

*Our newly
expanded
Kingsbury Hall*



UNIVERSITY of NEW HAMPSHIRE
**CHEMICAL
ENGINEERING**



What is Chemical Engineering?

Chemical Engineering deals with the transformation and transfer of energy and materials. Hence, chemical engineers . . .

- ◆ play a vital role in solving many of society's resource, manufacturing and environmental problems.
- ◆ are considered among the most versatile in the engineering profession.
- ◆ find employment in a broad spectrum of industries, private and public institutions.

The ever expanding domain of Chemical Engineering includes a very wide range of scientific and engineering activities. The following list gives a partial but comprehensive view of the important role of chemical engineering in meeting the critical needs of our modern society.

- ◆ Energy Resources, both conventional and renewable
- ◆ Biochemical Engineering and Biotechnology
- ◆ Pollution Control and Prevention
- ◆ Electrochemical Engineering
- ◆ Inorganic and Electronic Materials
- ◆ Plastics and Synthetic Fibers
- ◆ Agriculture and Food Products
- ◆ Medical Devices and Pharmaceutical Products
- ◆ Transportation, Propulsion and Fuels

The chemical engineering program at UNH is accredited by ABET. The program offers the B.S., M.S. and Ph.D. degrees. The B.S. program normally requires four years to complete with an average course load of 16 - 17 credits per semester.

Departmental Options

Departmental options provide our students with an additional opportunity to focus on special areas of interest. Currently the available options are:

- ◆ Bioengineering
- ◆ Environmental Engineering
- ◆ Energy

Teaching

The department has a long-standing commitment to teaching excellence.

- ◆ Small class size for all chemical engineering courses (about 15-30 students).
- ◆ All courses are taught by faculty.
- ◆ Faculty are highly accessible.

Facilities

The department maintains the following instructional laboratories:

- ◆ Unit Operations
- ◆ Process Dynamics and Control
- ◆ Biochemical Engineering
- ◆ Environmental Engineering
- ◆ Fossil Fuels
- ◆ Biomedical Engineering
- ◆ Electrochemical Engineering

The chemical engineering computer cluster provides our students with expert software for chemical engineering computation and process design.

The new expansion addition to Kingsbury Hall, completed in December 2005, has been assigned to the engineering departments providing state-of-the-art facilities for teaching and research.

Research Programs

Based on the research activities of the faculty, the Department maintains the following research laboratories:

- ◆ Electrochemical Engineering
- ◆ Biocatalysis and Biochemical Engineering
- ◆ Biomedical Engineering
- ◆ Air Pollution Control
- ◆ Interfacial Phenomena
- ◆ Fuel Cells
- ◆ Biofuels

The university has an active Undergraduate Research Opportunity Program (UROP) providing support for undergraduate participation in research and the presentation of research results at professional meetings.

International Exchange Program

During the junior year, students can choose to spend one semester abroad. UNH has a well-established student exchange program with the Technical University of Budapest, Hungary. Other exchange programs with universities in Spain and Scotland are under development.



Where Do Graduates Go?

About 10-15% of graduates go on to graduate schools. Past graduates have finished advanced degrees at very competitive schools, including U.C. Berkley, MIT, Stanford, Michigan, Wisconsin and Minnesota. Most graduates work for industry, government, consulting and education. Some graduates have entered into medicine, patent law and business administration.

Salary and Career Paths

Starting salaries for chemical engineers are among the highest in engineering. Professional career advancement can follow technical and managerial paths. Many top industrial executives are chemical engineers. A chemical engineering education is a solid basis for other careers, such as law, medicine, teaching and public service.

Scholarships

In addition to the UNH financial aid awards, the College of Engineering and Physical Sciences and the Department of Chemical Engineering offer additional scholarships to meritorious students.

Professional Societies

Chemical engineering students are active in the following professional society chapters:

- ◆ American Institute of Chemical Engineers (AIChE).
- ◆ Technical Association of the Paper and Pulp Industry (TAPPI).
- ◆ Society of Women Engineers (SWE).
- ◆ Tau Beta Pi (National Engineering Honor Society).

Program Endowments

The department has received endowments in excess of \$1,000,000 from the generosity of our graduates. The funding provides support for scholarships, program enhancement and special projects.

For Additional Information

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