

Chemical Engineering

With an enrollment of more than 275 undergraduate students, 60 full-time graduate students, a significant number of outreach graduate students, 19 full-time faculty members, and several visiting and part-time faculty, Auburn University boasts one of the Southeast's largest chemical engineering programs.

Auburn's Department of Chemical Engineering, one of nine departments in the Samuel Ginn College of Engineering, was established in 1913. The largest university in Alabama, Auburn is a state-assisted land grant institution that graduates more engineers than any other university in the state.

Our department is among the Southeast's top departments in research expenditures per faculty member. We typically average more than four million dollars per year in extramural research funding and recently ranked 11th in the nation in research expenditures (October 28, 2002 issue of *Chemical and Engineering News*).

Recent research supporters include NSF, DARPA, DOE, DTRA, ONR, Army (TSWG), USDA, DOE-BES, Raytheon, Army (SMDC), EPA, and various other government agencies and industries. The department hosts two of Auburn's research and education centers: the Alabama Center for Paper and Bioresource Engineering (AC-PABE) and the Center for Microfibrous Materials Manufacturing.

Graduate Program Overview

Degrees offered:

- Master of Chemical Engineering (M.ChE.) (non-thesis)
- Master of Science (M.S.)
- Doctor of Philosophy (Ph.D.)

Graduate study in chemical engineering provides students with opportunities to further their education through advanced courses in their area(s) of interest, and to exercise and sharpen skills developed during their undergraduate education. Each graduate student has the opportunity to develop personally and professionally through research and faculty mentoring. The focus is directed toward creative research through significant research activities with a faculty mentor.

The Auburn University Department of Chemical Engineering prepares its graduate students — through high quality educational programs — to professionally and ethically practice engineering in a competitive global environment. Our graduates possess the tools, skills, and competence necessary to understand and apply today's technologies and become leaders in developing and deploying tomorrow's technologies. The department is expanding scientific and engineering knowledge through innovative research and creative partnerships involving academia, industry, and government. We actively develop outreach activities to assist individuals and organizations to find solutions to engineering problems through education, consulting activities, and practical research.

Location

The Auburn campus is located at the center of a lively downtown with a variety of restaurants and numerous entertainment, arts, and recreational opportunities. And if you need an infusion of big city or beach it is an easy drive to Atlanta (1.5 hours), Montgomery (45 minutes), Birmingham (2 hours) and the Gulf Coast (3.5 hours).

Contact Us

Pursuing an advanced degree is an important step toward a rewarding, life-long career in the field of chemical engineering. The faculty of the Department of Chemical Engineering take great pride in providing the best possible educational experience for our graduate students. Combining broad fundamental understanding with specialized skills is the core of a successful research experience with the Department of Chemical Engineering.

We realize that the success of our department depends ultimately on the success of our students, and we will strive to assist you in realizing your full potential and reaching your goals. Auburn University's chemical engineering graduate program is a close-knit one in which faculty, postdoctorates, staff and students work together. We have found these interpersonal relationships to be extremely valuable in graduate work.

For more information:

Graduate Program Officer
Department of Chemical Engineering
230 Ross Hall
Auburn, AL 36849
334.844.4827
chemical@eng.auburn.edu
www.eng.auburn.edu/che

Get detailed information in the Auburn University bulletin by visiting www.auburn.edu/student_info/bulletin and clicking on "The Graduate School".



AUBURN UNIVERSITY

SAMUEL GINN
COLLEGE OF ENGINEERING

www.auburn.edu

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2006-001-ChE

CHEMICAL ENGINEERING

GRADUATE STUDY AND RESEARCH



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Degree Requirements

Master of Science (M.S.) — master's candidates are required to complete a thesis of depth and creativity appropriate to the degree. They must also complete a program of course work in order to deepen and broaden their technical expertise in chemical engineering as well as acquire the knowledge outside of chemical engineering necessary to complete the master's thesis research.

Six three-credit hour courses are required, consisting of three core courses and three electives, plus six credit hours of research and thesis.

Doctor of Philosophy (Ph.D.) — doctoral candidates are required to complete a research dissertation of significant depth and creativity. Students must complete a program of course work that both deepens their technical expertise in chemical engineering and supplies the necessary knowledge beyond chemical engineering for completion of their dissertation research.

Ten three-credit hour courses are required, consisting of four core courses and six electives, plus research and dissertation.

Distance Education (M.ChE.) — the Department of Chemical Engineering offers a non-thesis master's degree through the Graduate Outreach Program. With no residency requirement, courses are provided via streaming media with arrangements for examinations with test proctors provided by the business or industry where the student is employed. Students can contact the instructor via e-mail, phone, or in some cases, Internet chatroom.

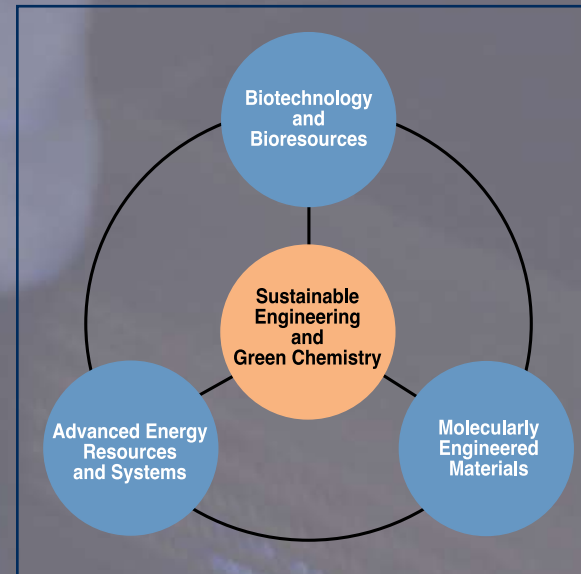


The course of study is flexible, allowing students to individually tailor an appropriate plan of study to meet their background and professional interests. Approximately 11 courses are required (32 credit hours), consisting of three core chemical engineering courses and four electives, plus four engineering, business or science graduate courses.

Program for Chemists and Other Majors

We encourage applicants who hold degrees in chemistry, mathematics, materials science, or any engineering discipline to apply. Students admitted with such backgrounds are normally required to complete several undergraduate chemical engineering courses. For detailed information visit www.eng.auburn.edu/programs/chen/programs/graduate/requirements-bs.html.

Strategic Focus and Research Thrusts



Biotechnology and bio-resources — research includes bio-processing, environmental biotechnology, fiber substitutes, bio-catalysis, bio-sensors and biomedical applications including advanced drug delivery systems, therapeutic and diagnostic devices, bio (mimetic and hybrid) materials, and bionanotechnology.

Advanced energy resources and systems — emphasis is on efficient production of ultra-clean fuels from renewable and conventional resources, mobile fuel processors, high performance energy conversion and storage systems, process efficiency and energy production.

Molecularly and chemically engineered materials — synthesis and applications focus

on microfibrinous materials, nano-structured materials and nano-technology, nano-functional materials, bio-filtration, polymers, bio-polymers, biomaterials, and sensors.

Sustainable engineering and green chemistry — research includes waste minimization, resource conservation, process integration and optimization, recycle technologies, renewable resources, solvent selection and substitution. The goal is to develop products, processes and services in a sustainable manner to improve the quality of life, the natural environment and the competitiveness of industry.

Admission Requirements and Procedures

- Complete the online application form: www.eng.auburn.edu/programs/chen/programs/graduate/admissions.html
- Send undergraduate and graduate transcripts (if applicable) from all institutions attended. Two official copies of all college or university transcripts are required, one sent to the Department of Chemical Engineering Graduate Program Officer at the address in the "Contact Us" section and one to The Graduate School, 106 Hargis Hall, Auburn University, Auburn, AL 36849-5122
- The Graduate Records Exam (GRE) is required for all applicants. The advanced test is not required. You will need to have the Educational Testing Service send your official scores to Auburn University (ETS Institution Code 1005)
- The Test of English as a Foreign Language (TOEFL) exam is required for graduates of programs in which English is not the sole language of instruction. A minimum TOEFL score of 550 (paper test) or 213 (electronic test) is required. You will need to have the Educational Testing Service send your official scores to Auburn University (ETS Institution Code 1005)
- A minimum of three letters of recommendation from former professors and/or supervisors is crucial to the application process and should be sent directly to the Department of Chemical Engineering's Graduate Program Officer at the address in the

"Contact Us" section. Obtain the required form at www.eng.auburn.edu/programs/chen/programs/graduate/admissions.html

- Complete application for an assistantship at www.eng.auburn.edu/programs/chen/programs/graduate/financialaid.html and send with your application materials. An offer of an assistantship is usually issued at the same time you are recommended for Graduate School admission

Financial Aid

Financial assistance is normally provided for each student who is admitted into the graduate program. Financially attractive fellowships and assistantships, which include full tuition waiver and stipend, are available to students pursuing either M.S. or Ph.D. degrees. Stipends are awarded via a teaching assistantship, research assistantship or fellowship. Graduate teaching assistant duties involve assisting the faculty in the undergraduate or graduate instructional programs. Special appointments that pay higher than normal stipends are also available on a competitive basis.

Prospective students are encouraged to apply for competitive national fellowships. Recipients may have their stipends augmented as permitted by the donating agency in accordance with departmental policy. Augmentation of stipends from these awards may be possible.

