



Your Place or Ours

— THE “EDGE IN KNOWLEDGE” TAKES TO THE ROAD

HOW CAN NEW JERSEY’S FIRST RESPONDERS AND LAW-ENFORCEMENT PROFESSIONALS STAY ABREAST OF KNOWLEDGE VITAL FOR MEETING THE CHALLENGES OF THEIR WORK, INCLUDING THE THREAT OF TERRORISM? OR HOW CAN STAFF IN KEY INDUSTRIES ADVANCE THEIR CAREERS WITH ESSENTIAL COURSES WHEN THEY CAN’T TRAVEL TO NJIT IN NEWARK? THE ANSWER: NJIT IS TAKING THE “EDGE IN KNOWLEDGE” TO THEM.

For 125 years, employees in the private and public sectors have benefited from programs at NJIT’s Newark campus. Now, the new Academic Certificate Program, coordinated by NJIT’s Division of Continuing Professional Education, is bringing courses tailored to an organization’s specific needs directly to companies and government agencies throughout New Jersey. All of the courses can be given at an organization’s own facility or other convenient location.

Each graduate-level certificate offered consists of four courses totaling 12 credits applicable to a master’s degree. The undergraduate certificates require six courses with 18 credits applicable to a bachelor’s. The inaugural offerings include programs in homeland security, pharmaceutical and biomedical engineering, and project management.

“We are focusing on areas of particular concern for New Jersey’s economy, our state’s security, and ensuring its competitive edge in global markets,” says NJIT Provost Priscilla Nelson. “Security is a major issue for commerce in this state, while pharmaceutical and biomedical companies constitute the most vibrant

sectors of our economy. The project management certificate spins out of our master’s in engineering management, which prepares engineers and other technical professionals for corporate leadership.”

For homeland security

Perhaps most distinctive are the certificate offerings related to homeland security and counter-terrorism: graduate certificates in network security and information assurance, or in emergency management, and an undergraduate program in counter-terrorism. NJIT is exceptionally qualified to offer instruction in these areas.

“NJIT has been designated a Center of Academic Excellence in Information Assurance Education by the National Security Agency, as well as being New Jersey’s Homeland Security Technology Systems Center,” says Robert Statica, program administrator. “We are also the only New Jersey university affiliated with the initiative sponsored by the U.S. Department of Homeland Security and the Naval Postgraduate School to advance homeland security education.”

In addition, NJIT is home to the Center for Information Protection, a joint university/National Science Foundation effort unique in the country, and a charter member of the Homeland Security Defense Education Consortium (HSDEC), sponsored by NORAD/Northcom (Department of Defense) and the Battelle organization. Since 2001, NJIT has also launched extensive research initiatives in homeland security that include innovative sensing technologies, computer-intrusion detection and network defense, emergency management systems, and assessment of critical threats to the nation's infrastructure.

Michael Chumer, special lecturer in information systems and director of the graduate programs, explains that the graduate certificate in network security and information assurance covers such topics as cryptography, network management and security, computer crime, and information-assurance auditing. The credits can be applied to master's degrees in computer and electrical engineering, computer science, or information systems. The program is geared toward anyone responsible for the design, supervision, operation or maintenance of information systems.

Managing emergencies

Decision-makers in many critical situations can benefit from the graduate offerings in emergency management — hospital personnel, transportation managers, air traffic controllers, and staff at utility companies and government agencies. The program focuses on design of emergency management information systems as well as improvisation under crisis conditions, with courses in infrastructure planning, command and control, hazardous-waste operations and toxicology. Credits may be applied to an MS in information systems or in interdisciplinary studies with an emergency-management concentration.

The counter-terrorism certificate is an undergraduate program designed specifically for law-enforcement and corporate-security personnel, and anyone else interested in counter-terrorism. Both conventional and digital counter-terrorism are covered.

"The digital courses build on NJIT's computer-security expertise," Statica says. They deal with recognizing and recovering from attacks against computer systems, digital forensics, investigating computer crime, and mitigating network vulnerabilities. We are working with Stephen Foster, a retired FBI agent and former director of the FBI's New Jersey Joint Terrorism Task Force, to develop courses on the tactics of modern terrorists, and effective countermeasures and investigation techniques."

The university also offers three certificate programs that apply to the MS in pharmaceutical engineering — pharmaceutical management, pharmaceutical manufacturing, and pharmaceutical technology. The manufacturing program is currently offered at Wyeth Pharmaceuticals.

"NJIT has strong ties with the pharmaceutical industry, and we work closely with industry advisors to ensure that the curriculum is relevant to company needs," says Piero Armenante, distinguished professor of chemical engineering and director of the program. "New Jersey has the nation's highest concentration of pharmaceutical companies, and third highest concentration of life-sciences and biotechnology firms. Assisting those industries assists New Jersey's economy."

Another certificate program already proven to be popular is project management, with credits applicable to a master's in engineering management. According to Athanassios Bladikas, chair of industrial engineering, the courses focus on planning, implementation, and control of technically oriented projects.

"Many students find that this program enhances their work performance and marketability," he says. "We've had students from the pharmaceutical, aerospace, software, construction, manufacturing, banking, and transportation industries, public agencies, non-profit groups, and other sectors of the economy. Our new program brings vital knowledge directly to professionals in all of these fields."

Gale Tenen Spak, associate vice president for continuing and distance education, who administers the certificate initiative, notes that its defining feature is flexibility. "Courses can be customized to accommodate virtually any employer's needs. We can offer the program at an organization's own facility or at another location convenient to participants, and we can offer live classes or distance-learning options. We have a huge amount of experience in corporate training — over the last decade, we've trained more than 45,000 professionals associated with some 500 companies."

The new Academic Certificate Program now on the road promises that these numbers will be even greater in the future — to the continuing benefit of individual students, their employers and the State of New Jersey. ■

For more information about the new certificates: <http://cpe.njit.edu>

For more about Homeland Security at NJIT: <http://homelandsecurity.njit.edu>

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