

NJIT

New Jersey Institute of Technology
A Public Research University

The Doctoral Program in
Information Systems
College of Computing Sciences

Advance the state of
the art in theory and practice of
information systems

The underlying methodological and scientific frameworks of business have been transformed by dramatic developments in information systems, computing technology, economics, and related social sciences. The area of information systems has shown explosive growth as organizations have become increasingly complex, electronically integrated, and interdependent. NJIT's Ph.D. program in information systems emphasizes the behavioral and organizational context of computer-based information systems, their requirements, design, implementation, user acceptance, management, and the evaluation of their effectiveness and consequences.

Information Systems

Questions & Answers



WHY STUDY INFORMATION SYSTEMS?

Information systems is the study of how to apply computer technology to a human social system. The technological advances of the past decade, have opened up a wide range of opportunities in such diverse fields as manufacturing, health care, learning systems, government and the arts for professionals with the background to research and develop new application areas. At the same time, the ongoing transformation to a knowledge-based economy has created a robust demand throughout the United States for highly skilled professionals in all areas of information technology. In the past decade, employment in the U.S. computer and software industries has nearly tripled, creating a shortage of information systems professionals that is expected to last for the foreseeable future.

WHY STUDY INFORMATION SYSTEMS AT NJIT?

With one of the most computing intensive campuses in the U.S., NJIT has been ranked among the top10 "most wired" universities for five consecutive years by Yahoo! Internet Life. Its newly-established College of Computing Sciences builds on three decades of excellence in computer science education and research, and boasts one of the largest educational programs in the country, with more than 2,400 students enrolled in 13 bachelor's, master's and doctoral programs. 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 8th in the nation for high technology employment concentration. New Jersey offers the second highest wages in the nation for technology workers.

WHAT RESEARCH OPPORTUNITIES EXIST?

NJIT's faculty includes internationally recognized researchers in Computer-mediated communication, human-computer interaction, multimedia and decision support systems. The Information Systems Department has three research labs: the Collaborative Hypermedia Lab and Learning Systems Lab and the new electronic arts habitat (eARTh) Lab. In addition, the university has several multidisciplinary research centers in the information technology field.



WHO TEACHES THE COURSES?

Distinguished faculty from the Department of Information Systems teach the program's courses. www.is.njit.edu/people.html#faculty

IS PART TIME STUDY AVAILABLE?

The program welcomes part time students. Many required courses are available via distance learning. NJIT's Collaborative Doctorate Program allows professionals to pursue a Ph.D. while continuing their full-time employment. www.njit.edu/Directory/Admin/Graduate_Studies/industry.html

IS FINANCIAL AID AVAILABLE?

Various financial support and graduate award options are available to graduate students at NJIT, including teaching, research and graduate assistantships; fellowships; special awards; loans and work-study; cooperative education industry positions; and curricular practical training. For further information, see the Graduate Studies web site at www.njit.edu/Directory/Admin/Graduate_Studies/Welcome.html.

SELECTED RESEARCH AREAS

Collaborative Systems; Computer-Mediated Communications
Human-Computer Interaction
Educational Use of Technology
Electronic Commerce
Hypermedia
Web Engineering
IS management
Information Retrieval
Databases

Decision Analysis and Support Systems
Software Engineering, Systems Analysis and Design
Process Reengineering & Requirements Development
Medical Informatics; Bioinformatics
Visualization
Virtual Communities

AFFILIATED RESEARCH CENTERS

- Center for Applied Genomics www.cag.icph.org/index.html
- Center for Computational Biology and Bioengineering ylem.njit.edu/
- Center for Applied Mathematics and Statistics math.njit.edu/CAMS/research.html
- Center for Communications and Signal Processing Research www.ccspr.njit.edu/ccspr.html
- Center for Digital Media and Video www.rpi.edu/web/CDVMR/
- New Jersey Center for Multimedia Research www.njcmr.org/
- New Jersey Center for Pervasive Information Systems www.ee.princeton.edu/~njpit/
- New Jersey Center for Wireless Networking and Internet Security
- New Jersey Center for Wireless Telecommunication www.njcwit.org/
- WebCenter for Asynchronous Learning Networks Effectiveness Research (www.ALNResearch.org)



PROGRAM SUMMARY

Degree Awarded: Ph.D. in Information Systems

Credits Required: 90

Program Objective: To produce scholars who possess a commanding knowledge of the nature of information systems, its applications and research, and the supporting technology in computer science. Graduates will be prepared for research, teaching or practice in the field.

SUMMARY OF ADMISSIONS REQUIREMENTS

Baccalaureate degree from an accredited institution

GPA of 3.5 or better on a 4.0 scale required

GRE, GMAT or MCAT scores. (Normal minimum GRE total score is 1850.)

Coursework in calculus, post-calculus probability and statistics, and discrete math methods

Four undergraduate courses in computer science in such areas as programming, data structures, databases, software engineering or communications.

Working knowledge of one developmental computer language such as C++ or JAVA

www.njit.edu/Admissions/doctoral.htm

CORE COURSES IN COMPUTING SCIENCES TOOLS AND METHODOLOGIES (12 CREDITS):

to be selected from the following areas:

Programming languages and methodologies

Database design

Communications and networks

Artificial Intelligence

Simulation

CORE COURSES IN INFORMATION SYSTEMS (12 CREDITS)

Software Design and Production Methodology

Information System Principles

Information System Evaluation

Management of Computer and Information Systems

APPLICATION AREA TRACKS (12 CREDITS)

Management Information Systems

Industrial Engineering

Multimedia Communications

Biomedical Informatics

Information Systems Research Methods

(Others may be tailored for individual students)

FOR FURTHER INFORMATION

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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.