

Professional Studies Technology Management (MPTM)

MPTM 5000 Ethics in Technology Mgmt 3 Credits

The Core Course in Applied Ethics provides a firm foundation of essential concepts, skills, and strategies to allow for informed decision-making and effective leadership. The course emphasizes ethical responsibilities and core values endemic to the professional world, cutting across several disciplines but focusing particularly on the connections between applied ethics and areas such as technology, business management, and law. You will explore real-world dilemmas and the framework for reaching ethical decisions. Topics will include intellectual property rights, government regulations, privacy, information security and cybercrime. Professional guests from various fields—such as business, law and government—will present case studies representative of their experiences. In addition to other requirements, students must earn a grade of "B" or higher in the Ethics course.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment limited to students in the MPS-PRSG, MPS-PRSG-O, NDGD-PRSG or NDGD-PRSG-O programs.

Enrollment limited to students in a Master of Professional Studies degree.

MPTM 5600 Managing Technology 3 Credits

The Management of Technology course provides theoretical and practical experience in using information technology to support organizational decision-making processes. You will examine the requirements of an organization to optimize its competitive strategy and core competencies. You will learn different tactical, strategic, and organizational factors relative to various information systems, as well as how to gauge the effectiveness of an organization's information system. The course addresses some of the unique issues in managing different types of IT professionals, from senior-level architects to junior-level infrastructure support personnel. You will explore tools and techniques related to hiring, developing, assessing, and retaining staff—as well as theories/methods of managing remote workers and virtual teams.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

MPTM 5700 Systems Requirements 3 Credits

Gives you a strong understanding of the system development life cycle (SDLC). You will learn methods of gathering, analyzing, and prioritizing business requirements with a focus on the ease of use for IT staff and end-users alike. The course covers many of the specifics of gap analysis through correctness and completeness methods, the use of case models, process and data modeling, database design principles, and more. In addition, the course covers SDLC models, Unified Process and CASE tools, Rapid Application Development methodologies, Package Evaluation and Selection, and more. Finally, the course will be well-grounded in practice through the coverage of relevant requirements standards (IEEE Standard 830) and current government practices for requirements management (i.e., System Requirements Specifications (SRS)).

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

MPTM 5800 Finc Analysis: Tech Managers 3 Credits

Provides theories and practical techniques related to acquiring, accounting for, and allocating an organization's financial assets. It analyzes basic business problems that managers face as they make technology decisions for their organizations. Some of the topics include return on investment, theories of portfolio management, financial statement and discounted cash flow analysis, interest rate determination, capital budgeting methodologies, concepts of risk and return, asset pricing, and valuation models. You will apply the knowledge you gain to issues you face within your work environment and to real-world examples through business cases and case studies.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment limited to students in a Master of Professional Studies degree.

MPTM 6140 New Urban Technologies 3 Credits

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6620 Project Management 3 Credits

Project Management for IT Professionals will master both the practical and theoretical sides of project management for IT professionals. In keeping with the ANSI standard for project management, this comprehensive course covers such core concepts as triple-constant theory, critical path method, and tracking earned value. You'll follow the project lifecycle—from planning to monitoring to control—and learn how to avoid the most common challenges of successful project management.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6621 Organization Tech Chng Mgmt 3 Credits

This course is designed to introduce Project Risk and Change Management related to the integration of new technology initiatives. In this course we will use a combination of presentation, discussion, and research to understand the risk of new technology project failure in the absence of a comprehensive change management strategy. The process is introduced from the systems view of organizational change and includes data collection methods (qualitative and quantitative), diagnosis, and the management of system-wide technology change integration. In addition to the practical component of the course of study, substantive and validated theory is integrated that spans 50+ years of change management literature.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6622 Mangng Diverse Org in Flat Wld 3 Credits

This timely course focuses on defining project structure and reporting Relationships; assigning project roles and responsibilities; and staffing, motivating, and leading an organization that can compete effectively worldwide. Specific topics include conflict resolution, process control and automation, outsourcing, offshoring, real-time access to information, and other practices required for effective management in the changing demands of the flat world.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment limited to students in the MPS-PRSG program.

Enrollment is limited to Graduate level students.

MPTM 6623 Technology Entrepreneurship 3 Credits

This course examines the startup process from both sides—exploring the perspective of the entrepreneur as well as the corporation pursuing a model of open innovation. Based largely on case study discussions, the course focuses on intellectual property, high-tech product development, venture finance, high-tech market strategy, strategic alliances, and entrepreneurial leadership skills.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6631 Strat. for Mgng Dig. Products 3 Credits

This course takes a look at strategies for managing digital products and services. To be successful in the world of digital products and services, one must start with strategy. Effective corporate strategy demands an in-depth understanding of the various technologies that enable digital business. In this course, you will examine how a strategic approach to emerging trends—in telecommunications, search engines, security, portals, websites, user interface design, fintech, digital download features, mobile commerce, cloud computing, custom database design and pervasive computing—can impact competitive dynamics.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

Enrollment limited to students in the School of Continuing Studies department.

MPTM 6632 Enterprise Modernization 3 Credits

Enterprise Modernization is about enabling and managing effective IT modernization/integration in an organization. In this course, you will focus on using a systematic approach to identify, plan and communicate modernization initiatives that leverage technology to improve organizational outcomes, aligning to the mission as well as financial and business goals. You will explore new and emerging technologies that provide opportunities to drive transformation across the enterprise. Areas of study will include introducing complex change in large organizations and the role of IT as an enabler and collaborator of modernization across the organization

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6650 Bus Intell Big Data Analysis 3 Credits

Today data is everywhere. The most competitive commercial companies are harnessing it to formulate their go-to-market strategies, make course corrections and outthink the competition. Governments are using data to develop solutions to social issues, recruit talent, and even to prevent terrorist attacks. This course explores how government agencies, commercial companies and nonprofits are Business Intelligence (BI) and Big Data Analytics to achieve their strategic goals and objectives. During the course students are introduced to the concepts through real-world demonstrations of BI and Big Data Analytics solutions.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6652 Information Security 3 Credits

The Managing Information Security course is designed for managers charged with protecting IT systems, this course prepares you to anticipate the threat of Internet attacks—and develop effective strategies to defend against them. Learn the core concepts of data security, signature algorithms, key distribution, hash functions, and identification schemes. You'll even explore public/private key cryptography, secret key schemes (DES and IDEA), public key schemes (RSA and ElGamal), and systems based on elliptic curves. The pertinent implementation aspects and current security estimations will be covered for all schemes.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6655 Enterprise Architecture 3 Credits

This is an introductory course in Enterprise Architecture (EA). The course defines EA as a series of interrelated reference models designed to foster a holistic top-down approach to managing Information Technology (IT) assets. Effective use of IT is essential to serving customers and/or constituents and this course explores how to align an organization's business goals with the use of technology. The course explains the use of EA as a structured discipline for managing and governing IT, enabling everyone in the organization, from strategic leaders to tactical office workers, to see how IT affects productivity. The course explains the benefits of EA such as:

- Fosters a common consistent approach to managing IT assets and technology use; providing the necessary discipline to support business agility.
- Provides the framework to manage business processes as assets. With the relative cost of technology ever affordable, an organization's business processes (how it produces goods and services) is what differentiates a successful organization from its competitors. Technology by itself is no longer a differentiator.
- Provides a direct link between business needs and technology use by establishing the vertical alignment of organizational strategies, business processes, and technology solutions.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6656 Cloud Computing AI Tech Strat 3 Credits

This course examines the strategic, architectural, and operational foundations of cloud computing with a focus on enabling industrial scale AI. This class leverages a technology strategy approach to define the future state enterprise, and to create a roadmap to achieve it. The strategy methods are based on proven, leading consultancy models. Through a combination of readings, case studies, hands-on lab exercises, and an applied strategic transformation project, students will assess real-world cloud adoption scenarios across industries. These activities will develop the ability to align enterprise cloud decisions with mission objectives, financial constraints, innovation goals, and long-term technology strategy.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6662 Cryptography Network Security 3 Credits

This fundamental course covers the theory of encryption and standard protocols for data communications and network security. Students will learn the goals of cryptography such as data privacy, authenticity and integrity. Topics that may be covered include PKI, digital signatures, message authentication codes, hash functions, etc. An examination of network security defenses and countermeasures are also covered.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6663 Cyber Threats Vulnerabilities 3 Credits

Focused on threats, vulnerabilities, patch management, incident response, and security operations to identify and protect against internal and external threats. Various security threats will be covered including hacker attacks, e-mail borne viruses, backdoor problems, and internal sabotage. Cybercrime, cyber security, and global information security will be discussed. Students will learn how to prevent and respond to such types of attacks using various assessment tools, intrusion detection systems, etc.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.

MPTM 6665 Persp. in Add. Cybersecurity 3 Credits

From the electrical grid, to medical infrastructure, to transportation systems, and to water distribution networks, this course explores the nature of and the technologies underpinning the critical infrastructure. There will be a strong focus on operational technologies, to include the similarities and differences between operational technology and information technology, and the cyber threats and vulnerabilities that exist within these infrastructures. This course will examine at least six of the critical infrastructures established by the United States Department of Homeland Security. Students will present multiple case studies.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

MPTM 6700 Sports Business Analytics 3 Credits

The use of data driven decision making for managers is an essential component of the future of the sports industry. During this course, students will examine the use of analytical techniques and quantitative methods in the areas of marketing, ticket sales, business operations. Skills such as critical thinking, mathematical modeling, statistical analysis, predictive analytics and optimization are crucial skills needed by sport managers. The course seeks to develop and refine these skills in the business application area of sport management.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6725 Info Mgmt:Competitive Intellig 3 Credits

This course examines how information science and competitive intelligence are both concerned with the gathering, manipulation, classification, storage, and retrieval of recorded knowledge for analysis and utilization. Students will have practical experience with case studies that demonstrate the need to develop information systems that can acquire, organize, maintain, and disseminate information with minimum effort and costs to users by adjusting the traditional perspectives substantially.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

Enrollment limited to students in the School of Continuing Studies college.

MPTM 6730 Competitive Intelligence Organ 3 Credits

Competitive intelligence analysis is the process that agencies and organizations use to assess their institutional strengths and weaknesses relative to peer organizations. Students in this course gain insight into how competitive intelligence informs and supports an organization's ongoing strategy. Throughout the course, students examine case studies and the history of competitive analysis in both government and industry. By the end of this course, students will be able to gather organizational data, interpret relevant data, and evaluate and recommend organizational strategies based on their research. The course places a strong emphasis on the development and application of data analysis and presentation skills.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6735 Global Competitive Intelligence 3 Credits

This course examines Competitive Intelligence (CI) as the collection and analysis of information to anticipate competitive activity, see past market disruptions, and dispassionately interpret events in a global perspective. In addition students will develop techniques to develop analysis, which provides insight into marketplace dynamics and challenges in a structured, disciplined, and ethical manner using published and non-published sources.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6740 Lean Agile w/Scrum Kanban 3 Credits

This course provides students with a solid foundation and a good understanding of practicing Agile with Scrum and Kanban. Scrum is a framework for designing, developing, and delivering products, services, and/or solutions of the highest value incrementally. Scrum is also known as a popular agile method in the computer software industry for addressing unknown and complex requirements iteratively and incrementally.. Scrum implementations require the use of self-organized teams who are flexible individuals willing to adapt quickly to change. Students will learn about the rules of the game specific to Scrum events (the sprint, sprint planning, daily Scrum, sprint review, and sprint retrospective), Scrum artifacts (e.g. product backlog, sprint backlog, and increment), and the importance of the definition of done. Kanban is another lean framework for developing and delivering products and services by balancing demands with available capacity, and by improving the handling of system-level bottlenecks. Students will also learn essential lean principles and discover how to use a Kanban board to help them visualize workflow and prioritize work items more effectively.

Level: Graduate

Prerequisites: (MPTM 520 or MPTM 6850)

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6750 Info Management for Comp Intel 3 Credits

This course examines how organizations can use information to create competitive advantage. Students will learn how organizations can become data driven by having the proper elements in place, such as strategy, data governance, and leadership. They will also gain knowledge on security and privacy requirements for information and how to monetize information for competitive advantage. Finally, the course covers best practices for sharing information within organizations and among organizations, and how to convert tacit knowledge to explicit knowledge.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6755 Agile Frameworks for Lean Ent 3 Credits

Agile organizations quickly sense and adapt to external and internal changes to deliver relevant results in a productive and cost-effective manner. This course explores merging life cycle approaches, which lead to greater organizational agility, and provides an in-depth examination and evaluation of Lean-Agile principles and values and the drivers behind becoming a more agile organization. Students learn how organizations can achieve agility at scale by funding ecosystems of teams that deliver large initiatives, allowing decentralized financial decision making within the portfolio, and continuously prioritizing their backlog of activities within each agile project. Learning objectives for this course include the ability to achieve true end-to-end business agility by utilizing industry standard agile frameworks (such as Scrum, Kanban, and SAFe); establishing the strategic themes that guide an organization's strategy and investments; determining and funding the relevant value streams; defining and prioritizing cross-cutting portfolio backlog epics; and monitoring the performance of the portfolios using applicable Lean portfolio, program, and team metrics. Students learn how to link an organizational strategy into relatively small investment increments called epics, study the breakup of epics into features that can be delivered by program teams, and explore the decomposition of features into user stories delivered by single teams in individual sprints. This course also explores organizational factors that impact the use of agile approaches, such as culture, readiness, business practices, and the role of the PMO.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6760 DevOps Essentials 3 Credits

DevOps, as a movement and methodology since the mid-2000s, is still transforming the way value is delivered by information technology (IT) organizations. Deriving from practices supporting modern technology management methodologies such as Agile, enterprise DevOps adoption has been demonstrated to create value by reducing the amount of unnecessary rework, improve the quality, speed and tempo of production deployments, create feature reinvestment opportunities, and reduce operational downtime significantly. This course in DevOps is an exploration in the practice of operations and development engineers participating together in the entire service lifecycle, from design through the development process to production support.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 6850 Agile Project Management Funda 3 Credits

The course provides students with a comprehensive understanding of Agile Project Management Fundamentals. The course not only teaches students how to manage projects with an adaptive approach, but also allows students to understand the differences and similarities between agile and traditional project management. Throughout the course, students acquire the essential knowledge on agile values, principles, practices, tools, and benefits of applying a lean-agile approach to Project Management. The course also provides students with the tools necessary to select an adequate approach to project management while considering degree of uncertainty and complexity. Through simulations and demonstrations of agile concepts, students gain experiential learning and acquire essential Agile PM skills to operate in an agile setting. By the end of the course, students can apply insights on how to blend linear, incremental, and iterative approaches in a traditional, agile, or hybrid environment.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 7948 Ind: Capstone 3 Credits

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 7949 Tutorial: MPTM 3 Credits

This is a tutorial course for Independent Study in the Master's of Professional Studies in Technology Management

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MPTM 7990 Capstone Course 3 Credits

The Capstone Course is the culmination of the student's academic and professional experience in the Technology Management program. Over the course of the semester, students will be asked to apply the knowledge gained during the program to a project. With a focus on technology for social good, students will incorporate the skills necessary for analyzing key issues, thinking creatively, and making sound decisions in order to develop and execute plans. Projects will address global and local challenges.

During the semester in which students are enrolled in the Capstone Course, it is strongly recommended that they only take one additional course along with it. Students must earn a grade of B or better in the Capstone Course in order to graduate.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt), Prof Studies (Technology Mgmt) or Prof Studies (Technology Mgmt).

Enrollment is limited to Graduate level students.