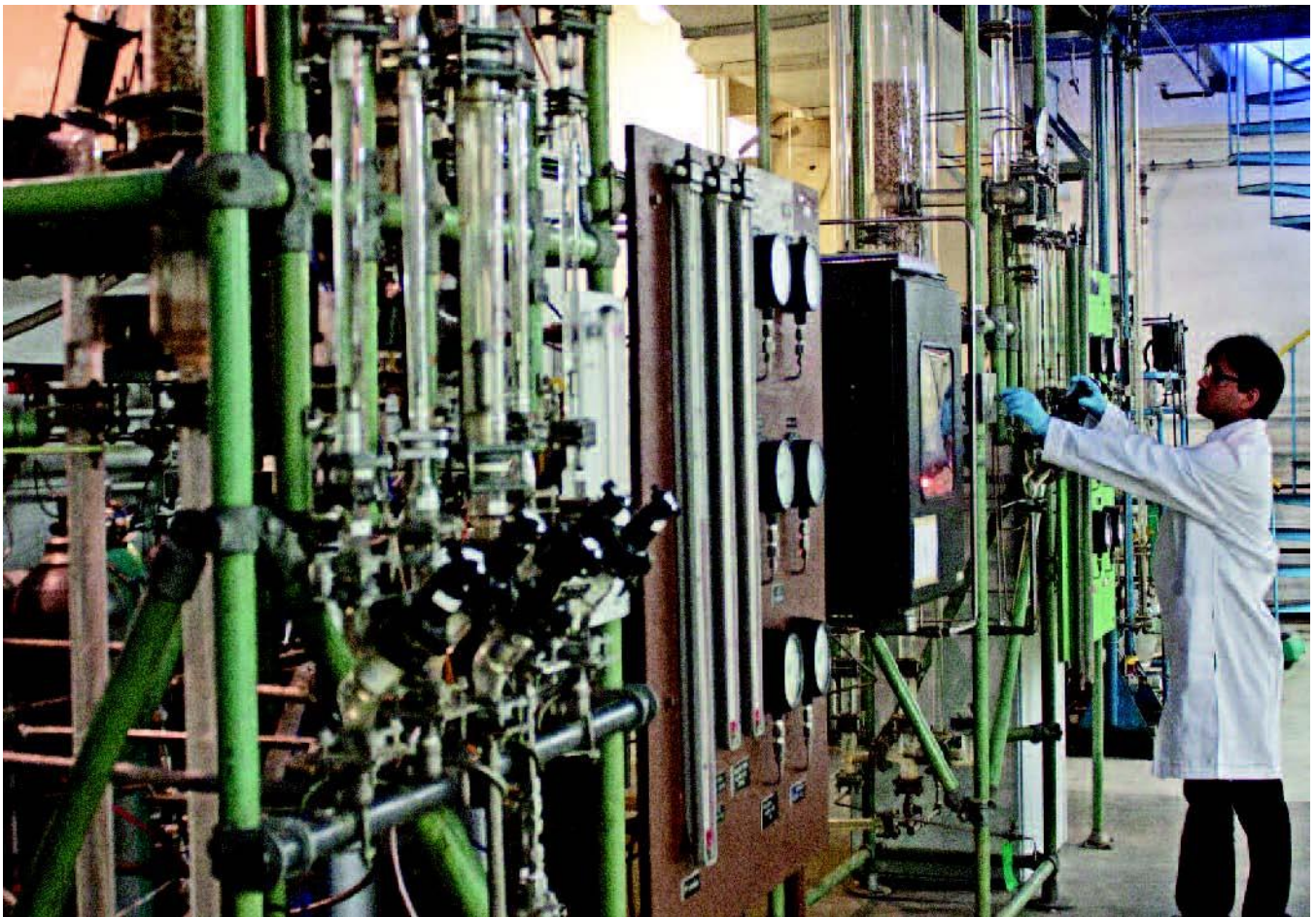


# NJIT

New Jersey's Science &  
Technology University

*THE EDGE IN KNOWLEDGE*

## Master of Science in Chemical Engineering



The Otto H. York Department of Chemical, Biological  
and Pharmaceutical Engineering

Newark College of Engineering

**New Jersey Institute of Technology**

## **WHY PURSUE AN MS IN CHEMICAL ENGINEERING?**

Chemical engineering is the foundation for many of today's most challenging careers. A master's degree in chemical engineering is the gateway to such fields as pharmaceuticals and biotechnology, environmental technology, food processing, petrochemicals and specialty chemicals, and polymer processing. Traditionally employed in manufacturing and in the petrochemical industry, chemical engineers also find opportunities in the development of the newer and emerging technologies, such as those based on ceramics, biochemicals, and electronic materials. Advancement in the field can move along both the technical and managerial paths.

## **WHY STUDY CHEMICAL ENGINEERING AT NJIT?**

The Otto H. York Department of Chemical, Biological and Pharmaceutical Engineering has been an integral part of the development of NJIT as a public research university. Graduate students have the opportunity to work with faculty on cutting-edge research. This research effort also leads to the teaching of courses involving current topics. NJIT hosts several state-of-the-art multidisciplinary research centers that focus on such emerging areas as membrane separation, engineered particulates, environmental engineering and science, polymer engineering, microelectronics and nanotechnology. Other active research areas include molecular simulations, biochemical engineering, process control, equations of state, supercritical fluids, polymer processing and characterization, neural networks, transport phenomena and combustion kinetics.

In addition, the state of New Jersey is ranked 4th in the nation in R&D spending, and the state is home to many of the nation's leading pharmaceutical, chemical, biotechnology and communications firms.

## **WHAT COURSES ARE AVAILABLE?**

Core Courses: 12 credits

ChE 611 Thermodynamics  
(3 credits)

ChE 612 Kinetics of Reactions and Reactor Design  
(3 credits)

ChE 624 Transport Phenomena I  
(3 credits)

ChE 626 Mathematical Methods in Chemical Engineering  
(3 credits)

## **WHO TEACHES THE COURSES?**

Courses are taught by fulltime faculty members that are also involved in cuttingedge research, and adjunct faculty with extensive industrial experience.

## **ARE THERE OPPORTUNITIES TO PARTICIPATE IN RESEARCH?**

The department enjoys close ties to the pharmaceutical and petrochemical industries, and plastics manufacturers through the Polymer Processing Institute (PPI). In addition to independent research, faculty members are associated with various research centers including the Center for Membrane Technology, the Particle Technology Center, and PPI. There are opportunities for interdisciplinary collaborative research with the Federated Department of Biological Sciences, the Department of Biomedical Engineering, the Department of Chemistry and Environmental Science, and the University of Medicine and Dentistry of New Jersey.

## **DO STUDENTS HAVE OPPORTUNITIES FOR DOCTORAL STUDIES?**

Qualified and research-oriented students will have the option of continuing their studies by pursuing a PhD in chemical engineering, or in related areas such as chemistry or industrial engineering. The university also sponsors an Industry Collaborative PhD program that allows students to pursue a doctoral degree while working fulltime in industry.

## **WHO SHOULD ENROLL IN THE MS IN CHEMICAL ENGINEERING?**

The program is open to students with undergraduate degrees in chemical engineering or related disciplines, although for some disciplines a bridge program may be necessary to meet the prerequisites.

## **IS FINANCIAL AID AVAILABLE?**

Financial support may be available for qualified fulltime students and might include: the Provost's Fellowship; a research assistantship; loans and work-study; cooperative education industry positions; and curricular practical training. A number of financial support options are available for targeted groups, including National Consortium for Graduate Degrees for Minorities in Engineering and Science (GEM) Fellowships. For further information on financial assistance programs, visit <http://www.njit.edu/admissions/graduate/graduatefinancialaid.php>

## **FOR FURTHER INFORMATION, CONTACT:**

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[lisa.b.axe@njit.edu](mailto:lisa.b.axe@njit.edu)  
973-596-2477

## **TO APPLY:**

Office of Graduate Admissions  
973-596-3300  
or on-line at <http://www.njit.edu/admissions/apply-online.php>