

## Stevens Institute of Technology 2006-2007 Catalog

### [Table of Contents](#)

### [Calendar](#)

### [Introduction](#)

### [Undergraduate Programs](#)

### [Graduate Programs](#)

### [School of Sciences and Arts](#)

### [School of Engineering](#)

### [School of Technology Management](#)

- List of Programs and Faculty
- Undergraduate Programs
- >> Graduate Programs
- Doctoral Program
- Courses

### [Interdisciplinary Programs](#)

### [ESL and Special Courses](#)

### [Physical Education, Athletics and Recreation](#)

### [Research Environment](#)

### [Student Services](#)

### [Financing Education](#)

### [Student Life](#)

### [Learning about the campus](#)

### [Policies](#)

### [Administrative Directory](#)

### [Faculty Directory](#)

### [Travel Directions](#)

### [Campus Map](#)

## The Wesley J. Howe School of Technology Management III



[Master of Science - Management](#)

[Master of Business Administration - Technology Management](#)

[Master of Science - Master of Business Administration in Technology Management](#)

[Master of Science in Information Systems](#)

[Master of Science - Telecommunications Management](#)

[Executive Master of Technology Management \(EMTM\)](#)

[Executive Master of Business Administration \(E.M.B.A.\)](#)

[Course Number Changes](#)

### GRADUATE PROGRAMS

Business success in the 21st century will be increasingly dependent on the strategic development and use of technology. This is a complex challenge since the solutions to many business problems rely on the convergence of a number of technologies and their proper alignment with customer requirements and various other business elements. Therefore, the ability to manage and market technology creatively is essential for enhancing business competitiveness. The Wesley J. Howe School of Technology Management has been designed to meet this need. It features a spectrum of customer-oriented curricula to accommodate gaining expertise and training in important technology management concentrations and research endeavors.

Currently, the School of Technology Management offers many graduate degree programs: the Master of Science in Management, the Master of Science in Information Systems, the Master of Business Administration in Technology Management, the Master of Technology Management for Experienced Professionals, the Master of Business Administration in Technology Management for Experienced Professionals, and the Doctor of Philosophy Degree with concentrations in Information Management, Technology Management, and Telecommunications Management. In addition, the School participates in several interdisciplinary graduate programs: a Master of Science in Telecommunications Management (with the Electrical and Computer Engineering department), a Master of Science in Information Systems with technical interdisciplinary tracks: Computer Science, Quantitative Software Engineering, Information Security, E-commerce (with the Computer Science department), Integrated Information Architecture (with the Electrical and Computer Engineering department), and Systems Engineering (with the Systems Engineering and Engineering Management department).

### Stevens Undergraduates in Simultaneous Degree or Deferred Graduate Credit Programs

Undergraduate students with junior or above standing who have at least a 3.0 GPA may obtain permission to take graduate courses by completing a study plan with the Program Director and submitting it to the Registrar's Office. Registration in graduate courses requires permission of the course instructor. Undergraduate students are not permitted in the Master of Science - Information Systems program or courses. Students must obtain a signed certification of standing prior to seeking permissions. This form is available from the Registrar's web site.

[back to top](#)

### MASTER OF SCIENCE

## **Master of Science - Management**

The Master of Science - Management program focuses on the practice of management and is grounded in a variety of analytic and administrative approaches drawn from the fields of management, economics, applied psychology, and quantitative methods. The philosophy of the program is that knowledge of these areas is only one of the components of an educated manager. In addition to knowledge, it is the steady development of conceptual reasoning that signals the growth of integrative critical thinking and judgment – the hallmarks of professional management practitioners. To accomplish this educational goal, all students take a set of common core courses and select additional courses based upon their chosen concentration. The Master of Science in Management core includes coursework in technology and innovation management, which reflects the focus of both the Howe School and Stevens Institute of Technology.

This 12-course, 36-credit program leads to the degree of Master of Science in Management and is designed for working professionals with at least two years of work experience. However, applicants who do not meet this work experience requirement, but have outstanding academic records, will be considered for admission. Admission to the program requires a bachelor's degree with at least a "B" average, and two letters of recommendation. Prerequisites may include a semester of microeconomics (MGT 503 or equivalent) and a semester of introductory calculus (MA 501 or equivalent). Admissions decisions are made on a rolling basis, so students are encouraged to apply at any time during the year.

Students must discuss their program plans with their advisors, whose names are listed on the Letter of Acceptance. Advisors will be able to recommend appropriate choices and may be able to waive required courses depending on previous educational accomplishment. Upon evidence of satisfactory prior completion of a required course, students may, upon academic advisor approval, substitute an elective.

All international students who are applying who have English as a second language will need a TOEFL score of 550 (213 for computer-based) and must take a Stevens English test upon arrival, which will include both the TOEIC (Test for English for International Communication) and a written essay exam. As a result of these exams, those students who do not become exempt from developmental English will be placed in an appropriate English course offered by Stevens. Following completion of the course(s), the student must take a post-test and pass in order to be exempt from future language courses. Satisfaction of the language skills requirement must occur within the first year of study at Stevens. Either the GRE or GMAT examination is also required for international students.

Seven concentrations are available: General Management, Global Innovation Management, Information Management, Pharmaceutical Management, Project Management, Technology Management, and Technology Commercialization. Students considering doctoral study are encouraged to complete a master's thesis as part of their degree.

[back to top](#)

### **Common Core Courses for Master of Science in Management**

MGT 600 Managerial Accounting  
MGT 607 Managerial Economics  
MGT 680 Organizational Behavior and Theory (or MGT 612 for Project Management concentration)  
MGT 690 Organization Theory and Design  
MGT 609 Introduction to Project Management  
MGT 620 Statistical Models

Additional Core Courses are specified for each concentration.

### **General Management Concentration**

The General Management concentration provides students with a basic grounding in the finance and marketing functional areas of management. It also requires students to apply their broad-based understanding of organizations to specific problems of project management and strategic management. In addition to the common core courses, all students who choose the General Management concentration are required to take additional core and concentration courses as follows:

#### **Additional Core Courses**

MGT 671 Technology and Innovation Management  
MGT 679 Management Information Systems

#### **Concentration Courses**

MGT 623 Financial Management  
MGT 641 Marketing Management  
MGT 725 Strategic Management

#### **Electives**

Students will choose one elective with the approval of their Academic Advisor.

[back to top](#)

### **Global Innovation Management Concentration**

In the current era of globalization, firms that

depend on innovation as their source of growth often need to create and manage their innovations on a global basis. This emerging trend, with its unique promise and complexity, is the focus of the Global Innovation Management concentration. Students learn the business issues, motivations, and processes of doing international and global business, with specific attention given to innovation management in this environment. They also gain awareness of the social impact on host countries.

In addition to the common core courses, students in the Global Innovation Management concentration will also take core and concentration courses as follows:

#### **Additional Core Courses**

MGT 671 Technology and Innovation Management  
MGT 679 Management Information Systems

#### **Concentration Courses**

MGT 630 Global Business and Markets  
MGT 650 International Business Management  
MGT 673 Global Innovation Management

#### **Electives**

Students will take one elective with the approval of their Academic Advisor. MGT 641 Marketing Management and MGT 632 Power and Politics in International Business are recommended.

#### **Pharmaceutical Management**

Technology plays a vital role in the pharmaceutical and biotechnology industries. Advances in, robotics, in silico simulation, high-throughput synthesis and screening, genomics, and information technology, to name a few, present tremendous opportunities and challenges. In addition, most pharmaceutical companies engage in numerous strategic alliances and partnerships, which now almost always involve the sharing and management of advanced technologies, as well as complex intellectual property issues. Scientists, clinicians, and other business people are increasingly called upon to manage complex technological environments or to deal extensively with those who do.

This program is targeted broadly at professionals across the whole of the

pharmaceutical industry whose jobs require that they manage functions that use technology extensively. This encompasses most of the functional areas in today's pharmaceutical companies and includes areas such as discovery research, clinical research and operations, regulatory affairs (especially those areas involved in the compilation and publication of submissions), market research, and quality assurance. Individuals in contract research organizations (CROs), contract laboratories, consulting firms, and other businesses that supply services to the pharmaceutical industry will also find the program of interest.

**Additional Core Courses**

MGT 671 Technology Management  
MGT 679 Management Information Systems

**Electives (Choose One)**

MGT 683 Introduction to Pharmaceutical Manufacturing  
MGT 684 Regulation and Compliance in the Pharmaceutical Industry

**Concentration Courses**

MGT 681 Managing Pharmaceutical Research and Development  
MGT 682 Logistics, Marketing, and Sales in the Pharmaceutical Industry

**Information Management Concentration**

The Information Management concentration focuses on management skills and the knowledge required to make efficient use of information in the organization. Today, more than ever, there is a pressing need for information systems that effectively support the strategic objectives of the organization. Consequently, the individuals creating and managing such systems have to be much more familiar with the business aspect of their organization than was necessary in the past. This concentration blends significant aspects of both business management and information systems knowledge, thereby preparing students to specify, develop, and manage information systems as a strategic organizational resource.

This program is geared for the business professional seeking an understanding of information management. IT professionals should review the Master in Information Systems degree.

[back to top](#)

In addition to the common core requirements, including MGT 679 Management Information Systems, all students who choose the

Information Management concentration will take six of the following concentration courses, with the approval of their academic advisor:

**Concentration Courses (choose six)**

MIS 620 Analysis and Development of Information Systems  
 MIS 630 Data and Knowledge Management  
 MIS 640 Managing Information Networks  
 MIS 760 IT Strategy  
 MIS 750 Management of IT Organizations  
 MIS 710 Enterprise Systems Management  
 MIS 730 Integrating IS Technologies

**Project Management Concentration**

The Stevens Project Management Concentration provides education and training in project management at the graduate level. While pursuing the M.S. Management degree, students can also earn the Graduate Certificate in Project Management (GC/PM) as they prepare to achieve the Project Management Professional (PMP) certification independently administered by the [Project Management Institute \(PMI\)](#).

The Project Management concentration presents the theory and practice of project management in modern organizations. Generally accepted and innovative practices in project management are presented in a manner that links project planning and execution with the achievement of strategic business goals. The Project Management concentration teaches new concepts in strategic project management and leadership that were developed by Howe faculty and have achieved international acclaim.

In addition to the core requirements, all students who choose the Project Management concentration take additional core and concentration courses as follows:

**Additional Core**

MGT 671 Technology and Innovation Management

**Concentration Courses**

MGT 618 Engineering Economics and Management Policy or MGT 621 Management Models or MGT 623 Financial Management  
 MGT 610 Strategic Perspectives on Project Management  
 MGT 612 The Human Side of Project Leadership  
 MGT 614 Advanced Project Management

Students will choose two electives with the approval of Academic Advisor:

MGT 641 Marketing Management is a recommended elective; MGT 671 Technology and Innovation Management; MGT 677 Emerging Technologies.

[back to top](#)

### **Technology Management Concentration**

Managing technological resources and processes in organizations is increasingly important as more firms utilize technology to create value or attain strategic goals. The Technology Management concentration focuses on the tools and issues involved in managing these critical resources. Students will develop awareness of the management and strategic implications of technology and innovation processes in product and service firms. They will also gain knowledge of the enterprise as a whole, with particular emphasis on the link between technology and business.

In addition to the core requirements, all students who choose the Technology Management concentration take additional core and concentration courses as follows:

#### **Additional Core**

Mgt 671 Technology and Innovation Management  
Mgt 677 Emerging Technologies

#### **Concentration Courses**

Mgt 618 Engineering Economics and Management Policy  
Mgt 656 Quality and Process Management

#### **Electives**

Students will choose two electives with the approval of their academic advisor; MGT 641 Marketing Management, MGT 673 Global Innovation Management, MGT 725 Strategic Management, MGT 672 Technology Licensing and Finance, and MGT 675 New Product and Service Innovation are recommended electives.

### **Technology Commercialization Concentration**

For new technologies to make the transition from R&D or engineering departments to becoming valuable assets, there are critical issues that define the efficient processes, legal protections, and potential for financial realization

for the firm. This set of courses is designed for professionals who are in or hope to operate in firms that invent, develop, and market technology.

**Additional Core**

MGT 671 Technology and Innovation Management  
MGT 623 Financial Management

**Concentration Courses**

MGT 677 Emerging Technologies  
MGT 672 Technology Licensing and Finance  
MGT 675 New Product and Service Innovation

**Electives**

Students will take one elective, with approval of their academic advisor. Recommended electives are: MGT 641 Marketing Management, MGT 663 Entrepreneurship, MGT 661 Online Marketing, or MGT 725 Strategic Management.

[back to top](#)

**Master of Business Administration - Technology Management**

Our emphasis on technology management distinguishes a Howe School education from that provided by most other management schools. Our research and educational programs focus on the determinants of real value for the firm - product and process innovation and strategic project management. We also emphasize the development of communication and leadership skills through innovative pedagogical techniques and the maintenance of small class sizes, which enable an intimate relationship between students and faculty members.

The M.B.A. in Technology Management (TM) adds general management skills to the knowledge of technology management provided by our M.S. degree programs. Graduates from the M.B.A. in TM program will be able to use their business, technology management, and people skills to align technology trends with customer needs, and to manage their organizations in an increasingly complex and competitive world.

At least two years of work experience is preferred for applicants to the M.B.A. in TM program. However, students who do not meet this work experience requirement, but have outstanding academic records, may be considered for admission. Applicants to the M.B.A. in TM program are required to have a four-year bachelor's degree. All applicants must submit transcripts showing academic achievement in prior studies, two letters of recommendation, a resume, and a score in either a GMAT or GRE examination. International students must also submit a TOEFL score. Students currently enrolled in one of the Howe School's M.S. degree programs may apply to join the M.B.A. in TM program prior to obtaining their M.S.



degree by submitting a written application together with their GMAT or GRE score. Courses taken in the M.S. program may count towards the M.B.A. degree. Similarly, students who are currently enrolled in the M.B.A. in TM program may apply to enroll in one of the Howe School's M.S. degree programs prior to obtaining their M.B.A. in TM degree by submitting a written application.

To obtain the degree of M.B.A. in Technology Management, students must take 20 3-credit courses (60 credits) of course work.

Ten majors are available in the M.B.A. in TM program: Engineering Management, Financial Engineering, Global Technology Management, Information Management, Information Technology in the Financial Services Industry, Information Technology Outsourcing, Information Technology in the Pharmaceutical Industry, Pharmaceutical Management, Project Management, and Telecommunications Management.

[back to top](#)

### **M.B.A. in TM with Engineering Management Major**

The Engineering Management (EM) major prepares students for the role of "Engineering Manager" in a technology-based company. Students in this major take twelve M.B.A. core courses, three engineering management courses, two systems courses and three electives. Prerequisites for this major include a semester of microeconomics (MGT 503 or equivalent) and a semester of introductory calculus.

#### **M.B.A. Core Courses for the EM Major**

MGT 609 Introduction to Project Management  
 MGT 725 Strategic Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 641 Marketing Management  
 MGT 680 Organizational Behavior and Theory  
 MGT 690 Organization Theory and Design  
 MGT 620 Statistical Models  
 MGT 671 Technology Management  
 MGT 657 Operations Management  
 MGT 679 Management Information Systems

#### **Engineering Management Major Requirements**

EM 600 Engineering Economics and Cost Analysis  
 EM 605 Elements of Operational Research  
 SYS 611 Modeling and Simulation  
     or SYS 660 Decision and Risk Analysis  
 SYS 625 Systems Operational Effectiveness and Life-cycle Analysis  
 One Engineering Management Elective

*Plus three advisor-approved electives or a master's thesis plus one advisor-approved elective.*

### **M.B.A. in TM with Financial Engineering Major**

Less theoretical than competing financial engineering programs, the Financial Engineering (FE) major provides students with both managerial and analytical skills specific to the world of finance. Students in this major take eleven M.B.A. core courses, two preparatory courses in mathematics and probability,; six courses specialized to financial engineering, and one elective course. Prerequisites for this major include a semester of microeconomics (MGT 503 or equivalent) and a semester of introductory calculus.

**M.B.A. Core Courses for the FE Major**

MGT 609 Introduction to Project Management  
 MGT 725 Strategic Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 641 Marketing Management  
 MGT 680 Organizational Behavior and Theory  
 MGT 690 Organization Theory and Design  
 MGT 671 Technology Management  
 MGT 657 Operations Management  
 MGT 679 Management Information Systems

**Financial Engineering Major Requirements**

MA 505 Introduction to Mathematical Methods  
 (may be waived by advisor)  
 MA 540 Introduction to Probability Theory (may  
 be waived by advisor)  
 TM 613 Knowledge Discovery and Data Mining  
 MGT 625 Investments and Capital Markets  
 MA/FE 610 Probability and Stochastic Calculus  
 MA/FE 620 Pricing and Hedging  
 MA/FE 621 Computational Methods in Finance **or**  
 CS 535 Financial Computing  
 MA/FE 630 Portfolio Theory and Risk  
 Management

*Plus one advisor-approved elective.*

**M.B.A. in TM with Global Technology Management Major**

The Global Technology Management (GTM) major provides knowledge of the economic drivers and cultural aspects that must be understood by managers seeking success in rapidly expanding global markets. Students in this major take twelve M.B.A. core courses plus four global technology management courses, a course in macroeconomic analysis, and three elective courses. Prerequisites for this major include a semester of microeconomics (MGT 503 or equivalent) and a semester of introductory calculus.

**M.B.A. Core Courses for the GTM Major**

MGT 609 Introduction to Project  
 Management  
 MGT 725 Strategic Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 641 Marketing Management  
 MGT 680 Organizational Behavior and

**Theory**

MGT 690 Organization Theory and Design  
 MGT 671 Technology Management  
 MGT 657 Operations Management  
 MGT 679 Management Information  
 Systems  
 MGT 620 Statistical Models

**Global Technology Management****Major Requirements**

MGT 608 Macroeconomic Analysis  
 MGT 630 Global Business and Markets  
 MGT 632 Power, Politics, and Policy in  
 International Business  
 MGT 650 International Business  
 Management  
 MGT 673 Global Innovation Management

*Plus three advisor-approved electives or a  
 master's thesis plus one advisor-approved  
 elective.*

**M.B.A. in TM with Information Management (IM) Major**

Students taking the M.B.A. in TM Information Management major take a number of general management courses in addition to the courses required for the M.S. in Information Systems degree.

Prerequisites for this major include a semester of introductory undergraduate calculus and MIS 502 Selected Topics in Economics, Statistics, and Accounting, for students not having previous coursework in these areas. For people with little or no information systems professional experience, MIS 501 (Information Management) is a prerequisite.

**M.B.A. Core Courses for the Information Management Major**

MGT 609 Introduction to Project Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 680 Organizational Behavior and Theory  
 MGT 690 Organization Theory and Design  
 MGT 657 Operations Management  
 MIS 661 Marketing Online  
 MIS 662 Legal Issues for the IT Professional  
 MIS 760 Information Technology Strategy  
 MIS 750 Management of Information  
 Technology Organizations  
 MGT 620 Statistical Models

**Information Management Major Requirements**

MIS 663 Entrepreneurship in IT  
 MIS 710 Enterprise Systems Management  
 MIS 730 Integrating IS Technologies  
 MIS 620 Analysis and Development of  
 Information Systems  
 MIS 630 Data and Knowledge Management  
 MIS 640 Network Management

*Plus two advisor-approved electives or a thesis.*

[back to top](#)

### **M.B.A. in TM with IT in Financial Services (ITF) Major**

This major responds to the need for information technology programs that are specific to the financial services community and the software vendors and consulting firms that serve this industry. Prerequisites include a semester of introductory undergraduate calculus and a semester of microeconomics, such as MGT 503 or equivalent.

#### **M.B.A. Core Courses for ITF Major**

MGT 609 Introduction to Project Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 680 Organizational Behavior and Theory  
 MGT 690 Organization Theory and Design  
 MIS 684 Financial Services Marketing and Sales  
 MIS 662 Legal Issues for IT Professionals  
 MIS 663 Entrepreneurship in IT  
 MIS 760 Information Technology Strategy  
 MIS 750 Management of IT Organizations  
 MGT 620 Statistical Models

#### **Information Technology for Financial Services Major Requirements**

MIS 681 Financial Services Trends and Issues  
 MIS 682 Financial Services Capital Markets  
 MIS 683 Financial Services Back Office  
 MIS 684 Financial Services Marketing and Sales  
 MIS 620 Analysis and Development of IS\*  
 MIS 630 Data and Knowledge Management\*  
 MIS 640 Network Management\*  
 MIS 710 Enterprise Systems Management  
 MIS 730 Integrating IS Technologies

*\*Select two from these three courses.*

### **M.B.A. in TM with IT Outsourcing Major**

This major addresses the increasing need for information technologists who are knowledgeable in the best practices of IT outsourcing, and possess the ability to manage outsourcing relationships on an on-going basis. Prerequisites include a semester of introductory undergraduate calculus and a semester of

microeconomics, such as MGT 503 or equivalent.

**M.B.A. Core Courses for IT Outsourcing Major**

MGT 609 Introduction to Project Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 680 Organizational Behavior and Theory  
 MGT 690 Organization Theory and Design  
 MIS 661 Marketing Online  
 MIS 662 Legal Issues for IT Professionals  
 MIS 663 Entrepreneurship in IT  
 MIS 760 Information Technology Strategy  
 MIS 750 Management of IT Organizations  
 MGT 620 Statistical Models

**Information Technology Outsourcing Major Requirements**

MIS 650 IT Outsourcing: Governance and Measurement  
 MGT 654 Organization Change and Development  
 MIS 652 Relationship Management in IT Outsourcing  
 MIS 651 IT Outsourcing: Legal Issues  
 MIS 620 Analysis and Development of IS\*  
 MIS 630 Data and Knowledge Management\*  
 MIS 640 Network Management\*  
 MIS 710 Enterprise Systems Management  
 MIS 730 Integrating IS Technologies

\* *Select two from these three courses.*

**M.B.A. in TM with IT in the Pharmaceutical Industry (ITP) Major**

The integration of business and technology in both research and development and business applications is a primary concern of the pharmaceutical industry. This major addresses the need for individuals with an understanding of both information technology and the pharmaceutical industry. Prerequisites include a semester of introductory undergraduate calculus and a semester of microeconomics, such as MGT 503 or equivalent.

**M.B.A. Core Courses for ITP Major**

MGT 609 Introduction to Project Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics

MGT 623 Financial Management  
 MGT 680 Organizational Behavior and Theory  
 MGT 690 Organization Theory and Design  
 MGT 760 Operations Management  
 MIS 662 Legal Issues for IT Professionals  
 MIS 663 Entrepreneurship in IT  
 MIS 760 Strategic Management of IT  
 MIS 750 Management of IT Organizations  
 MGT 620 Statistical Models

**Information Technology in the Pharmaceutical Industry Major Requirements**

MIS 671 Pharma Industry Trends and Issues  
 MIS 672 Pharma New Drug Development  
 MIS 674 Pharma Marketing & Sales  
 MIS 673 Pharma Supply Chain  
 MIS 620 Analysis and Development of IS\*  
 MIS 630 Data Management\*  
 MIS 640 Managing Information Networks\*  
 MIS 710 Enterprise Systems Management  
 MIS 730 Integrated IS Technologies

*\*Select two from these three courses*

**M.B.A. in TM with Pharmaceutical Management Major**

The Pharmaceutical Management (PM) major provides a solid foundation in business fundamentals, an in-depth understanding of the operations and strategic management of the pharmaceutical industry, and the opportunity to develop additional breadth in areas such as new business ventures, global innovation management, and TQM, to name a few. The Stevens M.B.A. in Pharmaceutical Management is unique in its focus on both business excellence and the exploitation of technology and innovation for business success. Prerequisites include a semester of introductory undergraduate calculus and a semester of microeconomics, such as MGT 503 or equivalent.

**M.B.A. Core Courses for the PTM Major**

MGT 609 Introduction to Project Management  
 MGT 725 Strategic Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 641 Marketing Management  
 MGT 680 Organizational Behavior and Theory

MGT 690 Organization Theory and Design  
 MGT 671 Technology Management  
 MGT 654 Organizational Change and  
 Development  
 MGT 679 Management Information  
 Systems  
 MGT 620 Statistical Models

**Pharmaceutical Management Major  
 Requirements**

MGT 677 Emerging Technologies  
 MGT 681 Managing Pharmaceutical  
 Reserach and Development  
 MGT 682 Marketing, Sales and Supply  
 Chain Management in the Pharmaceutical  
 Industry  
 MGT 683 Introduction to Pharmaceutical  
 Manufacturing  
 MGT 684 Regulation and Compliance in  
 the Pharmaceutical Industry

*Plus three advisor-approved electives or a  
 master's thesis plus one advisor-approved  
 elective.*

[back to top](#)

**M.B.A. in TM with Project Management (PM) Major**

Excellence in project execution is the hallmark of successful companies. This major teaches new concepts in strategic project management and leadership that were developed by the Howe faculty and have achieved international acclaim. Students taking the M.B.A. in TM with a PM major take a number of project management courses in addition to the courses required for an M.S. in Management degree. Prerequisites for this major include a semester of microeconomics (MGT 503 or equivalent) and a semester of introductory calculus.

**M.B.A. Core Courses for PM  
 Major**

MGT 609 Introduction to Project  
 Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 620 Statistical Models  
 MGT 621 Management Models  
 MGT 623 Financial Management  
 MGT 641 Marketing Management  
 MGT 690 Organization Theory and  
 Design  
 MGT 671 Technology and  
 Innovation Management  
 MGT 656 Quality and Process  
 Management  
 MGT 725 Strategic Management  
 MGT 657 Operations  
 Management\*  
 MGT 710 Risk Management\*

*\* Select one out of these two courses.*

**Project Management Major Requirements**

MGT 610 Strategic Perspectives on Project Management  
 MGT 611 Project Planning and Monitoring  
 MGT 612 The Human Side of Project Leadership  
 MGT 614 Advanced Project Management

*Plus four advisor-approved electives or two electives and a thesis.*

[back to top](#)

**M.B.A. in TM with Telecommunications Management Major**

Wireless, IP, and traditional communications technologies are the foundation for electronic commerce and global operations in every industry. This unique major provides both technical and management skills for tomorrow's telecommunications leaders.

Students taking the M.B.A. in TM Telecommunications Management major take a number of general management courses in addition to the courses required for an M.S. in Telecommunications Management degree. Prerequisites for this major include a semester of undergraduate introductory calculus (TM 500 or equivalent) and a semester of microeconomics (MGT 503 or equivalent). Students who lack an introductory telecommunications background may be required to take TM 550 Introduction to Telecommunications Concepts.

**M.B.A. Core Courses for Telecommunications Major**

MGT 609 Introduction to Project Management  
 MGT 725 Strategic Management  
 MGT 600 Managerial Accounting  
 MGT 607 Managerial Economics  
 MGT 623 Financial Management  
 MGT 641 Marketing Management  
 MGT 680 Organizational Behavior and Theory  
 MGT 690 Organization Theory and Design  
 MGT 671 Technology and Innovation Management  
 MGT 710 Risk Management  
 MGT 657 Operations Management  
 MGT 620 Statistical Models

**Telecommunications Management Major Requirements**



MGT 618 Engineering Economics  
TM 601 Principles of Applied  
Telecommunications Technology  
TM 605 Probability for Telecommunications  
Managers  
TM 610 Business Information Networks  
TM 612 Regulation and Policy in the  
Telecommunications Industry  
TM 770 Economics of Networks

*\*Plus two advisor-approved electives or a thesis.*

[back to top](#)

### **Master of Science-Master of Business Administration in Technology Management**

The M.S.-M.B.A. is a coordinated degree program that requires students to take 24 courses (72 credits) of course work. Students graduate with both a Howe School M.S. degree and an M.B.A. in Technology Management degree.

The combination of M.S. and M.B.A. in TM courses provides in-depth preparation for graduates wishing to assume either general management or technology-related managerial positions in organizations. The program is also designed to allow students to specialize in topic areas that are of special interest to their individual careers.

The application requirements are the same as those listed above for the M.B.A. in TM program. Current M.S. or M.B.A. in TM students must apply in writing before they can be admitted to the M.S.-M.B.A. degree.

The M.S.-M.B.A. has the same majors as the M.B.A. program. To satisfy the requirements for the M.S.-M.B.A. degree, students must satisfy all the requirements listed above to obtain an M.B.A. in TM degree in one of the eight major areas. In addition, students must take an additional four courses approved by an academic advisor.

[back to top](#)

### **Master of Science in Information Systems**

The Master of Science in Information Systems (MSIS) program evolved from a review by Stevens of industry and student needs. The MSIS Program is designed to provide participants with the requisite management, business, strategic, and technical skills needed to help their companies apply information systems technology more efficiently and effectively.

Rapid advancements in technology, dynamic markets, and the changing business environment have created increased demand for professionals who can manage and deliver information systems. This demand has been accelerated by new competition, shorter product lifecycles, and more complex and specialized markets. Information systems professionals are required to lead and evolve information resources while partnering with corporate management.

The Stevens MSIS program teaches IT professionals how to help their organizations achieve success through alignment and

deployment of business and IT strategies. The program is an interdisciplinary combination of twelve courses, typically taken over a two-year period. It is a practical program that is more like an apprenticeship where students work on real business problems.

Classes combine lectures, cases, individual and team projects, and participant presentations. Many projects will be applicable directly to the participant's sponsoring organization's business needs. Instructors are nationally/internationally recognized experts in information technology, technology management, and business strategy. Instructors generally have substantial corporate experience and academic qualifications. Emphasis is placed on providing practical experience that can be applied immediately.

[back to top](#)

Stevens offers a multi-track M.S. program to help you achieve your Information Technology career objectives. Students choose one of the following 14 career tracks to complete the MSIS degree:

#### Management Tracks

Entrepreneurial IT	(weeknights or Saturdays for students sponsored by their company)
Global Innovation Management	(weeknights or Saturdays for students sponsored by their company)
Human Resource Management	(weeknights or Saturdays for students sponsored by their company)
Information Management	(weeknights or Saturdays for students sponsored by their company)
IT in Financial Services	(Saturdays)
IT in Pharmaceutical	(Saturdays)
Project Management	(weeknights or Saturdays for students sponsored by their company)

#### Technical Tracks

Quantitative Software Engineering	(weeknights or Saturdays for students sponsored by their company)
Systems Engineering	(weeknights or Saturdays for students sponsored by their company)
Information Security	(weeknights only)
Integrated Information Architecture	(weeknights or Saturdays for students sponsored by their company)
Knowledge Management/Data Mining	(weeknights or Saturdays for students sponsored by their company)
Computer Science	(weeknights only)
E-Commerce	(weeknights only)

Telecommunications Management	(weeknights only)
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[back to top](#)

In addition to strong, practical, real-world IT and management skills, graduates of the program leave with improved communication, interpersonal, and team skills. The MSIS is a professional degree that integrates information and organizational cultures with emphasis on IT professionals who can contribute to the business.

To ensure quality and continuous improvement, participants are asked to appraise their courses twice each semester. These results are reviewed by the faculty and are made available to both participants and their sponsoring organizations.

#### **Degree Requirements:**

- Twelve graduate courses (36 credits) with a minimum GPA of 3.0 for the degree of Master of Science.
- Bachelor's degree in Information Systems, Management, Computer Science, and/or equivalent experience. Students without programming experience must take a programming course.
- For people with little or no information systems professional experience, MGT 501 Information Management is a prerequisite for all MSIS courses.

Students considering doctoral study are required to complete a master's thesis as part of their degree.

#### **Required Core Courses:**

MGT 609 Introduction to Project Management  
 MGT 623 Financial Management  
 MGT 680 Organizational Behavior and Theory  
 MIS 760 (formerly MGT 780) IT Strategy  
 MIS 750 (formerly MGT 781) Managing the IT Resource  
 MIS 710 (formerly MGT 783) Enterprise Systems Management  
 MIS 730 (formerly MGT 784) Integrating IS Technologies

[back to top](#)

#### **Management Concentrations**

##### **Information Management Track - Concentration Courses**

MIS 620 (formerly MGT 772) Analysis and Development of Information Systems  
 MIS 630 (formerly MGT 773) Data and Knowledge Management  
 MIS 640 (formerly MGT 776) Managing Information Networks

Students will also choose two electives or write a thesis with the approval of their academic advisor.

The typical admission profile includes career

advancement in general management, non-technical information technology leadership, technology leadership or consulting, three or more years of information technology/business experience, and a Bachelor's in business/management, sciences, or liberal arts.

**Entrepreneurial IT Management Track - Concentration Courses**

- MIS 640 (formerly MGT 776) Managing Information Networks
- MIS 661/MGT 661 Marketing Online
- MIS 662/MGT 662 Legal Issues for the IT Professional
- MIS 663/MGT 663 Entrepreneurship in IT
- MIS 620 (formerly MGT 772) Analysis and Development of Information Systems

Typical admission profile includes career advancement in information technology e-related business, general management in e-business, entrepreneurship or consulting, and three or more years of information technology/business experience.

**IT in the Pharmaceutical Industry - Concentration Courses**

- MIS 671 (formerly MGT 721) Pharmaceutical Services Industry Trends and Issues
- MIS 672 New Drug Development
- MIS 674 Pharmaceutical Marketing and Sales
- MIS 673 (formerly MGT 724) Pharmaceutical Supply Chain

Select one from:

- MIS 620 (formerly MGT 772) Analysis and Development of Information Systems
- MIS 630 (formerly MGT 773) Data and Knowledge Management
- MIS 640 (formerly MGT 776) Managing Information Networks

Typical admission profile includes non-technical information technology leadership in a pharmaceutical corporate environment, three or more years of information technology/business experience, and a bachelor's in business, information systems, political science, or international relations.

[back to top](#)

**IT in Financial Services Industry - Concentration Courses**

- MIS 681 (formerly MGT 761) Financial Services Industry Trends and Issues
- MIS 682 (formerly MGT 762) Capital Markets
- MIS 683 (formerly MGT 763) Back Office
- MIS 684 (formerly MGT 764) Financial Services Marketing and Sales

Select one from:

- MIS 620 (formerly MGT 772) Analysis and

Development of Information Systems  
 MIS 630 (formerly MGT 773) Data and Knowledge Management  
 MIS 640 (formerly MGT 776) Managing Information Networks

Typical admission profile includes non-technical information technology leadership in a financial services corporate environment, three or more years of information technology/business experience, and a Bachelor's in business, information systems political science, or international relations.

**Global Innovation Management Track - Concentration Courses**

MIS 630 (formerly MGT 773) Data and Knowledge Management  
 MGT 630 Global Business and Markets  
 MGT 650 International Business Management  
 MGT 673 Global Innovation Management  
 MIS 620 (formerly MGT 772) Analysis and Development of Information Systems

Typical admission profile includes non-technical information technology leadership in a global environment, three or more years of information technology/business experience, and a Bachelor's in business, information systems, political science, or international relations.

**Human Resource Management Track - Concentration Courses**

MIS 630 (formerly MGT 773) Data and Knowledge Management  
 MGT 646 Human Resource Processes: Techniques and Applications  
 MGT 647 Legal and Social Environment of Human Resources  
 MGT 654 Organizational Change and Development  
 MIS 620 (formerly MGT 772) Analysis and Development of Information Systems

Typical admission profile includes IT human resource management/staff career advancement, information technology leadership, three or more years of information technology/business experience, and a Bachelor's in business, information systems, or human resources.

[back to top](#)

**Project Management Track - Concentration Courses**

MGT 610 Strategic Perspectives on Project Management  
 MGT 612 The Human Side of Project Leadership  
 MGT 614 Advanced Project Management  
 MIS 620 (formerly MGT 772) Analysis and

Development of Information Systems  
MIS 630 (formerly MGT 773) Data and  
Knowledge Management

Typical admission profile includes career advancement as information technology project leader or functional area project leader, three or more years of information technology/business experience, and a Bachelor's in information systems, computer science, business/management, sciences, or liberal arts.

**Technical Concentrations**

**Computer Science Track - Recommended Concentration Courses (Interdisciplinary)**

- CS 561 Database Management Systems I
  - CS 551 Software Engineering and Practice I
  - CS 552 Software Engineering and Practice II
  - CS 666 Information Networks I
- Plus, one computer science elective.

Students will develop a plan of study with the approval of their academic advisor.

Typical admission profile includes information systems technical career advancement and three or more years of information technology experience. A strong mathematics and technical background is recommended.

**Information Security - Concentration Courses (Interdisciplinary)**

Choose four courses:

- MIS 645 CyberSecurity Principles for Managers
- MIS 646 Enterprise Architecture for Information Security
- MIS 647 Information Security and the Law
- CS 573 Fundamentals of Computer Security
- CS 694 E-Business Security and Information Assurance

Select one from:

- MIS 620 (formerly MGT 772) Analysis and Development of Information Systems
- MIS 630 (formerly MGT 773) Data and Knowledge Management
- MIS 640 (formerly MGT 776) Managing Information Networks

Typical admission profile includes technical management and leadership or consulting, three or more years of information technology or networking experience, and a Bachelor's in information systems or computer science. A strong mathematics and technical background is recommended.

[back to top](#)

**E-Commerce Technical Track - Concentration Courses (Interdisciplinary)**

Select four from the following list:

- MIS 620 (formerly Mgt 772) Analysis and Development of Information Systems
- MIS 640 (formerly Mgt 776) Managing Information Networks
- MIS 661/Mgt 661 Marketing Online
- MIS 663/Mgt 663 Entrepreneurial IT
- CPE 563 (Network Application Engineering)
- CS 533 Cost Estimation and Metrics
- CS 549 (Distributed Systems)
- CS 561 Database Management Systems IT

Typical admission profile includes e-commerce technical career advancement and three or more years of information technology experience. A strong mathematics and technical background is recommended.

**Integrated Information Architecture Track - Concentration Courses (Interdisciplinary)**

- NIS 560 Introduction to Networked Information Systems
- CS 561 Database Management Systems I
- NIS 611 Digital Communications Engineering I
- MIS 630 (formerly MGT 773) Data and Knowledge Management

And, select one from the following:

- CpE 654 Design and Analysis of Network Systems
- CpE 592 Multimedia Network Security
- CpE 636 Integrated Services - Multimedia
- CpE 678 Information Networks I

Typical admission profile includes technical management and leadership in systems architecture, three or more years of information technology experience, and a Bachelor's in information systems or computer science. A strong mathematics and technical background is recommended.

**Knowledge Management/Data Mining Track - Concentration Courses**

- MIS 635 Designing the Knowledge Organization
- MIS 636 Data Warehousing and Business Intelligence
- MIS 637 Knowledge Discovery in Databases I
- MIS 638 Knowledge Discovery in Databases II

Typical admission profile: Career advancement in the management and technology of high-end data and business analysis.

[back to top](#)

**Quantitative Software Engineering Track - Concentration Courses (Interdisciplinary)**

- CS 540 Fundamentals of Quantitative

Software Engineering  
CS 564 Software Requirements Acquisition  
and Analysis  
CS 565 Software Architecture and  
Component-Based Design  
CS 533 Cost Estimation and Metrics  
MIS 630 (formerly MGT 773) Data and  
Knowledge Management

Typical admission profile includes application systems analysis or testing career advancement, three or more years of information technology experience, and a Bachelor's in information systems or computer science. A strong mathematics and technical background is recommended.

**Systems Engineering Track - Concentration Courses (Interdisciplinary)**

SYS 625 Systems Operational Effectiveness  
and Life-Cycle Analysis  
SYS 650 System Architecture and Design  
SYS 611 Modeling and Simulation  
SYS 660 Decision Risk Analysis  
MIS 620 (formerly MGT 772) Analysis and  
Development of Information Systems

Typical admission profile includes technical management and leadership or consulting, three or more years of information technology experience and a Bachelor's in information systems or computer science. A strong mathematics and technical background is recommended.

**Telecommunications Management Track - Concentration Courses**

TM 601 Principles of Applied  
Telecommunications Technology  
TM 605 Probability for Telecommunications  
Managers  
TM 610 Business Information Networks  
TM 612 Regulation and Policy  
MIS 630 (formerly MGT 773) Data and  
Knowledge Management

Typical admission profile includes general management in telecommunications industry or telecommunications management, three or more years of information technology/network experience, and a Bachelor's in information systems or computer science. A strong mathematics and technical background is recommended.

[back to top](#)

**Master of Science - Telecommunications Management**

The Telecommunications Management graduate program (M.S. and Ph.D.) is an interdepartmental program involving the Wesley J. Howe School of Technology Management and the



Electrical and Computer Engineering Department of the Charles V. Schaefer, Jr. School of Engineering. The Wesley J. Howe School of Technology Management administers this program. The M.S. in Telecommunications Management is also offered in Beijing, China in partnership with Beijing Institute of Technology.

The Telecommunications Management curriculum addresses the demanding requirements of the telecommunications industry, businesses, and government for technical expertise combined with business skills. The program provides students with advanced technical knowledge of applied telecommunications integrated with business management. Admission to the program requires a bachelor's degree with at least a "B" average, including a semester of calculus. For students who lack this prerequisite, Stevens offers a non-credit calculus course for telecommunications management (e.g., TM 500). International students need a TOEFL score of 550 (213 for computer-based).

A student in this program is likely to be an individual who is, or aspires to be, a manager or supervisor in a corporation's or government agency's communications department. The student will typically be responsible for various aspects of planning, implementation, and management of the systems that satisfy the corporate requirements for voice, video, and data communications. The goal of this student is to become a management professional responsible for communications planning and resources, including people, networks, and systems, and for decisions involving planning and budgeting for acquisition, installation, and maintenance of products and services. Each sector of industry (government, regulatory, common carrier, financial, equipment vendor, consultant, R&D) will have corresponding profiles of professionals who need such technical expertise and management skills. This degree program builds an advanced foundation for more specialized study while enabling professionals from all industry sectors to understand and interact with customers and communications professionals who make the decisions on how businesses will implement communications.

[back to top](#)

Specialized courses are available in the areas of management of wireless networks, network management and evaluation, global innovation management, communications security, and project management. Students who wish to continue beyond their master's degree may pursue the Ph.D. program in Technology Management with a specialization in Telecommunications Management.

In addition to a number of off-campus (corporate-sponsored) programs, Telecommunications Management is offered on campus, weekdays and Saturdays, and via [WebCampus](#). Courses are offered year-round, in three terms.

### **Core Courses - Telecommunications Management**

TM 601 Principles of Applied  
Telecommunications Technology

TM 605 Probability for Telecommunications Managers  
TM 610 Business Information Networks  
TM 612 Regulation and Policy in the Telecommunications Industry  
MGT 609 Introduction to Project Management  
MGT 600 Managerial Accounting  
MGT 618 Engineering Economics and Management Policy

**Concentration and Elective Courses**

In designing a study plan with an advisor, students may choose any four courses from the tracks, or on-campus students may choose a concentration in a focused area of study and take the elective courses listed within the concentration.

**Business Management Track (choose four)**

MGT 641 Marketing Management  
MGT 680 Organizational Behavior and Theory  
MGT 690 Organization Theory and Design

TM 670 Decision Analysis for Corporate Network Systems

MGT 671 Technology and Innovation Management

MGT 710 Risk Management: Methods and Applications

MGT 656 Quality and Process Management

MIS 661/MGT 661 Marketing Online

MIS 662/MGT 662 Legal Issues for the IT Professional

MIS 663/MGT 663 Entrepreneurship in IT

MIS 640 (formerly MGT 776) Managing Information Networks

TM 616 Global Wireless Industry

TM 765 Selected Topics in

Telecommunications Management

[back to top](#)

**Technical Management Track Courses (choose four)**

TM 611 Emerging Technologies

TM 613 Knowledge Discovery and Data Mining for Telecommunications Managers

TM 614 Principles of Traffic Engineering and Performance Analysis

TM 615 Wireless Communications and Mobile Computing

TM 617 Next Generation Wireless Networks

TM 619 E-Commerce Technologies

TM 621 Telecommunications Switching and Signaling

TM 624 Network Management

TM 694 E-Business Security and Information Assurance

TM 670 Decision Analysis for Corporate Network Systems

MGT 710 Risk Management: Methods and

Applications

TM 765 Selected Topics in  
Telecommunications Management  
MIS 645 CyberSecurity Principles for  
Managers  
MIS 646 Enterprise Architectures for  
Information Security

**Global Innovation Management (choose  
four)**

MGT 630 Global Business and Markets  
MGT 650 International Business Management  
MGT 671 Technology and Innovation  
Management  
MGT 673 Global Innovation Management

**Management of Wireless Networks (choose  
four)**

TM 615 Wireless Communication and Mobile  
Computing  
TM 616 Global Wireless Industry  
TM 617 Next Generation Networks  
TM 618 Performance of Emerging Mobile  
Wireless Networks  
EE 584 Wireless Systems Security

[back to top](#)

**Online Technology, Business, and Security  
(choose four)**

TM 619 E-Commerce Technologies  
TM 694 E-Business Security and Information  
Assurance  
MIS 661/MGT 661 Marketing Online  
MIS 662/MGT 662 Legal Issues for the IT  
Professional  
MIS 663/MGT 663 Entrepreneurship in IT  
MIS 645 CyberSecurity Principles for  
Managers  
MIS 646 Enterprise Architectures for  
Information Security

**Project Management Concentration (choose  
four)**

MGT 609 Introduction to Project Management  
(core, required for all)  
MGT 610 Strategic Perspectives on Project  
Management  
MGT 612 The Human Side of Project  
Leadership  
MGT 614 Advanced Project Management  
MGT 611 Project Planning and Monitoring  
MGT 613 Project Management Office

**Security Management and Forensics  
(choose four, all have pre-requisites)**

CS 573 Fundamentals of CyberSecurity  
CS/TM 694 E-business Security and  
Information Assurance  
CS/TM/MIS 648 CyberSecurity Forensics

**Satisfying Prerequisites**

Students who satisfy Telecommunications Management admissions requirements but lack calculus and an introductory telecommunications background may be required to complete the following non-credit courses:

TM 500 Calculus for Telecommunications Managers

TM 550 Introduction to Telecommunications Concepts

These courses are offered at least once every academic year.

**Graduate Certificate in Telecommunications Management**

TM 601 Principles of Applied Telecommunications Technology

TM 605 Probability for Telecommunications Managers

TM 610 Business Information Networks

TM 612 Regulation and Policy in the Telecommunications Industry

(All credits earned may be applied towards the master's degree and the M.B.A..)

[back to top](#)

**Master of Technology Management for Experienced Professionals (EMTM)**

The EMTM program is specifically designed for experienced professionals wishing to move to a broader role in technology and business management. Applicants should have a bachelor's degree in a technical discipline, and have at least five years work experience in a technology-related field. The EMTM program focuses on the effective management and use of technology in technology-intensive businesses. It integrates business and technology topics focused on educating participants to manage technology creatively in order to enhance business competitiveness in a global business environment. Orientation is given in general business skills such as finance and marketing, and emphasis is placed on aligning technology development with business strategy through application of TQM, and the use of emerging technology, innovation, and multifunctional teams.

The EMTM program consists of eleven courses that are completed in six trimesters. The courses are supplemented by a number of one-day workshops (practicums) utilizing business simulation tools that reinforce classroom concepts while providing students with experience running a high tech company. Applicants are required to have a bachelor's degree in a relevant technical discipline. Consideration will be given to prospective students with non-technical undergraduate degrees provided they have appropriate technology-based work experience.

All courses are taught by Stevens faculty and Executives-in-Residence and are scheduled at convenient satellite locations in northern (Morristown) and central (Tinton Falls) New Jersey. Classes are held one afternoon/evening per

week and run from 3:30 p.m. to 9:30 p.m. There is a short break for dinner, which is provided on site. In the final semester, the capstone course requires several non-consecutive weekend (Friday evening/Saturday) sessions on the Stevens campus. Students complete their EMTM degree in 21 months.

**Curriculum for the Master of Technology Management degree**

- EMT 624 Financial Analysis for Technological Organizations
- EMT 628 Accounting Lab
- EMT 642 Marketing Management in Technical Organizations
- EMT 629 Marketing Lab
- EMT 677 Emerging Technologies
- EMT 758 Oral and Written Communications
- EMT 714 Technology Strategy
- EMT 715 Strategic Business Management
- EMT 740 Managing Multifunctional Teams
- EMT 741 Innovation Management Process
- EMT 751 Project Management and Leadership
- EMT 752 Corporate Venturing
- EMT 755 Process Management in High-Tech Organizations
- EMT 798 Integration and Application of Technology Management

**M.B.A. in Technology Management Program for Experienced Professionals (E.M.B.A. in TM)**

The E.M.B.A. in TM program is designed for experienced professionals wishing to move to a broader role in technology and business management. Applicants should have a bachelor's degree in a technical discipline, and have at least five years work experience in a technology-related field. All applicants must submit transcripts showing academic achievement in prior studies, two letters of recommendation from their companies, a letter stating their career objectives, a resume, and their GMAT score. International students should also submit a TOEFL score. The E.M.B.A.-TM program encompasses the EMTM curriculum, but includes additional courses that enhance skills in business management. Students who wish to obtain their M.B.A. in Technology Management degree through this program take all of the courses in the EMTM curriculum, and then proceed to a 5-course extension program leading to the M.B.A.-TM degree. The additional courses include the following:

- EMT 800B Managerial Decision Making
- EMT 800C Technology Commercialization
- EMT 607 Managerial Economics
- EMT 623 Financial Management
- EMT 625 Investments and Capital Markets

**Graduate Certificate in Pharmaceutical Management**

The four-course Graduate Certificate in Pharmaceutical Management covers current trends and issues in the pharmaceutical and biotechnology industries, research and

development, sales, marketing and manufacturing, and regulatory and ethical issues. The courses for the graduate certificate can be applied to either the M.S. or M.B.A..

MGT 671 Technology and  
Innovation Management  
MGT 681 Managing  
Pharmaceutical Research and  
Development  
MGT 682 Logistics, Marketing,  
and Sales in the Pharmaceutical  
Industry

**Electives:**

MGT 683 Introduction to  
Pharmaceutical Manufacturing  
MGT 684 Regulation and  
Compliance in the Pharmaceutical  
Industry

<b>OLD NUMBER</b>	<b>NEW NUMBER</b>	<b>COURSE NAME</b>
MGT 503	MGT 503	Microeconomics
MGT 529	MGT 654	Organizational Change and Development
MGT 530	MGT 647	Legal and Social Environment of HR (was HR and the Law)
MGT 550	MGT 609	Intro. to Project Management
MGT 551	MGT 725	Strategic Management
MGT 552	MGT 718	Multivariate Analysis
MGT 557	MGT 658	New Business Ventures
MGT 566	MGT 646	HR Processes: Techniques and Applications (was Task Analysis)
MGT 599	MGT 719	Research Methods
MGT 600	MGT 600	Managerial Accounting
MGT 607	MGT 607	Managerial Economics
MGT 608	MGT 608	Macroeconomics
MGT 610	MGT 610	Strategic Perspectives on Project Management
MGT 611	MGT 611	Project Planning Techniques
MGT 612	MGT 612	Human Side of Project Leadership
MGT 618	MGT 618	Engineering Economics
MGT 623	MGT 623	Financial Management
MGT 625	MGT 625	Investments and Capital Markets
MGT 626	MGT 626	Cost Analysis and Control
MGT 630	MGT 630	Global Business and Markets
MGT 632	MGT 632	Power, Politics, and Policy in International Business
MGT 641	MGT 641	Marketing Management
MGT 643	MGT 700	Econometrics
MGT 650	MGT 650	International Management
MGT 680	MGT 680	Organization Behavior and Theory
MGT 685	MGT 685	Employee Compensation
MGT 690	MGT 690	Organization Theory and Design
MGT 701	MGT 691	Management Policy Dynamics
MGT 702	MGT 671	Technology and Innovation
	MGT 672	Technology Licensing and Finance
	MGT 675	New Product and Service Innovation
MGT 707	MGT 677	Emerging Technologies
MGT 710	MGT 710	Risk Management
MGT 720	MGT 673	Global Innovation Management
MGT 730	MGT 730	Design and Analysis of Experiments

MGT 733	MGT 733	Applied Regression Analysis
MGT 737	MGT 613	Project Management Office
MGT 738	MGT 614	Advanced Project Management
MGT 744	MGT 744	Analytic Methods of Forecasting
MGT 750	MGT 656	Quality and Process Management
MGT 760	MGT 657	Operations Management
MGT 766	MGT 661	Marketing Online (cross-listed as MIS 661)
MGT 767	MGT 662	Legal Issues for the IT Professional (cross-listed as MIS 662)
MGT 768	MGT 663	Entrepreneurship (cross-listed as MIS 663)
MGT 771	MGT 679	Management Information Systems
MGT 795	MGT 621	Management Models
MGT 796	MGT 620	Statistical Models

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