

NJIT

New Jersey's Science &
Technology University

THE EDGE IN KNOWLEDGE

The Masters of Science in IT Administration and Security



College of Computing Sciences

New Jersey Institute of Technology

WHY PURSUE A MASTER'S IN IT ADMINISTRATION AND SECURITY?

According to the U.S. Bureau of Labor Statistics, employment of network and computer systems administrators is expected to increase by 27 percent by 2016, much faster than the average. Computer systems and networks are an integral part of business and demand for workers in these fields will increase as firms continue to invest in new technologies. The wide use of electronic commerce and the increasing adoption of mobile technologies mean that more establishments will use the Internet to conduct business online. This growth translates into a need for systems administrators who can help organizations use technology to communicate with employees, clients, and consumers. Demand for computer security specialists will grow as businesses and government continue to invest heavily in "cyber security," protecting vital computer networks and electronic infrastructures from attack. The information security field is expected to generate many new system administrator jobs over the next decade as firms across all industries place a high priority on safeguarding their data and systems.

WHY STUDY IT ADMINISTRATION AND SECURITY AT NJIT?

NJIT has a long history of innovation in digital communications. With one of the most computing intensive campuses in the nation, NJIT has also pioneered in the applications of new technologies as learning tools. The university educates one of the largest groups of information technology students in the nation. Not coincidentally, New Jersey is one of the leading states for computing and high technology businesses. Thirty of the nation's fastest growing technology companies are based in the state, and New Jersey ranks 7th in the nation as a cyberstate and 8th for venture capital investment - \$3.5 billion - in information technology and software. New Jersey offers the highest median salary in the nation for information systems managers.

WHAT COMPUTING RESOURCES ARE AVAILABLE?

The College of Computing Sciences maintains and offers computing facilities for its students, faculty, and staff. The computing facilities include research laboratories housing research in areas of computing such as: networking, real-time systems, hypermedia, parallel processing, and collaborative systems. Users have access to the state-of-the-art software and hardware including Oracle database, UNIX-based workstations and Microsoft Windows PCs supported by file and compute servers. Internet access, departmental intranets, and conferencing systems provide an integrated infrastructure for supporting teaching and research.

WHAT WILL I LEARN?

The objective of the MS in IT Administration and Security offered by the Information Technology (IT) program at NJIT is to educate students in the concepts, principles, techniques, and practices needed to administer a modern IT environment and its security. Students will gain extensive practical experience doing IT administration. Security will be a component of core courses in addition to specific security courses. Those who complete the program will be well prepared to play leadership roles as database, network, security and web services administrators, as enterprise application administrators, and as IT administration managers.

WHAT COURSES ARE OFFERED?

Required Courses

IT 6xx	Wireless Network Security & Administration
IT 6xx	Database Administration
IT 6xx	System Administration
CS 656	Internet and Higher Layer Protocols (or ECE 637 Introduction to Internet Engineering)
CS 696	Network Management and Security (or ECE 683 Network Management and Security)
IT 6xx	Web and Domain Server Administration

Elective Courses (EXISTING – select four)

CS 631	Data Management System Design
CS 632	Advanced Database System Design
CS 633	Distributed Systems
CS 652	Computer Networks-Architectures, Protocols and Standards (or ECE 683 Computer Network Design and Analysis)

IS 631	Enterprise Database Management
IS 677	Information System Principles
IS 679	Management of Computer and Information Systems
IS 680	Information Systems Auditing
IS 681	Computer Security Auditing
ECE 645	Wireless Networks
CS 697/	Principles of Broadband Networks
ECE 639	
HRM 601	Organizational Behavior

ARE THERE OPPORTUNITIES FOR REAL-WORLD EXPERIENCE?

There are abundant co-op and internship opportunities .

ARE THERE OPPORTUNITIES FOR RESEARCH EXPERIENCE?

Students can work alongside faculty in cutting edge research in such areas as the SmartCampus project, emergency management information systems, e-customer relations, and multimedia group collaboration.

WHAT BACKGROUND IS REQUIRED?

Applicants are expected to have an undergraduate degree, preferably in Information Technology, Computer Science, Computer Engineering, Information Systems, or a related field, with a GPA of 2.8 or higher. Applicants not satisfying these criteria will be considered for conditional admission on a case-by-case basis. This includes students whose bachelor's degree is in a non-technical field but who have professional experience in computing or systems administration. Such students are expected to complete some or all of a preparatory Bridge program.

IS PART TIME STUDY AVAILABLE?

Evening and weekend courses accommodate the working professional, who may pursue the degree part time.

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

FOR FURTHER INFORMATION

IT Program
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TO APPLY

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