

# TECHNOLOGY MANAGEMENT (TECM)

## 600 Level Courses

**TECM 601:** *HiTech Business Models*. 1 credit.

Provides an introduction to high tech industries, emerging technologies and business models that are transforming technology-intensive industries such as music, financial services and healthcare. The course covers techniques for analyzing how organizations create, deliver and capture value. The students use case-based approach to analyze traditional and high-tech organizations to understand their business models, and identify causes for success and failures. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 602:** *Emerging Technologies and the New CIO*. 1 credit.

Provides an overview of CIOs and IT executive leadership, enabling legislation and policies on CIOs in the U.S. and abroad. The course examines the evolution of CIO core competencies, and approaches to cross agency CIO and IT coordination. Emerging ICT technologies, their corresponding potential, challenges and considerations for CIOs and IT executives in their adoption and introduction, are also discussed. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 610:** *Communications and Leadership*. 2 credits.

Distinguishes between leadership and management, and focuses on the critical roles and functions of leadership, including communication ability, use of power and influence, providing direction, aligning an organization's systems, motivating a workforce, and creating a culture for effectiveness. It also focuses on strategies for developing oneself as an effective leader. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to students with a major in Professional Studies(Tech Mgt) or Technology Management.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 611:** *Leadership and Change Management*. 2 credits.

Examines the critical roles and functions of leadership with special attention to how leaders influence organizational performance and manage change. Topics include providing direction, creating a culture for effectiveness, the use of power and influence, leadership development, leading under changing conditions, and leading and managing change. Offered by School of Business. May not be repeated for credit. Equivalent to MSIS 611.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 614:** *Financial and Cost Accounting*. 2 credits.

Focuses on the economics and analysis of business transactions and financial reporting. Topics include an introduction to the financial reporting framework, review of how accountants measure and manage financial reporting, an introduction to cost concepts and product costing, and an analysis of capital investments and management control. Emphasis is placed on providing an analytic framework for evaluating transactions and companies. Offered by School of Business. May not be repeated for credit. Equivalent to MSIS 614.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 615:** *Decision Making Using Accounting and Financial Data*. 3 credits.

Provides managers with an overview of the purpose and importance of accounting within the organization and the financial valuation of information technology companies, projects, and product line. Students focus on the economics and analysis of business transactions and their related financial reporting issues from internal and external stakeholder

perspectives. Students improve their skills in analyzing financial issues and presenting results in a case analysis framework. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to students with a major in Professional Studies(Tech Mgt) or Technology Management.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 620:** *Economics of Technology Management.* 2-3 credits.

Enables students to build and evaluate economic and business models that can be used to analyze real managerial questions that affect all types of institutions, especially firms in the information technology industry. Students develop a better understanding of the operation of markets in general and the use of various quantitative and qualitative methods when making decisions within the firm. The use of economic analysis allows students to identify and evaluate decision alternatives, the competitive environments of firms, and the factors that influence firm performance, especially in the information technology industry. Offered by School of Business. May not be repeated for credit. Equivalent to MSIS 620.

**Recommended Prerequisite:** Admission to Technology Management Program or permission of the program director.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 635:** *Decision Models for Technology Management.* 2-3 credits.

Explores current metrics and metric development for quality, intangible assets, and project management as required within information technology companies. Applies statistical tools of best use with these metrics. Offered by School of Business. May not be repeated for credit. Equivalent to MSIS 635.

**Recommended Prerequisite:** Admission to Technology Management Program or permission of the program director.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 640:** *Management of Consulting and Technical Professionals.* 1-3 credits.

Students gain insight into conflict resolution, teamwork, communication, power and influence, career development, and ethics. Helps students understand themselves and those they manage, as they work to be as effective as possible in modern organizations. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to students with a major in Professional Studies(Tech Mgt) or Technology Management.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 641:** *Negotiation and Conflict Management.* 2 credits.

Students acquire insights and skills for negotiation and conflict resolution as they relate to a variety of organizational situations - including teamwork, communication and coordination, power and influence, legal disputes, career development, cross-cultural and international issues, as well as tackling ethical problems. The course is highly experiential, and is built on a foundation of hands-on exercises and extensive class discussion. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 643:** *Managerial Finance.* 2 credits.

Surveys the theory and practice of corporate financial management with specific application to the technology sector. Students develop an understanding of key elements required in the valuation of project alternatives; including their strategic importance. Students evaluate and use financial management models and gain an understanding of how finance can be employed as a source of potential competitive advantage.

Offered by School of Business. May not be repeated for credit. Equivalent to MSIS 643.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 696:** *Directed Studies in Technical Management.* 1-3 credits. Approval by faculty member and program director required prior to registration. Studies specialized topics in business not otherwise available in the curriculum. Offered by School of Business. May be repeated within the degree for a maximum 3 credits.

**Recommended Prerequisite:** Admission to the TECM program or permission of the program director.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Independent Study

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 697:** *Special Topics in Technology Management.* 1-3 credits. Sections established as necessary to focus on various topical issues that emerge in practice of business. Offered by School of Business. May be repeated within the term for a maximum 6 credits.

**Recommended Prerequisite:** Admission to the TECM program or permission of the program director.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Special scale.

**Additional Course Details:** Title varies by section and/or semester

## 700 Level Courses

**TECM 702:** *Building High Performance Teams.* 2 credits.

Develops behavioral skills integral to effective teamwork and interpersonal relationships in work environments. Covers techniques for making group decisions and resolving internal team conflicts, as well as negotiating effectively with outside parties. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to students with a major in Professional Studies(Tech Mgt) or Technology Management.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 703:** *Technology Assessment, Evaluation, and Investment.* 3 credits. Prepares students to be educated consumers of information technology to maximize strategic advantage of IT to an organization. Information technologies, architectures, and products are categorized and analyzed with a view to develop and maintain the most favorable IT asset portfolio to successfully carry out business goals and strategies. Techniques for making group technology assessments, outsourcing decisions, project bidding, and contract negotiations. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to students with a major in Professional Studies(Tech Mgt) or Technology Management.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 704:** *Management of Technology Projects and Portfolios.* 2 credits. Examines advanced topics in project and program management, with specific attention to the issues that managers face to effectively manage programs. This involves managing resources (both internal and external to the organization) and managing within an existing organizational structure. Specific program management topics include advanced topics for project management, program alignment with strategic objective, management of stakeholders, and development and organization of the program office. Strategic and operational tools and metrics also are discussed. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to students with a major in Professional Studies(Tech Mgt) or Technology Management.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 711:** *Deriving Strategic Value from IT Investments.* 2 credits. Reviews approaches for aligning IT strategy and investment with organizational strategy. The course covers methodologies for IT investment, planning and control including cost benefit, economic and risk analysis; benefits of alternative IT investments; methods of technology road mapping; and capital investment analysis. IT performance assessment methodologies and acquisition planning and design, are also reviewed. Offered by School of Business. May not be repeated for credit. Equivalent to MSIS 711.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 720:** *Competitive Strategy in Technology Industries.* 2 credits. Provides students with an understanding of the impact of information technology on firms and industries and equips them to develop and execute appropriate strategies. Although the emphasis is on information technology firms and industries, a key goal of the course is to better prepare students to respond to a diverse array of information technology challenges. Course work covers the demand and the supply side of information technology, as well as the development of frameworks and analytical tools to help put events, behaviors, and processes into understandable contexts. Offered by School of Business. May not be repeated for credit.

**Recommended Prerequisite:** Admission to Technology Management Program or permission of the program director. TECM 615 and 620.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 735:** *Technology Management Capstone Project.* 1-4 credits. Teams undertake a strategic evaluation and plan for IT-driven business initiatives. Presentation includes analysis of competitive forces and the value chain; recommendations, including changes in goals and organizational design; plan of action integrating marketing, human resource development, organizational design, finance, and information technology; and implementation plan using theories of communication and change management, to include business case and business plan. Offered by School of Business. May be repeated within the degree for a maximum 3 credits. Equivalent to MSIS 735.

**Recommended Prerequisite:** Admission to Technology Management Program or permission of the program director.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Special scale.

**TECM 737:** *Capstone Project in Management of Secure Information Systems.* 1-3 credits.

Teams undertake a strategic evaluation and plan for the management of secure information systems. They develop plans that include technical, organizational, and policy aspects. A report is produced and presented to the entire cohort for discussion. Offered by School of Business. May be repeated within the degree for a maximum 3 credits. Equivalent to MSEC 720.

**Recommended Prerequisite:** Admission to Executive MS in Management of Secure Information Systems.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Special scale.

**TECM 741:** *Marketing of Innovations and Technology.* 2 credits. Provides students the opportunity to conduct a detailed exploration of effective marketing strategies, including product and service development, branding, and customer relationships, in preparation for developing a marketing plan for a technology related innovation. Specific course topics include: assessing the marketplace, understanding the customer, market segmentation, developing and positioning the offering, pricing, branding, distribution, and promotion. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 743:** *Security Risk Analysis and Assessment.* 1 credit.

Focuses on the analysis of security risk to the business within IT systems and across IT architecture and enterprise practices. Offered by School of Business. May not be repeated for credit.

**Recommended Prerequisite:** C or better in TECM 747.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 744:** *IT Audit Control.* 2 credits.

Introduces methodologies to assess security and control issues concerning accounting and other information systems. A key feature

of the course will be applying Computer Assisted Audit Tools and Techniques (CAA Ts) to test effectiveness of application controls. Students will gain hands-on experience by using Generalized Audit Software (GAS) such as ACL to extract data from a database and perform a variety of analyses. Examples of other topics covered include business continuity planning, continuous auditing, control objectives for information technology, COSO's framework for risk management, assessment of transaction processing integrity, and role of information assurance in e-commerce. Offered by School of Business. May not be repeated for credit.

**Recommended Prerequisite:** C or better in TECM 747.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Enrollment limited to students in a Non-Degree Undergraduate degree.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 745: *Leading and Managing IT Operations.* 2 credits.**

Explores best practices in the IT industry. Students analyze practices in terms of gaining competitive advantage in an industry where the scarcity economic model for products no longer applies. Course work focuses on leading an organization with the IT function. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to students with a major in Professional Studies(Tech Mgt) or Technology Management.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 746: *Enterprise Architecture and IT Governance.* 2 credits.**

Examines the operational, financial and strategic considerations of leading enterprise architecture and reviews the historical development of enterprise architecture. Major enterprise architecture frameworks including Zachman and TOGAF are examined. The relationship of enterprise architecture to IT governance, approaches to IT governance and the role of the CIO, and the relationship of IT governance to organizational performance, are also discussed. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 747: *Information Assurance and Security Management.* 2 credits.**

Addresses the increasingly critical areas of information security and information assurance. Specific focus is on best practices for

assessment, planning and management of information security strategy, policy, organizations and controls to minimize the risks pertaining to unauthorized use, processing, storage, and communication of digital information. Pertinent legislation and policy requirements are also covered. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 748: *Systemic Approach to IT Management.* 2 credits.**

The course introduces students to systems thinking, and then applies systems thinking to best practices in development and management of IT processes and connecting management of IT processes to organizational strategy. The course also reviews and considers IT processes from the strategy and service management frameworks including Balanced Scorecard and ITIL. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 750: *Global IT Management.* 1-4 credits.**

Students spend a week in an international residency. Emphasizes dealing with technological changes across international markets and amid global developments, virtual organizations, and project management across cultures. Corporate site visits combined with presentations by professors from universities outside the United States and relevant practitioners. Offered by School of Business. May not be repeated for credit.

**Recommended Prerequisite:** Admission to Technology Management Program or permission of the program director. TECM 600 and 620.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 752: *Global Tech Management.* 3 credits.**

Provides the opportunity for students to spend a week in a country or countries that are leading edge in technology and technology management. Students visit corporations and governments and interact with corporate and IT executives, and government leaders. Topics include CIO and eGovernment, commercialization of emerging technologies, national competitiveness, international development, global supply chains and virtual teams. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.

**TECM 760:** *CIO Consulting Project*. 1-3 credits.

A guided independent study course which allow students completing their course work within the M.S. Technology Management (MSTM) program to demonstrate a select set of key competencies in the role of Chief Information Officer (CIO) while leveraging their program coursework and aligning with the identified federal CIO competencies. Offered by School of Business. May not be repeated for credit.

**Registration Restrictions:**

Enrollment is limited to students with a major in Technology Management.

Enrollment is limited to Graduate or Non-Degree level students.

Enrollment limited to students in a Master of Science degree.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale.