

The Master of Science Program in Pharmaceutical Systems Management*



Department of Industrial and Manufacturing Engineering

Newark College of Engineering

New Jersey Institute of Technology

WHY PURSUE AN MS DEGREE IN PHARMACEUTICAL SYSTEMS MANAGEMENT?

Spurred by an explosion in new medical knowledge and an aging population, the pharmaceutical industry is one of the strongest and most exciting sectors of the economy. Pharmaceutical manufacturing ranks among the fastest growing manufacturing industries. Demand for this industry's products is expected to remain strong, due to the aging population and rising health consciousness among Americans. Even during fluctuating economic conditions, there will be a market for over-the-counter and prescription drugs, including the diagnostics used in hospitals, laboratories, and homes; the vaccines used routinely on infants and children; analgesics and other symptom-easing drugs; antibiotics and other drugs for life-threatening diseases; and lifestyle drugs for the treatment of non-life-threatening conditions. The number of jobs in pharmaceutical and medicine manufacturing is expected to increase by about 26 percent over the 2004-14 period, compared with 14 percent for all industries combined.

WHY STUDY PHARMACEUTICAL SYSTEMS MANAGEMENT AT NJIT?

New Jersey is geographically at the heart of the nation's pharmaceutical industry and home to more of the world's leading pharmaceutical companies than any other state, and NJIT is at the national epicenter of this concentration of industrial pharmaceutical research and development. In 2006 New Jersey had 14% of the nation's total employment in the pharmaceutical industry as measured by the U.S. Bureau of Labor Statistics. As the state's science and technology university, NJIT has strong ties with the pharmaceutical industry and works directly with industry advisors to ensure that the curriculum is relevant to industry needs. This new program is designed for technical managers in the pharmaceutical industry, whose professional functions involve significant levels of technology development and application. These include the areas of drug discovery and clinical research, manufacturing operations, packaging and distribution, quality control and regulatory compliance, and product management. Career growth in these positions can be enhanced by an advanced degree that provides a combination of managerial and technical training. The dual focus of this new program on a systems engineering and management approach combined with knowledge of pharmaceutical industry process will provide you with the skills to advance your career.

The WHAT DOES THE PROGRAM COVER?

The MS in Pharmaceutical Systems Management program integrates expertise in management methods and tools with pharmaceutical research and processing knowledge. It is designed to train and educate graduates with contemporary knowledge related to the analysis, planning, implementation, project management, and evaluation of all operational components in the pharmaceutical industry.

NJIT currently has two very popular MS programs at NJIT in the areas of Engineering Management and Pharmaceutical Engineering. The new MS in Pharmaceutical Systems Management blends the curriculum of these two into a focused program for the pharmaceutical industry. The program curriculum follows a systems approach and is designed to provide graduates with the skills and abilities to analyze and manage the increasingly complex global pharmaceutical industry. These will include contemporary systems engineering and management methods, coupled with use of powerful software based analytical tools. For example they would learn how to apply systems simulation tools to model the pharmaceutical supply chain and then identify bottlenecks and primary cost drivers. Example courses include Project Management, Management Science, Principles of Pharmaceutical Engineering, and Validation and Regulatory Issues in the Pharmaceutical Industry.

IS PART-TIME STUDY AVAILABLE?

The program can be pursued on a full- or part-time basis. Evening and late afternoon classes accommodate working professionals.

IS FINANCIAL AID AVAILABLE?

Financial support for full-time students in the MS program is extremely limited. Full-time domestic and international students may be eligible to receive the Provost Fellowship. For further information on financial aid, visit

www.njit.edu/financialaid/graduate/index.php

NJIT students can also offset educational costs by participating in the Cooperative Education Program, which provides an opportunity to gain practical work experience in a professional environment. A co-op student works on a fulltime or part-time basis for a company that has agreed to hire, train, and pay the student during a specific co-op work cycle.

www.njit.edu/CDS/studentervices/coop.htm

NJIT AT A GLANCE

- New Jersey's Science and Technology University, founded in 1881.
- Enrollment of just over 8,200 undergraduate and graduate students in six schools allows small-college intimacy with big university resources.
- 45-acre campus with a recently-completed \$83-million construction program featuring a new Campus Center.
- A *U.S. News and World Report* "Top National University" and a *Princeton Review* "Best College."
- Ranks 9th in the nation in diversity with students from more than 100 countries.
- 13:1 student-faculty ratio.

FOR FURTHER INFORMATION

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TO APPLY:

Graduate Admissions
800-925-NJIT
www.njit.edu/admissions/graduate/howtoapply/