of Dayton: Renewable & Clean Energy, M
Marietta College: Petroleum, B*

Miami University: Manufacturing, B*; Paper Science, B*
The Ohio State University: Agricultural, B*; Nuclear, M, D;
Surveying, B, M, D; Welding, B*, M, D
Wright State University: Engineering Physics, B*;
Human Factors, M; Renewable & Clean Energy, M

Engineering Technology Degrees Offered by Ohio Colleges and Universities

For the most accurate degree information, check with individual schools.

	CAD/CADD Drafting	Civil	Construction	Computer	Electrical/ Electronics	Environmental/ Safety/ Hazardous Materials	Industrial/ Manufacturing	Manufacturing	Mechanical	Power Plant	Surveying	Specialty (see list)
University of Akron (inc. branches)	A, C	B*	A, B*, C		A, B*, C		A, B	C	A, B*		A, B*, C	
Belmont Technical College		A		A	A	A	A		A	A		
Bowling Green State University (inc. Firelands)			B	A	A		A, B		A, B			
Central Ohio Technical College	A				A		A					
Central State University							B					
University of Cincinnati (inc. branches)				A, B*, C	B*	A, B*, C			B*			A, B*
Cincinnati State Technical & Community College			A	A	A	A	A		A	A		A
Clark State Community College	A						A		A			
Cleveland State University					B*				B			
Columbus State Community College		A			A				A		A	A
Cuyahoga Community College (inc. branches)			A	A	A		A		A			
University of Dayton				A, B*	B*		B*		B*			
Eastern Gateway Community College	A				A		A		A			
Edison State Community College	A			A	A		A		A			
University of Findlay	A					B*						
Hocking College			A		A	A						A
James A. Rhodes State College				A	A	A	A	A	A			
Kent State University (inc. branches)					A	A	A	A	A			
Lakeland Community College		A		A	A	A	A		A			
Lorain County Community College	A		A		A	A	A		A			A
Marion Technical College					A	A	A		A			
Miami University (inc. branches)					A	B*	B		A			A, B*
North Central State College	A				A		A	A	A			
Northwest State Community College	A, C			A	A	A	A, C		A			
Ohio University (inc. branches)	A				A	A	A, B					A, B, B*
Owens State Community College (any)	A			A	A	A, C			A		A	
University of Rio Grande	A			A	A		A			A		A
Shawnee State University	A				A		A					A
Sinclair Community College		A			A	A	A		A		A	A
Southern State Community College	A			A	A							
Stark State College of Technology	A	A, C		A	A	A	A		A	A		A, C
Terra State Community College					A		A	A	A			
University of Toledo			B*	B*	B*				A, B			
Washington State Community College	A			A	A		A		A			
Wright State University (inc. branches)	A						A					B*
Youngstown State University	A	A, B*	A, B*		A, B*				A, B*			
Zane State College					A	A			A			

Key:

- A Associate's degree
- B Bachelor's degree
- B* ABET accredited bachelor's degree
- C Professional certificate

ABET, Ohio Board of Regents, school Web sites

Specialty degrees:

- University of Cincinnati: Aviation, A; Information, B*
- Cincinnati State Technical & Community College: Aeronautical/Aerospace, A
- Columbus State Community College: Aeronautical/Aerospace, A
- Hocking College: Alternative Energy, A; Military Technology, A
- Lorain County Community College: Alternative Energy, A
- Miami University: Electromechanical, B*; Information, A
- Ohio University: Aviation, A, B; Industrial Hygiene, B*
- University of Rio Grande: Information, A
- Shawnee State University: Electromechanical, A
- Sinclair Community College: Aviation, A
- Stark State College of Technology: Alternative Energy, A, C
- Wright State University: Information Systems, B*

Ohio Universities with Engineering Degree Programs

Air Force Institute of Technology

Graduate School of Engineering
& Management
2950 Hobson Way
WPAFB, OH 45433-7765
937-255-6565
www.afit.edu/en/

University of Akron

College of Engineering
Auburn Science & Engineering Center
Akron, OH 44325-3901
330-972-6978
www.uakron.edu/engineering/

Case Western Reserve University

The Case School of Engineering
10900 Euclid Ave
Nord Hall 500
Cleveland, OH 44106-7220
216-368-4436
<http://engineering.case.edu/>

Cedarville University

Department of Engineering
and Computer Science
251 N. Main St.
Cedarville, OH 45314
937-766-7680
www.cedarville.edu/Academics/Engineering-and-Computer-Science.aspx

Central State University

College of Science & Engineering
1400 Brush Row Rd.
Wilberforce, OH 45384
(937) 376-6153
www.centralstate.edu/academics/cse/

University of Cincinnati

College of Engineering & Applied Science
2901 Woodside Drive
Cincinnati, OH 45221-0018
513-556-2933
www.ceas.uc.edu/html

Cleveland State University

Fenn College of Engineering
2121 Euclid Ave., SH 104
Cleveland, OH 44115-2425
216-687-2555
www.csuohio.edu/engineering

University of Dayton

School of Engineering
300 College Park
Dayton, OH 45469-0228
937-229-2736
www.udayton.edu/engineering

Kent State University

College of Aeronautics & Engineering
800 E. Summit St.
Kent, OH 44242
330-672-2892
<https://www.kent.edu/engineering>

Marietta College

Department of Petroleum Engineering
215 Fifth St
Marietta, OH 45750
740-376-4775
www.marietta.edu/departments/Petroleum_Engineering/

Miami University

School of Engineering & Applied Science
510 E. High St., 106 Benton
Oxford, OH 45056
513-529-0700
www.eas.muohio.edu/

University of Mount Union

Engineering Department
1972 Clark Ave
Alliance, OH 44601
330-823-3248
<https://www.mountunion.edu>

Mount Vernon Nazarene University

Engineering Department
800 Martinsburg Road
Mount Vernon, OH 43050
740-397-7000
<https://mvnu.edu/on-campus/undergraduate/engineering/>

Muskingum University

Engineering Department (122 Boyd Science Ctr.)
10 College Dr, PO Box 1837
New Concord, OH 45810
740-826-6137
<https://www.muskingum.edu/academics/engineering>

Ohio Northern University

T.J. Smull College of Engineering
Biggs Engineering Building
525 S. Main St
Ada, OH 45810
419-772-2371
www.onu.edu/academics/engineering

The Ohio State University

College of Engineering
142 Hitchcock Hall
2070 Neil Ave
Columbus, OH 43210
614-292-2836
<https://engineering.osu.edu/>

Ohio University

Russ College of Engineering & Technology
155 Stocker Engineering Center
Athens, OH 45701-2979
740-593-1474
www.ohio.edu/engineering

University of Toledo

College of Engineering
Nitschke Hall, MS 310
1610 N. Westwood
Toledo, OH 43606-3390
419-530-8000
www.eng.utoledo.edu/

Wright State University

College of Engineering & Computer Science
405 Russ Engineering Center
Dayton, OH 45435
937-775-5001
www.cs.wright.edu/

Youngstown State University

College of STEM
2200 Moser Hall
Youngstown, OH 44555-0001
330-941-3009
<https://www.yzu.edu/stem>



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**Russ College of Engineering
and Technology**

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