Accelerated Degree Programs

Accelerated programs are designed to allow highly qualified students to count 9 credit hours of their undergraduate degree towards their graduate degree program. This is achieved by students completing graduate level courses (6000-level and 8000-level) and receiving dual credit for equivalent undergraduate courses (4000-level and 4990 respectively). Students must apply and be admitted to an accelerated program prior to enrolling in the graduate level classes. In general at the time a student applies to an accelerated program, the student must:

- Be enrolled at Mississippi State University in one of the undergraduate degree programs in the Bagley College
- Have completed a minimum of 60 credit hours towards a bachelor’s degree (may vary by program)
- Have an overall GPA of 3.5 or higher for all undergraduate work

Bachelor’s Degrees

- Aerospace Engineering
- Aeronautics
- Astronautics
- Biological Engineering
- Biomedical Engineering
- Chemical Engineering
- Biomedical Engineering Practice
- Chemical Engineering R&D
- Civil Engineering
- Environmental Engineering
- Computer Engineering
- Computer Science
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering
- Petroleum Engineering
- Software Engineering

Master’s Degrees

- Aerospace Engineering
- Applied Physics
- Biological Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science
- Cyber Security & Operations
- Electrical & Computer Engineering
- Industrial Engineering
- Master of Engineering
- Military Engineering
- Mechanical Engineering

Doctoral Degrees

- Aerospace Engineering
- Biological Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science
- Cyber Security & Operations
- Electrical & Computer Engineering
- Industrial Engineering
- Master of Engineering
- Mechanical Engineering
- Petroleum Engineering
- Software Engineering

Certificate Programs

- Automotive Engineering
- Computational Biology
- Cybersecurity
- Cyber Operations
- Information Assurance
- Energy
- Entrepreneurship
- Materials

Typical Minors

- Business
- Computer Science
- Electrical Engineering
- Global Engineering Leadership
- Industrial Engineering
- Leadership Studies
- Mathematics
- Software Engineering

*also available online

BAGLEY COLLEGE OF ENGINEERING

4700+
STUDENT ENROLLMENT

ENROLLMENT BY GENDER

270+
ENGINEERING COMPANIES RECRUIT BCOE STUDENTS

GROWTH THROUGHOUT THE YEARS

2017-2018 DEGREES AWARDED

Your First Year Here

The Engineering Living Learning Community (ELLC) provides first-year engineering students the opportunity to contribute to a supportive community that encourages academic, professional, and personal growth. The community also helps students develop essential skills for a successful career in engineering or computer science.

The residence halls include study areas, designed to both create a sense of community and provide a social support network for first-year engineering students. On-site academic advising gives students the ability to seek guidance about academic and career options in a familiar surrounding. Also, in the fall, the engineering student council hosts an organizational fair in the ELLC, introducing freshman to the various opportunities and organizations that the Bagley College offers.
Aerospace engineering is the branch of engineering concerned with the design, development, testing, and production of aircraft and related systems that fly within the Earth’s atmosphere (aeronautics) and of spacecraft, missiles, rocket propulsion systems and other equipment operating beyond the Earth’s atmosphere (astronautics).

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Aerospace Engineering
  - Aeronautics
  - Astronautics
  - M.S. Aerospace Engineering
  - Ph.D. Aerospace Engineering

DEPARTMENTS

**AEROSPACE ENGINEERING**

AE.MSSTATE.EDU

**AGRICULTURAL & BIOLOGICAL ENGINEERING**

Biological engineering offers the same foundational knowledge as any other engineering discipline plus additional knowledge in chemistry, biological sciences, biochemistry and microbiology. Biomedical engineering combines engineering principles and biomedical sciences to solve problems that deal with the human body and health.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Biological Engineering
- B.S. Biomedical Engineering
- M.S. Biological Engineering
- M.S. Biomedical Engineering
- Ph.D. Biological Engineering
- Ph.D. Biomedical Engineering

ABE.MSSTATE.EDU

**DAVE C. SWALM SCHOOL OF CHEMICAL ENGINEERING**

Chemical engineering applies chemistry and math to make processes and products that improve all aspects of life including pharmaceuticals, semiconductors, artificial kidneys, solar panels, clean water and biocompatible polymers. Petroleum engineering prepares students for careers in the oil and gas industry, specifically reservoir engineering.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Chemical Engineering
  - Chemical Engineering Practice
  - Chemical Engineering Research/Development
- B.S. Petroleum Engineering
- M.S. Chemical Engineering
- Ph.D. Chemical Engineering

CHE.MSSTATE.EDU

**CIVIL & ENVIRONMENTAL ENGINEERING**

Civil and environmental engineering deals with many aspects of society including water resources, environmental sanitation, intermodal transportation, structures and many other parts of the infrastructure of modern life. These projects help promote public safety, foster economic and community development and raise the standard of living.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Civil Engineering
  - Environmental Engineering
- M.S. Civil Engineering
  - Ph.D. Civil Engineering

CEE.MSSTATE.EDU

**COMPUTER SCIENCE & ENGINEERING**

Computer science provides a foundation of knowledge for students with career objectives in a wide range of computing and computer-related professions. Software engineering helps fill the tremendous demand for engineers who can design and build reliable large-scale software systems.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Computer Science
  - B.S. Software Engineering
  - M.S. Computer Science
  - M.S. Cyber Security & Operations
  - Ph.D. Computer Science

CSE.MSSTATE.EDU

**ELECTRICAL & COMPUTER ENGINEERING**

Electrical engineering uses science, technology and problem solving skills to design, construct, develop and maintain electrical products, services, devices and information systems. Computer engineering involves the creation of intelligent systems characterized by the application of embedded digital processing technology.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Electrical Engineering
- B.S. Computer Engineering
- M.S. Electrical & Computer Engineering
  - Ph.D. Electrical & Computer Engineering

ECE.MSSTATE.EDU

**INDUSTRIAL & SYSTEMS ENGINEERING**

Industrial and systems engineering involves the design, improvement and installation of integrated systems of people, materials, information, equipment and energy. The task of an industrial and systems engineer is to improve the performance and safety of processes by identifying and eliminating wastes of time, money, materials and energy.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Industrial Engineering
  - M.S. Industrial Engineering
  - Ph.D. Industrial & Systems Engineering

ISE.MSSTATE.EDU

**MECHANICAL ENGINEERING**

Mechanical engineering is the application of science and mathematics to the design, development and operation of mechanical and energy systems. In addition to their strong foundation in the sciences, mechanical engineers must develop speaking and writing skills and spend much of their time creating complex design processes.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Mechanical Engineering
  - M.S. Mechanical Engineering
  - Ph.D. Mechanical Engineering

ME.MSSTATE.EDU

**CHEMICAL ENGINEERING**

Chemical engineering applies chemistry and math to make processes and products that improve all aspects of life including pharmaceuticals, semiconductors, artificial kidneys, solar panels, clean water and biocompatible polymers. Petroleum engineering prepares students for careers in the oil and gas industry, specifically reservoir engineering.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Chemical Engineering
  - Chemical Engineering Practice
  - Chemical Engineering Research/Development
- B.S. Petroleum Engineering
- M.S. Chemical Engineering
- Ph.D. Chemical Engineering

CHE.MSSTATE.EDU

**Agricultural & Biological Engineering**

Biological engineering offers the same foundational knowledge as any other engineering discipline plus additional knowledge in chemistry, biological sciences, biochemistry and microbiology. Biomedical engineering combines engineering principles and biomedical sciences to solve problems that deal with the human body and health.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Biological Engineering
- B.S. Biomedical Engineering
- M.S. Biological Engineering
- M.S. Biomedical Engineering
- Ph.D. Biological Engineering
- Ph.D. Biomedical Engineering

ABE.MSSTATE.EDU

**Civil & Environmental Engineering**

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  - Environmental Engineering
- M.S. Civil Engineering
  - Ph.D. Civil Engineering

CEE.MSSTATE.EDU

**Computer Science & Engineering**

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  - B.S. Software Engineering
  - M.S. Computer Science
  - M.S. Cyber Security & Operations
  - Ph.D. Computer Science

CSE.MSSTATE.EDU

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- B.S. Computer Engineering
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  - Ph.D. Electrical & Computer Engineering

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  - Ph.D. Industrial & Systems Engineering

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**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Mechanical Engineering
  - M.S. Mechanical Engineering
  - Ph.D. Mechanical Engineering

ME.MSSTATE.EDU

**Civil & Environmental Engineering**

Civil and environmental engineering deals with many aspects of society including water resources, environmental sanitation, intermodal transportation, structures and many other parts of the infrastructure of modern life. These projects help promote public safety, foster economic and community development and raise the standard of living.

**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Civil Engineering
  - Environmental Engineering
- M.S. Civil Engineering
  - Ph.D. Civil Engineering

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- B.S. Computer Science
- B.S. Software Engineering
- M.S. Computer Science
  - Ph.D. Cyber Security & Operations

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**Electrical & Computer Engineering**

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  - B.S. Computer Engineering
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  - Ph.D. Industrial & Systems Engineering

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**DEGREES WITHIN THIS DEPARTMENT**

- B.S. Mechanical Engineering
  - M.S. Mechanical Engineering
  - Ph.D. Mechanical Engineering

ME.MSSTATE.EDU
Build leadership skills by engaging in research projects or joining a professional society. The BCoE has over 35 organizations, including Society of Women Engineers, National Society of Black Engineers, Theta Tau Professional Engineering Fraternity, Society of Hispanic Professional Engineers, and Engineers Without Borders.

Participate in competitions and events, like the Space Cowboys rocket team, EcoCar, NASA Robotic Mining Competition, ASCE Concrete Canoe Competition, Xipliter Unmanned Aircraft Systems team, or our annual Engineering Week.

Involvement in MSU’s Cooperative Education Program allows students to earn money and gain practical experience. Students are encouraged to apply for the cooperative education or internship programs and will begin working on a resume, interviewing skills, and overall professional development. Cooperative education is a unique academic program that allows students to obtain valuable work experience related to their field of study while still in school. Work semesters alternate with school semesters, and after completing three work semesters, most students have gained 52 weeks of work experience before graduation.

With today’s integrated global economy, engineers must understand other cultures and ways of doing business by being a part of collaborations that span the globe. In order to help engineering students be better prepared for the global workplace, the BCoE has developed opportunities and joined with other universities to provide students and faculty with opportunities to gain international experience by studying abroad. In years past, the Bagley College has offered MSU faculty-led courses in France, England, and Germany.

Being a part of state-of-the-art research allows students numerous educational opportunities and the ability to be taught by over 100 professors actively involved in research. The college also has facilities to conduct a wide variety of design, analysis, and testing and works with many centers such as the Center for Advanced Vehicular Systems (CAVS), the High Performance Computing Collaboratory (HPC2), and many others. Research is supported by external funding from many government agencies, as well as large and small private companies.

In 43 countries, students can study at 23 universities. With over 35 organizations, students can participate in competitions and events like Space Cowboys rocket team, EcoCar, NASA Robotic Mining Competition, ASCE Concrete Canoe Competition, Xipliter Unmanned Aircraft Systems team, or our annual Engineering Week.

Research expenditures exceed $61.4 million, with over 35 engineering organizations available to students. With 65% student participation in co-op/internships, students can gain valuable work experience related to their field of study while still in school.
Mississippi State University is an equal opportunity institution. Discrimination in university employment, programs or activities based on race, color, ethnicity, sex, pregnancy, religion, national origin, disability, age, sexual orientation, genetic information, status as a U.S. veteran, or any other status protected by applicable law is prohibited. Questions about equal opportunity programs or compliance should be directed to the Office of Compliance and Integrity, 56 Morgan Avenue, P.O. 6044, Mississippi State, MS 39762, (662) 325-5839.