

## Life After Graduation

Civil engineers conceive, plan, design, construct, operate, and maintain facilities and systems that serve the basic needs of society. These include buildings, bridges, water tanks, transmission lines, pipelines, highways, railways, airports, harbors, water and wastewater systems, dams and power plants. They also help protect the environment by working to prevent pollution of our air, land and water.

Because civil engineers are involved in every aspect of creating and maintaining our society's infrastructure, the job market for them is strong and stable. They work for industrial and manufacturing firms; structural, environmental, geotechnical and transportation consulting firms; architectural and engineering firms; construction companies; local governments; state and federal agencies; departments of transportation; and industries such as oil, aircraft, shipbuilding, electric utility, communication, chemical and paper.

## Scholarships

The College of Engineering and the Department of Civil Engineering provide numerous scholarship opportunities to students at every stage of their academic career. While no application is required for most university and college-wide scholarships, the deadline for civil engineering departmental scholarship applications is Jan. 15.

For information about these offerings, visit us on the Web at [www.eng.auburn.edu/scholarships](http://www.eng.auburn.edu/scholarships)

## The Auburn Advantage

Auburn University has provided instruction, research and outreach to benefit the state and nation for more than 150 years and is among a distinctive group of universities designated as Land, Sea and Space Grant institutions. Auburn makes a nearly \$5 billion economic contribution to the state each year, has more than 250,000 graduates and provides 130 degree programs to more than 24,000 graduate and undergraduate students.

## Contact Us

Dr. Michael Stallings, Department Head  
Department of Civil Engineering  
238 Harbert Engineering Center  
Auburn, AL 36849  
334.844.4320  
stallmj@auburn.edu  
[www.eng.auburn.edu/civil](http://www.eng.auburn.edu/civil)

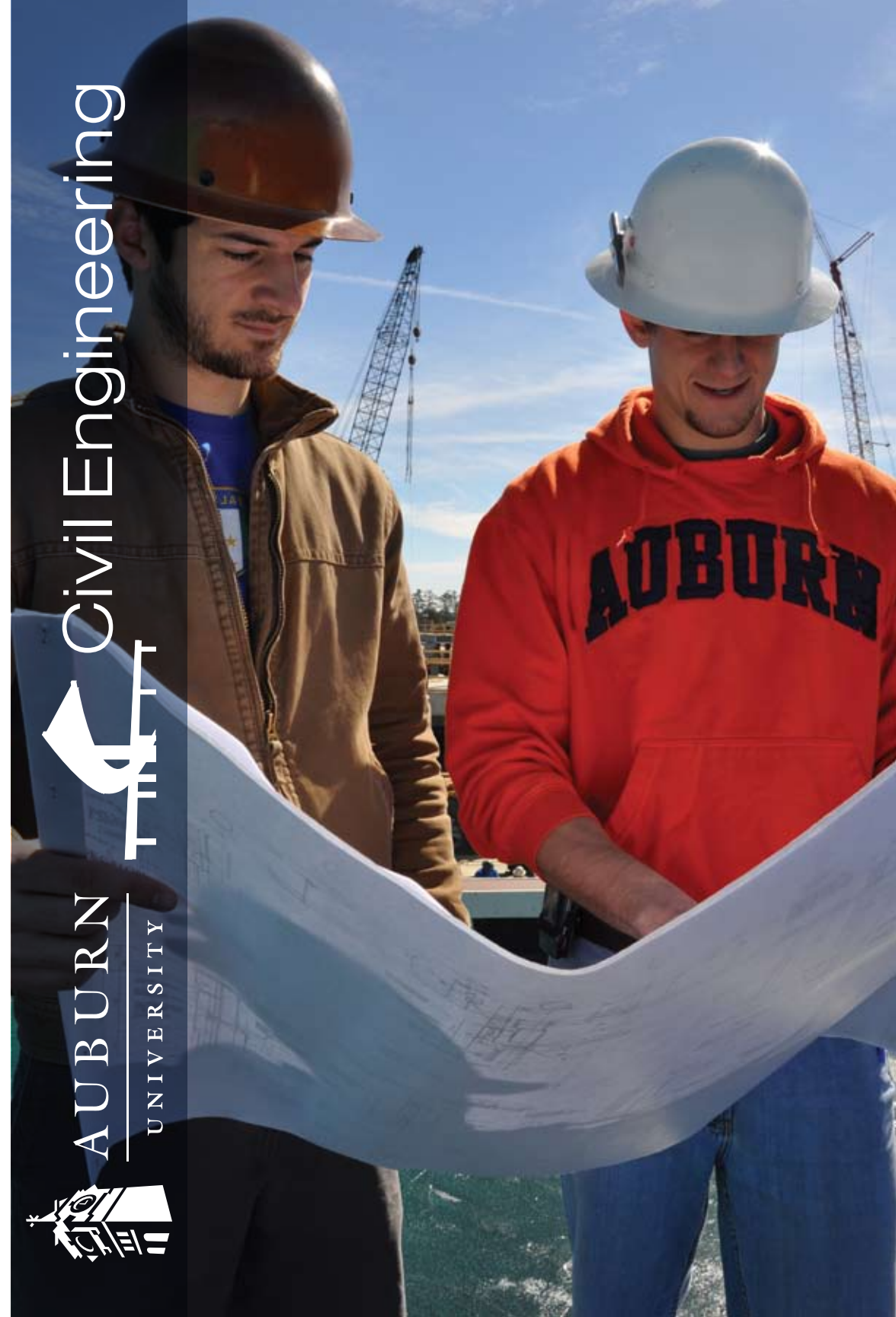
Office of Engineering  
Student Services  
1210 Shelby Center  
Auburn, AL 36849  
334.844.4310  
engineering@auburn.edu  
[www.eng.auburn.edu/ess](http://www.eng.auburn.edu/ess)



AUBURN UNIVERSITY

SAMUEL GINN  
COLLEGE OF ENGINEERING

[www.auburn.edu](http://www.auburn.edu)



Civil Engineering  
AUBURN UNIVERSITY

## Welcome to the Department of Civil Engineering

From the roads and bridges on which we travel to the clean water and soil on which we depend, civil engineering is a vital component of our everyday lives. As part of the oldest and broadest of all engineering disciplines, civil engineers design and construct infrastructure such as airports, buildings, bridges, dams, roads and sanitation systems. These professionals can be found in rural and urban areas working for large and small companies, as well as local, state and federal governments.

Auburn University's Department of Civil Engineering, one of nine departments in the Samuel Ginn College of Engineering, is the largest civil engineering program in Alabama. Each year, we graduate almost half of the state's civil engineers and are ranked among the nation's top institutions in the number of undergraduate degrees awarded annually. Auburn's civil engineering program is known for its comprehensive and challenging curriculum, strong and dedicated faculty, outstanding teaching and for the achievements of its graduates.

## Undergraduate Curriculum

- ▶ Bachelor of Civil Engineering
- ▶ Bachelor of Science in Environmental Science

The Department of Civil Engineering offers required and elective courses in the following specialty areas of civil engineering:

### Construction Engineering and Management

Construction consumes more basic and finished materials than any other industry. The construction of a highway, power plant, office building or concrete dam requires an in-depth understanding of economic principles, design fundamentals, material properties and management techniques.

### Environmental Engineering

From properly disposing of waste to minimizing the damaging effects of human activities, environmental engineers help protect people and the environment. They are involved with issues such as air and water quality, excessive noise and vibration, harmful radiation, hazardous waste and solid waste management.



### Geotechnical Engineering

Working with the earth to satisfy the needs of society, geotechnical engineers build from the ground down, creating foundations for structures such as bridges, buildings, roads and dams — working closely with environmental and hydraulic engineers to protect groundwater from pollution.



### Hydraulic Engineering

Hydraulic engineering is the application of principles of fluid mechanics to urban drainage design, flood control and mitigation, water resources planning, sediment transport and the protection or restoration of surface and groundwater resources. Engineering hydrology quantifies the distribution and movement of water in the environment.

### Pavements and Materials Engineering

Engineers in the pavements and materials area are responsible for roadway design, construction, maintenance and rehabilitation. Pavements — an integral component of any transportation infrastructure — combine essential elements of materials, geotechnical and structural engineering to produce facilities that connect our country from coast to coast.

### Structural Engineering

All structures — including buildings, bridges, stadiums and industrial facilities — must be designed to efficiently resist the forces exerted by humans and nature. Structural engineers create new designs and evaluate and improve the load resisting capabilities of existing structures, such as buildings subjected to hurricane or earthquake damage. They must be knowledgeable about the behavior of various structural systems, the sources, magnitudes and frequencies of applied loads and material properties, design methods and governing design codes.

### Transportation Engineering

Through the movement of people and goods, our transportation system greatly influences our quality of life. Transportation engineers plan, design, construct and operate systems for all modes of transit. Students address the topics of traffic safety, parking, highway capacity, traffic signalization, geometric design surveying and mapping and transportation models.

## Research and Laboratories

The Department of Civil Engineering provides its students with opportunities for research in many different aspects of their respective field. Broad faculty expertise, combined with the department's insistence on quality teaching and state-of-the-art equipment, ensures that students attain a thorough understanding of civil engineering. Research centers and labs include:

- ▶ National Center for Asphalt Technology
- ▶ Highway Research Center
- ▶ Alabama Technology Transfer Center
- ▶ Auburn University Environmental Institute
- ▶ Structural Engineering Laboratories
- ▶ Geotechnical Engineering Laboratories
- ▶ Environmental Engineering Laboratories
- ▶ Concrete Materials Laboratory
- ▶ Asphalt and Materials Laboratories

## Extracurricular Opportunities

Auburn Engineering students can participate in a variety of activities beyond the classroom, gaining experience with teamwork and project management. Along with various engineering-focused student competition teams, civil engineering students are encouraged to participate in campus organizations such as:

- ▶ American Society of Civil Engineers
- ▶ Institute of Transportation Engineers
- ▶ Chi Epsilon honor society
- ▶ National Society of Black Engineers
- ▶ Society of Women Engineers



For more information, visit [www.eng.auburn.edu/organizations](http://www.eng.auburn.edu/organizations)