Management Science & Information Systems Major

Description & Careers

The Field

Nearly all organizations rely on computer and information technology (IT) to conduct business and to operate efficiently. Computer systems analysts work with specific types of computer systems—for example, business, accounting, and financial systems or scientific and engineering systems—that vary with each type of organization.

Analysts consult with an organization’s managers and users to define the goals of the system and then design a system to meet those goals. Analysts use techniques such as structured analysis, data modeling, information engineering, mathematical model building, sampling, and a variety of accounting principles to ensure their plans are efficient and complete. They also may prepare cost-benefit and return-on-investment analyses to help management decide whether implementing a proposed technology would be financially feasible.

Analysts are increasingly working with databases, networks, object-oriented programming languages, client–server applications, and multimedia and Internet technology. Prospective students should have an aptitude for computers and quantitatively oriented material. Specific skills taught to MSIS students include database design and management, fundamentals of business computer programming, information systems security, statistics and forecasting, optimization models, and quantitative uncertainty and risk modeling.

Positions

Graduates can expect to work in both technical and managerial capacities on development of information technology projects for collecting, managing, analyzing, and acting on business data. For jobs in a business environment, employers often seek applicants with at least a bachelor’s degree in a business-related field such as management information systems (MIS). Increasingly, employers are seeking individuals who have a master’s degree in business administration (MBA) with a concentration in information systems. Technological advances come so rapidly in the computer field that continuous study is necessary to remain competitive.

Compensation

According to the 2012 U.S. Bureau of Labor Statistics Occupational Outlook Handbook, bachelor’s degree candidates in information systems management received offers with a median salary of $78,000.

Key Facts:

- The MSIS major is only offered on the Newark campus
- Constantly updated curriculum prepares students for careers in:
  - Information technology
  - Risk management
  - Technical/quantitative supply chain logistics
  - Operations planning
- Business graduates with strong information technology skills are highly prized, with demand exceeding supply for the better part of a decade
- The MSIS major teaches skills in Information Technology, Data Analysis and Decision Analysis and Modeling

Excellence

Talented students, outstanding and demanding faculty, prestigious research University.

Diversity

Diverse and driven student body, diverse faculty, and a wide array of programs in diverse locations.

Access

Education that prepares students to make positive contributions to the economy of New Jersey and the world.