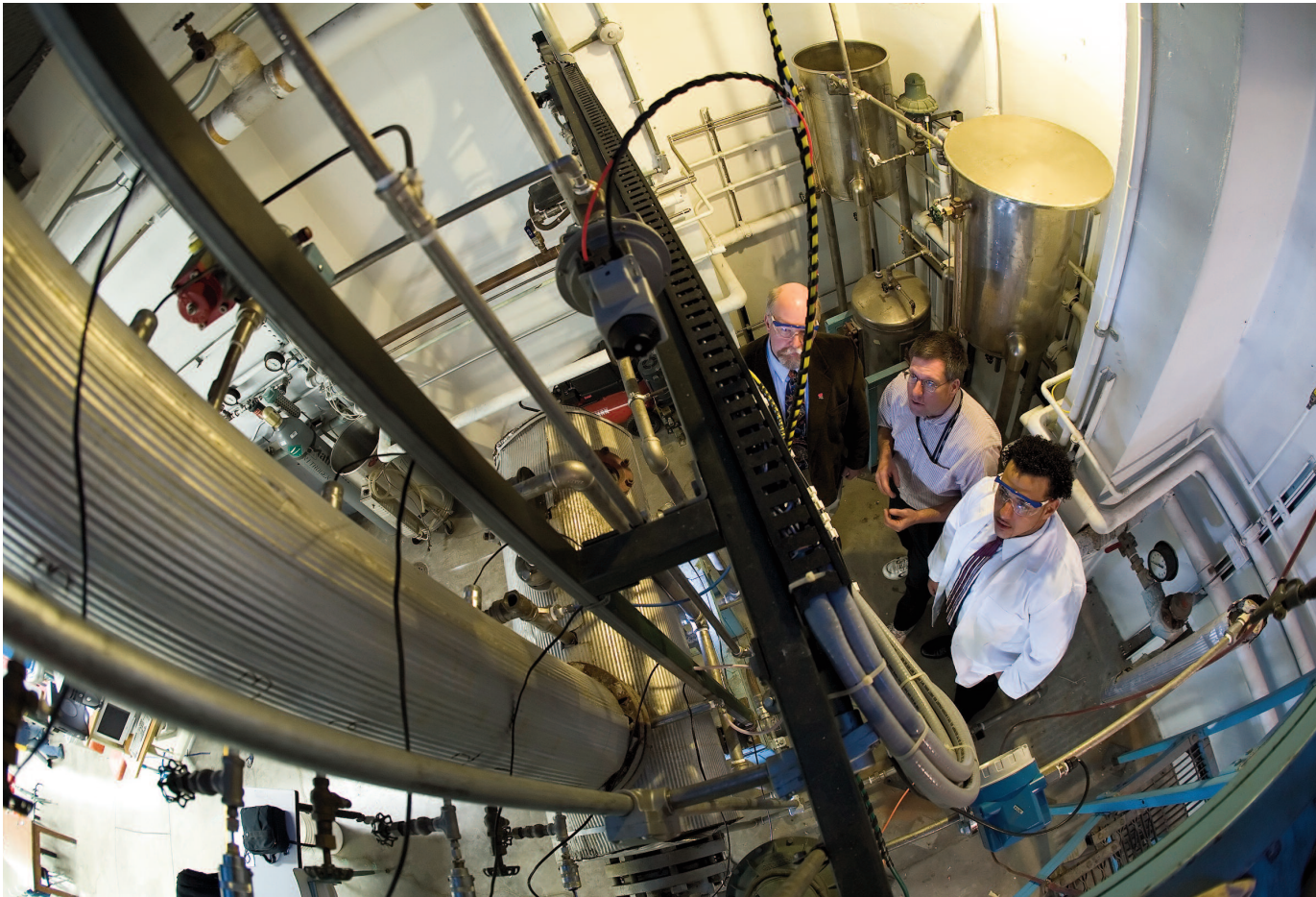


NJIT[™]

New Jersey's Science &
Technology University

THE EDGE IN KNOWLEDGE

Bachelor of Science in Chemical Engineering



Newark College of Engineering

New Jersey Institute of Technology

WHY STUDY CHEMICAL ENGINEERING?

Chemical engineers are regarded as the most versatile of all engineers. Their rigorous education in chemical and physical fundamentals, in economics, in mathematics and systems analysis uniquely qualifies them to seek solutions to problems which affect the future of our civilization. Advancement in the field can move along both the technical and managerial paths, and a chemical engineering education is an excellent basis for other careers - law, medicine, information technology, finance, teaching, politics, or other branches of engineering. Chemical engineers are consistently offered the highest paying jobs at graduation. According to the National Association for Colleges and Employers, 2006 graduates with a BS in Chemical Engineering received an average starting salary of \$56,269, the highest among all bachelor's recipients.

WHY STUDY CHEMICAL ENGINEERING AT NJIT?

The Otto H. York Department of Chemical Engineering has been an integral part of the development of NJIT as a public research university. Its faculty and students have for many years conducted cutting-edge research in areas as diverse as environmental technology, polymer processing, biotechnology, particulates and nanotechnology. This research effort also leads to the teaching of courses involving current topics. Modern chemical engineering involves extensive use of computers for process simulation and design, for product characterization and for process control. The American Institute of Chemical Engineering (AIChE) has a very successful student chapter at NJIT which offers seminars, plant trips and social activities.

WHAT WILL I LEARN?

The educational objectives of the chemical engineering curriculum are:

- To produce chemical engineers with the ability to think critically and to perform effectively within their profession.
- To produce chemical engineers with an awareness of social responsibility and the ability for technical translation.
- To provide skills for lifelong learning both within and outside the profession and the ability to pursue a variety of career options

The academic training of chemical engineers provides a strong background for a variety of areas, including:

- Process Design
- Pharmaceutical Engineering
- Production Engineering
- Research and Development
- Marketing/Technical Sales
- Environmental and Waste Management Safety

WHAT COURSES WILL I TAKE?

- Physical Property Evaluation
- Phase & Reaction Equilibria
- Fluid Flow
- Heat Transfer
- Mass Transfer
- Kinetics and Reactor Design
- Design of Separation Equipment
- Process Dynamics and Control
- Process and Plant Design
- Large-Scale Laboratories (related to all of the above)

WHAT KINDS OF CAREER OPPORTUNITIES WILL I HAVE?

Concerned with the transformation of raw materials into valuable products by chemical, biochemical or physical processes, they are involved in the conception, design, construction, and operation of industrial plants. They participate in the manufacture of such products as pulp and paper, petrochemicals, fertilizers, oil and gas, pharmaceuticals, food and beverages, minerals, plastics and cosmetics. Chemical engineers also play key roles in the growing fields of biotechnology, nanotechnology, membrane technology and electronic materials processing.

ARE THERE OPPORTUNITIES TO GAIN REAL-WORLD EXPERIENCE?

Qualified students can earn academic credit as well as substantial salaries while gaining hands-on experience in their major field through NJIT's Cooperative Education Program.
<http://www.njit.edu/CDS/employerservices/coop.htm>

ARE THERE OPPORTUNITIES TO PARTICIPATE IN RESEARCH?

Undergraduate students at NJIT have many opportunities to gain valuable research experience and learn about the latest technologies. The Otto H. York Department of Chemical Engineering is affiliated with or home to a number of state-of-the-art multidisciplinary research centers:

- Center for Membrane Technology
- Otto H. York Center for Environmental Engineering and Science
- New Jersey Center for Engineered Particulates
- NSF Engineering Research Center for Structural Organic Particulate Systems
- Polymer Processing Institute

New Jersey Center for Engineered Particulates also offers an NSF-supported Research Experience for Undergraduates in Engineered Nano-Composite Particulate Materials.

IS FINANCIAL AID AVAILABLE?

The Office of Student Financial Aid Services helps to provide NJIT students with every opportunity to obtain funding to support their educational costs. The university encourages all students to apply for financial aid.
<http://www.njit.edu/admissions/finaid>

NJIT AT A GLANCE

- Enrollment of just over 8,000 undergraduate and graduate students in six schools provides small-college intimacy with big university resources.
- 45-acre campus with a recently-completed \$83-million construction program featuring a new Campus Center.
- A *Princeton Review* Best Value College and "Top 25 Most Connected College."
- A *U.S. News* top national university, NJIT is 10th in the nation in diversity.

FOR FURTHER INFORMATION, CONTACT:

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TO APPLY:

Office of Undergraduate Admissions, 1-800-925-NJIT
Or apply on line:
<http://www.njit.edu/admissions/applyonline.php>