Internet Engineering

NJIT

New Jersey Institute of Technology

A Public Research University

The Master of Science
in Internet Engineering

Department of Electrical
and Computer Engineering (ECE)
Newark College of Engineering

Design tomorrow's communications infrastructure as an Internet engineer

NJIT's Master of Science in Internet Engineering is the first program of its kind in the nation, developed to prepare a new type of technical professional with the engineering skills required for design, deployment and evaluation of systems that support the Internet. This unique program draws upon the university's strengths in electrical and computer engineering, computer and information science, management of technology, and entrepreneurship and management information systems.

Questions & Answers

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WHY STUDY INTERNET ENGINEERING?

The explosive growth in Internet-related technologies has created a need for engineers who understand internetworking and the emerging multimedia technologies that support on-line functions. Internet engineers are needed to develop, design and evaluate interfaces, computer networks that support Internet activities, front pages, and the tools to navigate and make secure web sites. These skills cannot be learned adequately in traditional degree programs. NJIT's M.S. in Internet Engineering is the first degree program in the nation that focuses exclusively on Internet technologies as they relate to engineering, emphasizing design and analysis problems in both wireline and wireless computer networking and internetworking.

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WHY IS NJIT THE FIRST UNIVERSITY TO OFFER A DEGREE IN INTERNET ENGINEERING?

The ECE Department at NJIT has been very successful in teaching and research activities in the computer networking field. NJIT also has a long history of innovation in on-line communications. University faculty created the first computer-mediated communications system in 1976. As 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.

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. New Jersey ranks 8th in the nation for high technology employment and offers the second highest wages in the nation for technology workers.

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WHAT RESEARCH OPPORTUNITIES EXIST?

NJIT's faculty includes nationally recognized researchers in networking, telecommunications, multimedia and embedded systems. Students have the opportunity to participate in cutting-edge research at such facilities as the New Jersey Multimedia Research Center, the New Jersey Center for Wireless Telecommunications, and several other research laboratories.

WHO TEACHES THE COURSES?

Distinguished faculty from the Department of Electrical and Computer Engineering teach most of the program's courses. www.njit.edu/ECE/faculty.htm

WHO SHOULD APPLY? WHAT IS REQUIRED?

Computer engineers, electrical engineers with a telecommunications background, and computer scientists with some background in networking will benefit from the program. The curriculum requires a foundation in computer and communications fundamentals, such as signals and systems, basic communication systems, programming, data structures and algorithms, and computer organization. A bridge program is available to students who lack specific prerequisites.

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IS FINANCIAL AID AVAILABLE?

Various financial support and graduate award options are available to graduate students, including teaching, research and graduate assistantships; fellowships; special awards; loans and work-study; cooperative education industry positions; and curricular practical training. A number of financial support options are available for targeted groups. These include Minority Academic Career (MAC) Fellowships, National Consortium for Graduate Degrees for Minorities in Engineering and Science (GEM) Fellowships, and NJIT Presidential Fellowships. For further information, see the Graduate Studies web site at www.njit.edu/Admissions/fin.htm.

FOR FURTHER INFORMATION
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PROGRAM SUMMARY

Degree Awarded: Master of Science in Internet Engineering
Credits Required: 30
Program Objective: To educate students in the field of Internet Engineering, with emphasis on computer internetworking and relevant applications.

SUMMARY OF ADMISSIONS REQUIREMENTS

B.S. in Computer Engineering, Electrical Engineering
or other relevant discipline
GPA of 3.0 on a 4.0 scale required
Math 333 (Probability and Statistics), or EE321 (Random Signal and Noise), or equivalent course; EE333 (Signals and Systems); and CIS 112 (Introduction to Computing or equivalent proficiency in C++ programming)
For an application, contact the Office of Graduate Admissions, (973) 596-3300, or apply on-line at www.njit.edu/Admissions/gradad.htm

CORE COURSES (9 CREDITS):

ECE 637	INTRODUCTION TO INTERNET ENGINEERING
ECE 682	COMPUTER NETWORK DESIGN: AN INTERNET PERSPECTIVE
CIS 602	WWW: APPLICATIONS DEVELOPMENT AND JAVA

NJIT does not discriminate on the basis of sex, sexual orientation, race, age, religion, national or ethnic origin, veteran's status or handicap in its educational programs, activities or employment policies. Campus facilities are accessible to the disabled.