OVERVIEW STATEMENT

Whether you want to discover alternative sources of energy, develop new methods of food production or engineer the next medical breakthrough, you can get there with a degree in chemical engineering from Florida Tech. Here, you'll develop a strong background in engineering and get hands-on experience in modern chemical systems.

Our chemical engineering program is dynamic and focused. You'll get started right away, taking core courses like Introduction to Chemical Engineering and General Chemistry as a freshman. Guided by highly qualified faculty who care about your success, you'll hone your strengths and begin specializing as early as sophomore year.

New technical electives allow you to specialize in unique career-track subfields such as biochemical engineering, environmental engineering, materials engineering and nuclear technology, making you a hot prospect in the eyes of future employers.

As a senior, you'll complete an exciting senior design project in collaboration with a team of your peers. Together, you'll conceptualize, design and present a full-scale chemical plant that fulfills a real-world need. You'll present your project to industry leaders and employers, and may compete in regional and national events. As a result, you get practical experience, an expanded professional network and perhaps even a pre-graduation job offer.

Beyond the classroom, chemical engineering majors build leadership and professional experience through exciting internships and participation in academic organizations like the American Institute of Chemical Engineers, the American Chemical Society Student Affiliates, student government and over 100 other student organizations.

Florida Tech's chemical engineering students have taken home nearly two dozen national and regional awards in engineering competitions in the last decade only, including the AIChE Chem-E Car Competition, National AIChE Student Research Competitions, National Science Foundation (NSF) Undergraduate Research Awards, the United States Achievement Academy (USAA) Award and the National Tau Beta Pi Engineering Honor Society Scholarship Award. This standard of excellence prepares students for real-world on-the-job applications.

Employers that have recruited Florida Tech students for internships and careers include GE, Duracell, Pfizer Pharmaceuticals, Tropicana, Intel, IBM and Northrop Grumman.

Many chemical engineering majors go on to graduate school at universities such as Florida Tech, Stanford, MIT, Johns Hopkins, Columbia, Virginia Tech and Yale.

Envision yourself at Florida Tech—a university already operating in the future—and imagine how far a world-class degree in chemical engineering will take you.
RESEARCH

**Computer-aided modeling, processing and control:** Research is ongoing in the area of adaptive control and neural networks for application primarily in nonlinear control systems. Modeling, analysis and simulation of chemical processes for in situ resource use on the moon and Mars are also being conducted to aid NASA’s effort in space exploration.

**Environmental engineering:** Projects include development of a new bioreactor to produce microalgae for applications in aquaculture and design of systems for controlling contaminants in spacecraft atmospheres. Most projects focus on development of renewable resources, especially alternative sources of energy.

**Materials synthesis, processing and modeling:** Ongoing activities are primarily in development of new membranes for hydrogen purification, including porous silicon and metal hydride-templated porous carbon composites. Work is being done using molten salt electrolysis for metals production. Other activities include development of polymer/carbon composites for applications in gas sensing and modeling of transport properties in porous media.

**Transport and separation processes:** Current projects include development of computer simulation algorithms for estimating transport properties of porous and composite materials, especially fibrous media, and modeling transport and reaction in polymer electrolyte membrane fuel cells. Other recent projects have examined membrane separation of gases, pressure swing adsorption separation of biogas, and the use of supercritical fluids for extraction of citrus oils.

CONTACT

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