

# IT Administration

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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. 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 systems administrator jobs over the next decade as firms across all industries place a high priority on safeguarding their data and systems.

Who is suited for this program?

This certificate is recommended for anyone involved or interested in network and computer systems and the security of those systems.

What will I learn?

This certificate will provide the basics of IT administration as well as a solid technical background in databases and networking. Students learn concepts, principles, techniques, and practices needed to administer and secure a modern IT environment. Security is a main component and discussed in detail. Topics covered include:

- Administration of host server systems in a modern operation system environment
- Fundamentals of wireless network security and administration
- Protocols and standards of TCP/IP suite that govern the functions of the Internet
- Security control risks and issues
- Various network architecture and protocol standards

Why study Information Technology Administration at NJIT?

NJIT has a long history of innovation in digital communications. With one of the most computing intensive campuses in the world, NJIT has pioneered the application of new technologies as learning tools. The university educates one of the largest groups of information technology students in the nation. 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. 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.

Prerequisites

NJIT's standard admission requirements apply to this graduate certificate. Applicants should have an undergraduate degree in information technology, computer science, computer engineering, information systems or a related field. Students who lack an appropriate undergraduate background may be required to complete some or all of the following bridge courses.

- IT 114 Advanced Programming for Information Technology
- IT 120 Introduction to Network Technology (networking basics, protocols, modern OS)
- IT 220 Wireless Networks (tools and technologies, designing wireless networks)
- IT 230 Computer & Network Security (system defense, attacks, security protocols, and recovery)
- IT 340 Introduction to System Administration (Linux/unix admin)
- IT 420 Computer Systems and Networks (standards, connectivity, performance, protocols, network configurations, network design, wireless technology, management and simulation)
- IS 331 Database System Design & Management

Related Degrees

Courses in the Graduate Certificate program in Information Technology Administration can be wholly applied to NJIT's MS in IT Administration and Security (<http://it.njit.edu/academics/graduate/>).

Take Note

Check the course descriptions for more information. Some courses have prerequisites and must be taken in order. Complete course descriptions can be found in the NJIT Graduate Catalog (<http://catalog.njit.edu/graduate/>).

Gainful Employment Disclosure

Click here (<http://www.njit.edu/graduatestudies/sites/graduatestudies/files/gainfulemployment/it-administration-cert-gainful-employment.html>) for the Gainful Employment Disclosure for this program

What are the Required Courses?

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Core Courses</b>		
CS 656	Internet and Higher-Layer Protocols	3
IT 610	Systems Administration	3
IT 620	Wireless Networks Security and Administration	3
<b>Electives</b>		
Select one of the following:		3
CS 631	Data Management System Design	
IS 631	Enterprise Database Management	
IT 635	Database Administration	
IT 640	Network Services Administration	