M.S. in Business & Information Systems

M.S. in Business & Information Systems (30 credits)

Training Business Information Management Professionals

Modern business moves at the speed of data, with mission-critical decisions being made every day based on information from different sources. **Business information management professionals** are needed to harness the power of that knowledge pipeline and translate it into effective, actionable business strategy.

The M.S. in Business & Information Systems prepares its graduates for all areas of this interdisciplinary field, whether it's behind the computer or in front of the boardroom. Students develop expertise in working with user requirements and understanding information architecture, gain exposure to accounting, finance or human capital, and build both analytical skills and business acumen comparable to an MBA. To be admitted to the program, we require a basic background in software development (programming, data structures and algorithms). A GRE score is not required.

This part-time degree program involves 10 courses of three credits each (five core courses and four electives), typically taught over five semesters of 15 weeks each **(including summer)**. Courses consist of formal lectures as well as discussions, group work, case studies, business plans and programming projects.

The program curriculum includes tools and technology such as Python programming, data management in relational and NoSQL databases, and Tableau for data visualization. Discussions and group projects include project and risk management, and scalable/adaptive business processes. Students complete hands-on homework assignments and projects covering both theory and applications using real data with guidance from the professor and teaching assistants.

Recommended part-time credit schedule:

Two courses **(six credits)** per semester over five consecutive semesters, including Summer. Start is possible in Fall, Spring or Summer semesters.

Core (required) courses:

- **HRM 601 Organizational Behavior**
- **IS 601 Web Systems Development**
- **IS 631 Enterprise Database Management**
- **IS 663 System Analysis and Design**
- **IS 665 Data Analytics for Information Systems**
- **IS 677 Information Systems Principles**
- **IS 678 IT Service Management**
- **IS 684 Business Process Innovation**

Additional sample electives:

- **CS 636 Data Analytics with R Programming**
- **CS 643 Cloud Computing**
- **CS 644 Introduction to Big Data**
- **CS 675 Machine Learning**
- **CS 677 Deep Learning**
- **IS 650 Data Visualization and Interpretation**
- **IS 661 User Experience Design**
- **MATH 661 Applied Statistics**

NJIT
New Jersey Institute of Technology

Prerequisites and Admissions:

To be eligible for admission, a student must have a B.S. degree with a minimum GPA of 2.8 on a 4.0 scale and have the following background **(typically obtained through a B.S. in a STEM field)**:

- **Programming:** Basic object-oriented programming constructs, writing and debugging programs, iteration, recursion, structures and arrays
- **Data Structures and Algorithms**: Basic data structures, search and sort algorithm analysis

Applicants lacking this background may enroll in the Certificate in Data Mining or Certificate in Data Visualization to acquire it and then continue to the M.S. program while transferring all credits, if they maintain a minimum GPA of 3.0 in the certificate program.

A GRE score is not required.

Program Outcomes:

- Manage data retrieval, analysis and visualization for your team, presenting conclusions and guiding decision-making.
- Develop applications for data collection and use scripting to distill and summarize large data sets.
- Design interfaces that allow for ease of use for both software and data sets.
- Analyze enterprise-scale systems and apply best practices for business processes to improve efficiency, agility, compliance and effectiveness.
- Process text, financial information or unstructured data on the Internet to extract insights and provide recommendations.

For more information and to apply, contact:
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