

Materials engineers' broad scope and knowledge of materials science allow technological advances to spring from the drawing board to the production line.



The Auburn Advantage

Solid academics and a campus with a strong sense of place make Auburn special. Our alumni recall a friendly, safe campus with a sense of family, caring professors, academic variety and challenge, and extracurricular activities that helped them grow into leaders.

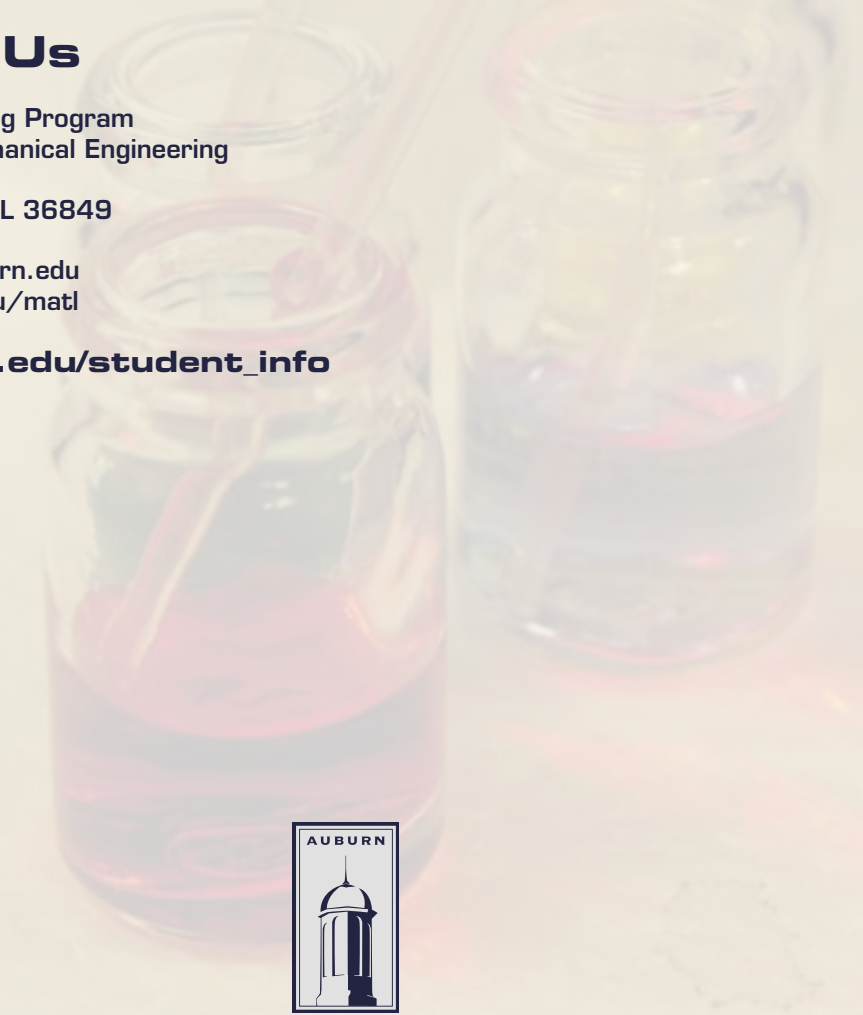
- Classic college town atmosphere
- Outstanding instruction
- Hands-on lab projects
- Research opportunities
- Co-op education and internships
- Scholarship opportunities
- Mentoring
- Academic support
- Diversified faculty and student body
- Job search assistance
- Résumé service for alumni
- Variety of career opportunities



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MATERIALS engineering



At a Glance

Because everything we use is made of materials, materials engineering serves as the foundation for many engineering advances. Using science and engineering principles to select, design and manufacture materials, materials engineers design, develop, fabricate and evaluate materials for use in engineering applications. They combine engineering problem solving with scientific curiosity to understand how and why materials behave the way they do.

Materials engineers address the science and technology of producing materials — including metals, ceramics, plastics, semiconductors and composites — that have properties and shapes suitable for practical use in applications including aerospace, transportation, electronics, energy conversion and biomedical systems.

Materials engineering concepts are used daily to make things lighter, last longer, go faster and perform better. Materials developments continue to improve the efficiency of power production and have led to new sources of power. Strong and lightweight composite materials have improved the capabilities and performance of aircraft and aerospace vehicles.

Materials-related challenges exist in virtually every technological field, so materials engineers are in demand and well equipped to adapt to changes in the job market. This flexibility allows materials engineers to explore interests in a wide variety of related disciplines. The starting salary range for Auburn materials engineers is \$50,000 to \$60,000.



Laboratory Facilities

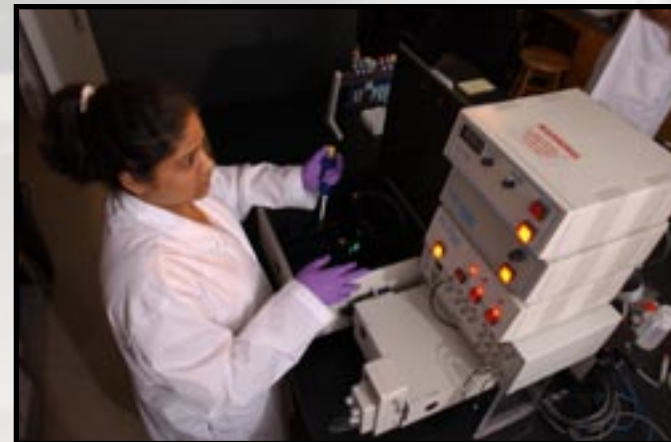
With more than 12,000 square feet of laboratory space, Auburn's materials engineering facilities house the newest, cutting-edge equipment, enabling students to develop skills working with advanced engineering instrumentation. Laboratories include:

- Nano/Microscale Materials
- Sensors/Biomaterials/Functional Materials
- Materials Processing
- Materials Characterization

Undergraduate Research Opportunities

Materials engineering offers undergraduates the opportunity to work in various laboratory-based research projects — allowing students to apply academic concepts in hands-on laboratory settings, explore emerging technologies and work closely with faculty members to investigate specializations within materials engineering.

This real-world experience sets Auburn University materials engineering graduates apart from their peers during postgraduate employment pursuits. As a result of this laboratory experience, many graduates have co-authored papers or presented research at conferences.



Research Activities

Established in 1993, the Materials Research and Education Center has attracted national and international materials-related research projects funded by agencies including the National Science Foundation, U.S. Department of Energy, U.S. Department of Defense, U.S. Navy, USDA, Army Research Office of Scientific Research and NASA. Research areas include:



- Adaptive Materials
- Nanomaterials and Nanocomposites
- Biomaterials and Biosensors
- Processing and Fabrication of Materials
- High-Temperature Materials
- Detection and Food Safety
- Airliner Cabin Environment Research

Extracurricular Activities

Organizations give students the opportunity to grow, network and further their education outside of the classroom. Materials engineering students are involved in organizations including:



- Auburn Materials Society
- Cupola Engineering Society
- Engineering Student Council
- National Society of Black Engineers
- Society of Women Engineers
- Tau Beta Pi honor society

www.eng.auburn.edu/organizations

Advising/Support Services

To ensure progress toward completion of degree requirements, an engineering advisor, the department chair and a department undergraduate program officer are available to discuss and advise on curriculum choices and requirements and to provide personal guidance and professional advice.

Auburn Engineering is committed to helping students succeed. The following services are available at no cost:

- Study Partners mentoring program
- MentorNet e-mentoring network
- College of Engineering tutoring program
- BellSouth Minority Engineering tutoring program



Scholarships/Financial Assistance

Loan and grant opportunities are available, including:

- Pell grants
- Guaranteed student loans
- Research internships with professors
- Birdsong study abroad scholarships
- Departmental scholarships

As students progress, the number of available scholarships and grants may increase. Although some consideration is given to financial need and residency, most scholarship awards are based on academic achievement.

www.auburn.edu/student_info/student_affairs/finaid

Undergraduate Curriculum

- Bachelor of Materials Engineering

The undergraduate curriculum is designed to offer students a broad foundation in chemistry, physics and mathematics. Students gain comprehensive knowledge and understanding of the relationships between the structure and properties of materials. Included in the required 128 semester credit hours is a series of capstone project courses in which students apply materials science principles to open-ended engineering problems. The program also offers students the opportunity to engage in a cross-disciplinary sequence that allows students to specialize in an area outside of materials.

