

Enterprise Systems

GRADUATE PROGRAM



STEVENS
Institute of Technology

Mainframes are the essential computing vehicle for the world's largest, most influential organizations. The IS Enterprise Systems program at Stevens Howe School provides vital knowledge necessary to address the management and architectural challenges for leveraging large systems (e.g., mainframe computing). Mainframes are one of the most mature, reliable, robust, and scalable computing options available today, however knowledge of the mainframe architecture can be difficult to acquire, particularly for established and emerging managers. The IS Enterprise Systems Program, created in collaboration with IBM, provides students in the Master of Science – Information Systems Program with the opportunity to learn about large systems in the context of strategic IT planning. A four course Graduate Certificate is also available. Businesses can leverage large systems to improve service, reduce support costs, and scale their e-businesses to meet incredibly challenging demands.

As personal computers and UNIX grew in popularity, a misconception arose that mainframes would ultimately be replaced. Quite the contrary; organizations that process high volumes of vital transactions have found that large systems are the perfect solution for delivering the service that business and customers demand. Mainframes are relied on today by banks, insurance companies, pharmaceuticals, and a range of manufacturers that run their most critical business on mainframes. Most importantly, the new mainframe is connected to the network, making it the ideal enterprise server environment.

Organizations are increasingly relying on large systems to host their complex Linux, web server, and e-commerce environments. The flexibility, reliability, and robustness make large systems the optimal choice for many types of businesses. Technology managers, therefore, must have an understanding of the functionality and strategic technical values of large systems.

PROGRAM OVERVIEW

The IS Enterprise Systems Master's Degree and Certificate Programs provide exposure to enterprise systems to provide IT professionals with a broad overview of the large systems technical environment, emphasizing IS management issues. The program is available as a concentration in both the MSIS and MBA degrees as well as a four course Graduate Certificate.

COURSE DESCRIPTIONS

MIS 610 Managing Enterprise Systems This course includes a broad survey of Enterprise Systems technology and IS management considerations with emphasis on the mainframe. The course takes a strategic management perspective in exploring the mainframe's architectural capabilities and impacts. Specific topics of study include Introduction to the Mainframe Environment, Total Cost of Ownership, Cost of Downtime, Scalability, Security, Access Management, and Mainframe Careers. Enterprise Systems case studies are explored throughout the course.

MIS 620 Analysis and Development of Information System This course focuses on the analysis and development of systems to meet the increasing need for information within organizations. It presents and analyzes various topics such as systems development life cycle, analysis and design techniques, information systems planning and project identification and selection, requirements collection and structuring, process modeling, data modeling, design of interface and data management, system implementation and operation, system maintenance, and change management implications of systems. It looks at current methods and tools such as rapid application development, prototyping, and computer-aided software development (CASE).

MIS 731 Integrating IS Technologies on the Mainframe This course focuses on the issues surrounding the design of overall information technology architecture. The traditional approach in organizations is to segment the problem into 4 areas – network, hardware, data, and applications. Instead, this course will focus on the interdependencies among these layers. The student will learn how to design in the large, make appropriate choices about architecture in relationship to overall organization goals, understand the different mechanisms for coordination available, and create a process for establishing ongoing enterprise architecture.

Students in the IS Enterprise Systems concentration can choose from the following Computer Science and Engineering courses in order to complete the four-course certificate:

ELECTIVE COURSES (select one):

- MIS 710 Enterprise Systems Management**
- MIS 730 Integrating IS Technologies**
- MIS 750 Management of IT Organizations**
- CS 528 Systems Programming for Enterprise Computing**
- CS 549 Distributed Systems**
- S00E 780 Engineering of Agile Systems and Enterprises**
- S00E 790 Design of Agile Systems and Enterprises**

Students are expected to have professional experience working with mainframe computing systems and must satisfy any course prerequisites to be admitted to the program.

FOR FURTHER INFORMATION

Paul Rohmeyer, Program Coordinator

Phone 201.216.8107 **Fax** 201.216.5385

Email Paul.Rohmeyer@stevens.edu

Or visit: <http://Howe.Stevens.edu/msis>

Howe School of Technology Management

Stevens Institute of Technology, Castle Point on Hudson, Hoboken, NJ 07030

