

YOU'RE READY TO BE A BEAR. WHAT SHOULD YOU DO NEXT?

Visit in person or take a virtual tour

We'd love to welcome you to campus. You can see where you will be learning, living and hanging out. We also offer a virtual tour online. Any time you want, you can explore 360-degree views of indoor and outdoor sites. You will be able to go inside academic buildings and campus landmarks.

 MissouriState.edu/Visit

Apply for admission

The earlier you apply, the better your chances to be considered for the maximum amount of financial aid. Everything you need is online.

 MissouriState.edu/Apply

Have any questions?

Contact the cooperative engineering program.

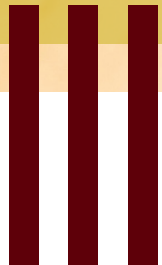
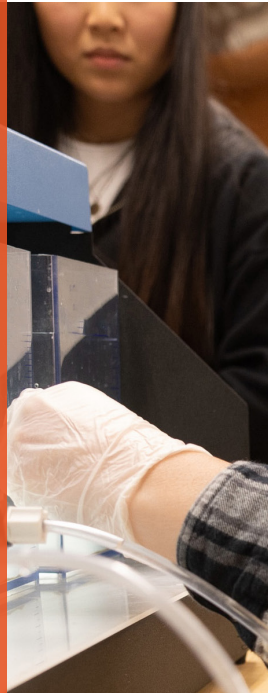
 MissouriState.edu/Engineering

 Engineering@MissouriState.edu

 417-837-2339

We're social

 [@Engineering_MSU](https://twitter.com/Engineering_MSU)



**Missouri
State.**

COOPERATIVE
ENGINEERING PROGRAM



**IT'S TIME
TO RESEARCH
YOUR FUTURE.**

MAKE YOUR MISSOURI STATEMENT.

MissouriState.edu/Engineering




Engineers take on big challenges. They make a difference for society. They are involved in everything from designing safe buildings to minimizing pollution and making sure we have power. The bottom line: Engineers solve problems. Are you ready to develop your own solutions?

Our unique cooperative program

Missouri State offers engineering in cooperation with the Missouri University of Science and Technology. This means:

- MSU offers the nonengineering courses.
- S&T offers the engineering courses.
- All of the classes are taught on the Missouri State University campus.
- Your diploma will come from Missouri S&T.



**We give you
the highest level
of training.**

Each option for the cooperative engineering program is accredited by ABET, a nonprofit, nongovernmental accrediting agency.

That means you can be sure your program will meet the quality standards of the profession.

Your program options

We offer three degrees: civil, electrical and mechanical engineering. We also offer a pre-engineering program. Each of these is open to any Missouri State student.

Civil engineering: These professionals plan, design and supervise construction of public projects. Their work may include bridges, buildings, dams, highway interchanges and other large-scale ventures. In civil engineering, you may study:

- Environmental engineering related to hazardous waste, pollution, water supply and maintaining a safe environment.
- Hydraulics and hydrology related to water resources, flood control, predicting rainfall and runoff and the transportation of fluids.
- Geotechnical engineering related to the design of building foundations and the bearing capacities of soils.
- Structural analysis and design related to bridges, buildings, port facilities and lock-and-dam facilities.
- Transportation systems related to the movement of people and cargo from place to place, the design of airports and highways, and traffic studies to maintain efficient flows.
- Construction engineering including construction techniques, cost estimating and quality assurance. This also includes the use and understanding of materials such as asphalt, concrete, wood, steel and more.

Electrical engineering: These engineers may design new and better electronics, such as cell phones, computers and circuit boards. They also may design power plants. They channel natural resources into heating, lighting, computing, communication methods and more. In electrical engineering, you can study a broad spectrum of course work or emphasize in one area. Emphasis areas include:

- Circuits and the application of basic electrical elements.
- Communications-signal processing.
- Computer engineering.
- Controls and systems used to automatically monitor and regulate devices, machines and systems.
- Electromagnetics.
- Optics and devices.
- Generators, transformers, distribution systems, high-voltage design methods and the economic transmission of energy.

Mechanical engineering: These professionals may design power plants, engines, cars, aircraft, robots and other machinery. They may set up and automate production facilities. If you study mechanical engineering, you may learn how to:

- Analyze a problem to see how a mechanical device might help solve it.
- Design or redesign devices and create blueprints so devices can be built.
- Develop and test prototypes, analyze test results and change designs as needed.
- Oversee the manufacturing process.
- Design power-producing machines such as electric generators, internal-combustion engines and steam and gas turbines.
- Design machines such as refrigerators and air-conditioning units.
- Develop industrial-production equipment, including robots used in manufacturing.
- Design machines used inside buildings, such as elevators and escalators.
- Develop machines and tools for other engineers.

Pre-engineering program: If you want to pursue a discipline other than civil, electrical or mechanical engineering, we offer this curriculum.

Why you should choose MSU for this program

- **You will find mentors.** Local engineers are actively involved in this program, helping with student groups or teaching courses.
- **You can have real-world experiences.** You will find a strong emphasis on placing you in internships, most of which are paid. These often lead to full-time positions after students graduate.
- **You will have all the resources you need.** Some of the facilities and equipment you may experience:
 - A state-of-the-art home for the engineering department in the Plaster Center, a building devoted to innovation and business.
 - A Power Lab where you can learn about electric motors, transformers and the electrical power grid.
 - A Soils Lab where you can learn how to test the properties of soil — a crucial step in building design.
 - Flume equipment that teaches you about the flow of rivers and levies for flood control.
- **You can meet friends and network.** We have organizations just for engineering students. You can learn outside of the classroom, meet professionals, help in the community and have fun.
- **You can meet your next mentor.** Your faculty members will be active professionals. Your advisor will be one of the engineering faculty members on Missouri State's campus.



CAREER OUTLOOK

4%
expected growth in all
engineering occupations
through 2031

Source: U.S. Bureau of Labor Statistics

**Median national starting salary
for those with a bachelor's
degree in civil engineering:**

\$69,000

91,300:
projected number of new jobs
related to engineering and
architecture to be added by 2031

Source: U.S. Bureau of Labor Statistics

**Median national starting salary
for those with a bachelor's
degree in electrical engineering:**

\$78,500

**Predicted most in-demand
engineering services:**

- Infrastructure.
- Renewable energy.
- Oil and gas extraction.
- Robotics.

Source: U.S. Bureau of Labor Statistics

**Median national starting
salary for those with a
bachelor's degree in
mechanical engineering:**

\$79,000

Source for all salaries: National Association of Colleges and
Employers winter 2021 salary survey

What can you do with this degree?

Entry-level job titles include:

- Automotive engineer
- Civil engineer
- Design engineer
- Environmental engineer
- Geotechnical engineer
- Hydraulic engineer/
hydrological engineer
- Manufacturing engineer
- Mechanical engineer
- Power-plant engineer
- Product-design engineer
- Project engineer
- Quality-control engineer
- Structural engineer
- Transportation engineer

Recent graduates have gone on to work at:

- 3M
- Anderson Engineering
- Associated Electric Cooperative
- CHN Industrial Reman
- City of Springfield
- CJW Consultants
- CMT Engineering
- Digital Monitoring Products
- ESC Engineering
- John Deere Reman
- Missouri Department of Transportation
- Olsson Engineering
- Palmerton & Parrish, Inc.
- Paul Mueller
- Siemens
- Southwest Power
- Springfield City Utilities
- SRC
- Toth & Associates



You can join engineering contests and competitions

Do you want to put your classroom learning into practice and have fun? Be a part of a design team! Our student teams enter contests that help them put engineering principles into practice. Get ready to design an exciting experience! Students have worked on:

- Formula Society of Automotive Engineers (SAE) race-car competitions.
- American Society of Civil Engineers (ASCE) steel-bridge competitions.



Academic programs

What types of classes will you take?

Find descriptions online:

MissouriState.edu/Engineering

UNDERGRADUATE

Majors

Civil Engineering
Electrical Engineering
Mechanical Engineering

You can be part of our annual research day



All undergraduate students in the College of Natural and Applied Sciences can participate in CNAS Undergraduate Research Day. You could submit your work, which is then displayed and judged. Cash awards are given for the judges' top picks!



STUDENT ORGANIZATIONS

- American Society of Civil Engineers student chapter
- Institute of Electrical and Electronics Engineers (student chapter aligned with the southwest Missouri section)
- Missouri Society of Professional Engineers (student chapter closely aligned with the Ozarks chapter)
- Ozarks Chapter Institute of Transportation Engineers
- Society of Automotive Engineers



MEET MISSOURI STATE

Missouri State University is a public university system with an enrollment of more than 20,000 students who come from around the state and the world. The main campus is in Springfield, Missouri. There are three other physical campuses, two in Missouri — West Plains and Mountain Grove — and one in Dalian, China.

What makes Missouri State different? We're a big state university, but it doesn't feel that way. Just visit our campus. You'll experience a close-knit, friendly community.

When you're here, you're a Citizen Bear. You'll learn how to see the world differently, and follow your path with integrity. When you graduate, you're prepared to be a global citizen in the truest sense of the word. You'll bring more to your career and your community.

You'll be ready to Make Your **Missouri Statement**.

**You make your statement.
We'll put the cost within reach.**

Missouri State's philosophy: A quality college education should be within the financial reach of all students. Our total costs are lower than most other universities in the state and well below the national average. We invite you to compare.

If you are from outside Missouri and will be an entering freshman or transfer student, you may qualify for a full waiver of nonresident fees if you meet ACT, GPA or class-rank qualifications.



WHY IS MISSOURI STATE A GREAT VALUE?

Find out! MissouriState.edu/Costs