

NJIT

New Jersey's Science &
Technology University

THE EDGE IN KNOWLEDGE

The Master of Science in Telecommunications



Department of Electrical and Computer Engineering

Newark College of Engineering

New Jersey Institute of Technology

WHY PURSUE A MASTER'S IN TELECOMMUNICATIONS?

Telecommunications is one of the most rapidly growing and changing fields in Engineering. Telecommunications specializations are becoming necessary in such diverse fields as financial businesses including banking and stock market, e-businesses, industrial and office information systems, corporate networks, defense, homeland security, the Internet, etc. Recent challenges like high speed networks, multimedia communications, information assurance, broadband access, and fourth generation networks, make the future of the field very exciting. The objective of this program is to educate individuals in one or more of these telecommunications specializations, and to create the high-tech workforce for the telecommunications industry.

WHY STUDY TELECOMMUNICATIONS AT NJIT?

NJIT's Department of Electrical and Computer Engineering is strategically leading in teaching and research activities in telecommunications through interaction and growing partnerships with companies including AT&T, Alcatel-Lucent Technologies-Bell Laboratories, NEC, IBM, Sarnoff, Sun Microsystems, PSE&G, Globix, Telcordia, GEC Marconi, Anadigics, Nokia, ITT, Panasonic, Mitsubishi, Interdigital, Samsung, and Mitre Corp.

This program draws upon the university's strengths in electrical and computer engineering, computing sciences, management of technology, and management information systems to prepare the workforce with the engineering skills required for design, deployment and evaluation of various telecommunications systems.

Not coincidentally, New Jersey is one of the leading states for computing and high technology businesses. New Jersey ranks 8th in the nation for high technology employment and offers the second highest wages in the nation for technology workers.

WHO TEACHES THE COURSES?

In addition to more than 36 full-time faculty members, students are taught by adjunct professors from industry that offer specialty courses in their areas of expertise and can also serve on thesis and dissertation committees.

DO STUDENTS HAVE OPPORTUNITIES FOR RESEARCH?

NJIT's faculty includes nationally recognized researchers in telecommunications, networking, security, wireless communications, signal processing, multimedia, and embedded systems. Students have the opportunity to work, one-on-one, with faculty researchers pursuing projects in cutting edge technologies at such state-of-the-art centers and labs as the Center for Wireless Communications and Signal Processing Research, Advanced Networking Laboratory, and several other research laboratories. Ongoing research projects are well funded by federal funding and leading industries. Students have opportunities to conduct thesis research with participating industry, hospitals, and university centers and departments

IS PART TIME STUDY AVAILABLE?

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

PROGRAM SUMMARY?

Degree Awarded: Master of Science in Telecommunications

Credits Required: 30

Program Objective: To educate students in the field of Telecommunications, with specializations in networking, communications systems, and information administration.

Core Courses:

ECE 642	Communication Systems I
ECE 644	Introduction to Wireless and Personal Communications Systems
ECE 673	Random Signal Analysis I
ECE 683	Computer Network Design and Analysis
OR	
CS 652	Computer Networks-Architectures, Protocols and Standards

Project, Thesis (optional)

ECE 700	Master's Project in Internet Engineering (3 Credits), replace 1 Elective
ECE 701	Master's Thesis in Internet Engineering (6 Credits), replace 2 Electives

IS FINANCIAL AID AVAILABLE?

Financial support for full-time students in the MS program is limited (available via research projects conducted by ECE faculty members). Full-time domestic and international students may also be eligible to receive the Provost Fellowship. For further information on financial aid:

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

WHO SHOULD APPLY?

Holders of BS in computer engineering, electrical engineering, computer science, the sciences or other closely related areas may apply for 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.

FOR FURTHER INFORMATION

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ece.njit.edu/academics/graduate/ms-telecom.php

TO APPLY:

Office of Graduate Admissions,

(973) 596-3300, or apply on-line at

www.njit.edu/admissions/graduate/howtoapply