

# MANAGEMENT (MG-GY)

## **MG-GY 625 Seminar in Organization and Career Change (3 Credits)**

This course explores organizational restructuring, including downsizing, reengineering, delayering, mergers and acquisitions, and focuses on the impact of such change on professional and managerial careers. The course emphasizes current organizational and individual management practices in coping with rapid structural, cultural and technological change in the work environment. Experts from the private and public sectors and from consulting firms address these management practices. | Co-requisite: MG-GY 6013 or instructor's permission and graduate standing.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

## **MG-GY 997X MS THESIS IN TECHNOLOGY MANAGEMENT (3-9 Credits)**

*Typically offered occasionally*

Students choose original investigation topics for their theses. While they conduct research and draft their theses, students are required to confer with their advisers and to submit progress reports. A final written report is required at completion. The department may request an oral examination. | Prerequisites: Graduate Standing and approval of supervising professor, adviser and department chair.

**Grading:** Satisfactory/Unsatisfactory

**Repeatable for additional credit:** Yes

## **MG-GY 999X PHD DISSERTATION IN TECHNOLOGY MANAGEMENT (3-9 Credits)**

*Typically offered occasionally*

Students are required to complete 24 credits of doctoral dissertation research. | Prerequisite: Passing grade in Doctoral standing or instructor's permission.

**Grading:** Satisfactory/Unsatisfactory

**Repeatable for additional credit:** Yes

## **MG-GY 5050 PROBABILITY AND MANAGERIAL STATISTICS (3 Credits)**

*Typically offered occasionally*

This course starts with the basic concepts of Random phenomena and goes on to advanced applications of statistics relevant to managers. Topics include probability theory, discrete and continuous probability variables, sampling, measures of central value and dispersion, hypothesis testing, statistical inference, quality control, analysis of variance, regression, correlation and nonparametrics. The course emphasizes application of concepts. No credit is allowed toward any graduate degree program administered by the Department of Technology Management. | Prerequisite: Graduate standing

**Grading:** Grad Poly Pass/Fail

**Repeatable for additional credit:** No

## **MG-GY 6013 ORGANIZATIONAL BEHAVIOR (3 Credits)**

*Typically offered occasionally*

Introduction to theory, research and practice to better understand human behavior in organizations. Topics include motivation and job satisfaction; decision making; group dynamics; work teams; leadership; communication; power, politics and conflict; organization culture, structure and design; impact of technology; management of work stress; organizational change and development; and career management. Analysis of organizational behavior problems by self assessments, case studies and simulations. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

## **MG-GY 6023 ECONOMICS AND STRATEGY (3 Credits)**

*Typically offered Fall and Spring*

This is a course in Economics, Strategy and the Firm with a primary focus on the needs of managers. It draws upon a range of concepts and tools from the fields of Industrial Organization and Strategic Management to review the cognitive building blocks that provide an economic foundation to strategic thinking. Strategy is ultimately about value creation and capture of economic value. Value-based strategies show that a firm that introduces a technological innovation creates value, and if it fails to protect it from competition it will be driven out of business. This basic level of insight is linked to the rich tradition in economics to untangle some ambiguities surrounding these concepts and provide a deeper understanding of strategic decisions made by managers within the bounds imposed by competition. | Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

## **MG-GY 6033 FINANCIAL ANALYSIS FOR TECH MANAGERS (3 Credits)**

*Typically offered Fall and Spring*

The course will focus upon accounting issues as well as financing and investment functions/decisions of the financial manager as applied to practical real world situations. We will first cover basic concepts of accounting (including cost accounting); as well as basic concepts of finance. Some of the course will involve analysis of actual case studies of real business situations. In the process of analyzing the cases students will be able to apply these accounting and finance concepts to actual business problems and their solutions. | Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

## **MG-GY 6043 INNOVATION MGMT IN MONEY, BANKING, & FIN MARKETS (3 Credits)**

INNOVATION MGMT IN MONEY, BANKING, & FIN MARKETS.

Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

## **MG-GY 6073 MARKETING (3 Credits)**

*Typically offered occasionally*

This course emphasizes the imperative to be customer-focused in the information sectors. Topics include market definition and redefinition due to technological change; analysis of customer decisions; strategic choices of markets and products; positioning for competitive success; product pricing, distribution and communications decisions; new product development; market-system dynamics and the value chain. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

## **MG-GY 6103 MANAGEMENT SCIENCE (3 Credits)**

*Typically offered occasionally*

This course introduces major concepts and methods associated with Management Science, which deals with the application of quantitative modeling and analysis to management problems. Students learn to employ important analytical tools, to determine the assumptions used, and to recognize the limitations of such methods. The course discusses methods of linear and nonlinear programming, queuing, decision analysis, simulations and game theory. The course also introduces modeling with spreadsheets. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 6113 Career Management (3 Credits)***Typically offered occasionally*

This course integrates theory, research and practice pertaining to careers in organizations, particularly as they change through the life span. It examines careers from the perspectives of both the individual and the organization, including topics such as career-stage models, organizational entry, early career development, mid-career transition, career change and career issues for women. The course develops greater understanding and insight into one's own career growth and development through the use of career-assessment techniques and standardized instruments for self-evaluation. | Co-requisite: MG-GY 6013 or instructor's permission and Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6123 Human Resource Management (3 Credits)***Typically offered occasionally*

Introduction to the broad range of human resource functions and their organizational role. Addresses issues in managing people that impact not only HR professionals but also line managers. The course is divided into four modules: (1) an overview of HRM from a strategic perspective; (2) the management of human resources, including recruitment and selection, performance management, compensation and benefits, training and career support; (3) human resource challenges, including diversity, procedural justice and ethics, collective bargaining and managing change and innovation; and (4) professional roles in HRM. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6131 Labor Relations (1.5 Credits)***Typically offered occasionally*

This course introduces labor relations from various perspectives in both union and nonunion organizations. Topics include labor movement history; the current state of the labor movement; labor statistics; labor laws and practices; union organizing; negotiating; economics and labor unions; contract administration; achieving cooperation; grievances; labor and employment arbitration; employee discipline; engineering and professional unions, public sector unions; global aspects; and the future for unions. Note: Not open to students who have completed MG-GY 6133.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6141 Conflict Management (1.5 Credits)***Typically offered occasionally*

This course investigates the nature and meaning of conflict, especially in knowledge-based organizations. It analyzes the design of conflict avoidance and mitigation programs. Alternative dispute resolution modalities are presented and demonstrated. Students learn strategies to build successful relationships on an ongoing basis, and how to build skills around collaborative conflict resolution. Issues related to diversity, knowledge workers and creative professionals are addressed as part of a proactive approach to managing conflict in the contemporary workplace. Note: Not open to students who have completed MG-GY 6143.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6153 Leadership Development and Team Building (3 Credits)***Typically offered occasionally*

This course focuses on the essential role of multifaceted leadership in diverse organizational settings, especially those utilizing technology. Students learn the nature of leadership and its relationship to team development and organizational effectiveness. The course broadly surveys theory and research on leadership and teams in organizations. Students learn a hands-on approach involving experiential learning and case analyses. Working in teams, students are required to participate actively. | Prerequisite: Graduate Standing. Co-requisite: MG-GY 6013 or instructor's permission.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6163 Job and Workplace Design (3 Credits)***Typically offered occasionally*

Examination of theory, research and applications of job and workplace design. Job design is presented from an interdisciplinary perspective focusing on how job design influences attitudes and work behavior within organizations. Exposure to diagnostic tools for measuring and evaluating jobs and the psycho-social aspects of the workplace environment, as well as the principles of work redesign. Topics include the influences on work design by innovations in information technology, modern manufacturing, virtual work arrangements and open office systems; design and support of effective work teams; reengineering and total quality management; and privacy and communication in the workplace. | Co-requisite: MG-GY 6013 or instructor's permission and Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6173 Performance Management and Reward Systems (3 Credits)***Typically offered occasionally*

Introduction to creating performance appraisal systems that includes theoretical and applied issues. Topics include coaching and feedback; team settings; multi-source feedback and self-ratings; executive performance; and improving evaluations. The role of compensation, benefits and other rewards in attracting, retaining and motivating employees is addressed, including technical and professional personnel. | Co-requisite: MG-GY 6123 or instructor's permission and graduate standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6181 Talent Management Systems (1.5 Credits)***Typically offered occasionally*

In this survey course, students gain a knowledge and understanding of the strategies and range of processes, methods and tools that organizations use in effective Talent Management programs. The focus is on developing and managing leadership talent and on Talent Management practices for general management, professional, technical and other positions. Topics include identifying and competing for critical talent pools; alignment and integration of HR practices; recruiting and employment branding; identifying, selecting, developing, reviewing and managing leadership talent; retention and recognition strategies; and career paths and career planning. | Instructor's permission and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**Prerequisites:** Graduate Standing or instructor's permission.

**MG-GY 6183 COMMUNICATION FOR TECH MANAGERS (3 Credits)***Typically offered Fall and Spring*

This highly interactive and participative experience introduces powerful concepts and approaches for effective technical communication, strategy, and delivery. Deliverables will include written documents and oral presentations. You will present both individually and in a team, and will receive feedback to improve your presentation effectiveness. | Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6191 Coaching in Organizations (1.5 Credits)***Typically offered occasionally*

This course focuses on the role of coaching in organizations as part of a talent-management program to develop human resources. Students gain an understanding of the definition, theoretical basis, functions and models of coaching. Topics: How coaching is linked to the adult development lifecycle and the range of contexts in which it is applied. How coaching is used in leadership development as well as performance management, the multicultural aspects of coaching and the access minorities have to coaching. The course provides a familiarity with different coaching tools and instruments as well as how leading organizations use coaching in their talent management programs. Issues related to certification as a coach are addressed. | Co-requisite: MG-GY 6013 or instructor's permission and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6193 STATISTICS FOR DATA ANALYSTS (3 Credits)***Typically offered Fall and Spring*

The course is an excellent introduction to statistical tools used in any aspect of business. It covers thoroughly key probability concepts and statistical techniques used in the analysis of financial, economic and accounting data. In addition to descriptive statistics, probability, and hypothesis testing, this course also covers regression analysis and time series analysis with an emphasis on model formulation and interpretation of results. The use of spreadsheets (to facilitate most of the analysis in this class) will be introduced and developed as well through case studies based on real-world data and problems in business and economics, so you will have acquired a working knowledge of spreadsheet after this class. The focus is on understanding underlying concepts rather than on memorizing mathematical formulas while the lectures concentrate on statistical concepts and applications using spreadsheets rather than rigorous math proof for the entire semester. | Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6201 CONSULTING IN ORGANIZATIONS (1.5 Credits)***Typically offered occasionally*

This course provides a practical orientation to consulting in organizations within an academic framework. The course prepares students from a variety of disciplines for roles as internal and external consultants by building knowledge and skills to successfully take a client and project from entry through termination and evaluation. Each student is required to take a project from conception to presentation. This project gives students an in-depth understanding of the details and issues that consultants need to address. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6203 DATA VISUALIZATION FOR BUSINESS INTELLIGENCE (3 Credits)***Typically offered Fall and Spring*

Huge volumes of data are generated, stored and analyzed to drive complex technical and business decisions by providing actionable insights. To achieve this end-users across the industry, need to visualize the data in diverse representations and perform explanatory and exploratory analysis. The course will provide a graduate-level introduction to Data Visualization, as a human perception friendly approach to convey concepts and analysis based on appropriately presented field data. It will systematically introduce building blocks, including types of data, visual elements and design approaches with many examples; provide a basic introduction to the latest visualization software tools as well as programming technologies, such as R and D3; and review several case studies of their application in producing business intelligence.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6211 OUTSOURCING: A HUMAN CAPITAL STRATEGY (1.5 Credits)***Typically offered occasionally*

This comprehensive course prepares students from a variety of disciplines with the knowledge and skills necessary for a "make or buy" decision when considering outsourcing human capital. Topics include strategic implications, financial aspects, project management, internal consulting, metrics, legal considerations, development of an effective template RFP (request for proposal), internal communication details, and management of the vendor/provider relationship. | Prerequisite: Graduate Standing. Co-requisite: MG-GY 6123 or instructor's permission.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6223 Staffing Systems in Organizations (3 Credits)***Typically offered occasionally*

Examination of the design and management of successful staffing practices used to build, deploy and retain a quality workforce in order to achieve organizational effectiveness and individual job satisfaction. Topics include staffing strategy; human resource planning and workforce diversity; job analysis; recruitment; hiring methods; the reliability and validity of employee assessment methods; and retention management. Psychological theories of personnel assessment are reviewed. Legal issues pertaining to staffing practices are integrated. | Co-requisite: MG-GY 6123 or instructor's permission and Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6233 Training Systems in Organizations (3 Credits)***Typically offered occasionally*

An overview of the many forms of training and related learning activities found in the modern workplace, including management development, technical training, career planning and mentoring. The course will focus on training as both an asset to the organization and a necessity for delivering goods or services that will be valued by the customer. Topics addressed include needs analysis, preparation of employees for jobs, training program design, traditional training methods, computer-based methods, development, implementation and evaluation of training, targeting various groups with special training needs and management development. | Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 6243 Change Management Systems in Organizations (3 Credits)***Typically offered occasionally*

Survey of theory, research and applications related to the process of managing planned change in organizations. Organization development (OD) encompasses a variety of interventions and techniques, including strategic management sessions, team building, organizational climate studies, career development and job enrichment. Addresses the practical application of group, inter-group and individual changes; planned structural revisions in formal organizations; and the dynamics of organizational change processes. Experiential techniques emphasized. | Co-requisite: MG-GY 6013 or instructor's permission and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6253 Seminar in Organization and Career Change (3 Credits)***Typically offered occasionally*

This course explores organizational restructuring, including downsizing, reengineering, delayering, mergers and acquisitions, and focuses on the impact of such change on professional and managerial careers. The course emphasizes current organizational and individual management practices in coping with rapid structural, cultural and technological change in the work environment. Experts from the private and public sectors and from consulting firms address these management practices. | Co-requisite: MG-GY 6013 or instructor's permission and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6263 Human Resource Information Systems (3 Credits)***Typically offered occasionally*

Introduction to the design, selection, implementation, enhancement and operation of human resource information systems (HRIS), a computer-based tool that allows the efficient entry and updating of employee-related information. Focus is on the design and use of HRIS to facilitate the objectives of HR functions as well as the organization. Provides a "hands-on" experience with the design of prototype simulations and database programming systems used to solve common HR problems and efficiently manage employee information. | Co-requisite: MG-GY 6123 or instructor's permission. Prerequisite: Graduate standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6271 MANAGING HUMAN RESOURCE TECHNOLOGY IN ORGANIZATIONS (1.5 Credits)***Typically offered occasionally*

Examination of factors critical to the effective organizational adoption and utilization of technology in human resource applications. Topics covered include: project management; HR data and process standardization; organizational governance; the unique security requirements of HR data; metrics; and HR process and technology outsourcing. By understanding these issues and how organizations can address them, students will be better prepared to more effectively plan and implement HR process re-engineering and technology enablement. | Prerequisite: Graduate Standing. Co-requisite: MG-GY 6123 or instructor's permission.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6283 Web-Based Human Resource Management (3 Credits)***Typically offered occasionally*

Survey of the effective use and application of Internet and Intranet technologies for HR functions. Topics include employee self-service and online recruiting as well as software that handles peer reviews, applicant tracking, performance management, succession planning and benefits administration. Issues addressed include: Best practices in utilizing web technology for HRM; creating websites to achieve organizational goals; determining HR information to include in an organization website; impact of Web technology on organization design; evaluating privacy and security issues; and developing a vision and a plan for utilizing Web technology in HRM. | Co-requisite: MG-GY 6123 or instructor's permission and graduate standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6293 MANAGING TECH PROFESSIONALS (3 Credits)**

This course provides a survey of research and practice focusing on the effective management of technical professionals, who have come to represent a significant segment of the labor force. The success of organizations today is largely a result of the knowledge and skills applied by their technical professional employees. The effective management of such a work force has been one of the most critical problems faced by organizations that depend on their contributions. This course closely examines research and case studies that examine various management techniques to improve the utilization, development and motivation of technical professionals for achieving high levels of performance, innovation and creativity. | Prerequisite: MG-GY 6013 or instructor's permission.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6303 OPERATIONS MANAGEMENT (3 Credits)***Typically offered occasionally*

This course focuses on developing a deeper understanding of the role that operations management plays in determining business strategy and in developing competitive advantage. The primary emphasis is on how to develop and effectively manage operations in knowledge-intensive enterprises. Participants discuss the operational design and managerial implications when the emphasis of the operations group is more on knowledge management than on production and facilities management; managing the effective integration of technology, people and operating systems; understanding the complexities and challenges of operations management; the challenges of developing and managing supply chain networks; and the critical role of technology in developing operational capabilities in an organization. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6313 ORGANIZATIONAL THEORY & DESIGN (3 Credits)***Typically offered occasionally*

Introduction to theories of organizations including structure, design and culture. Provides an understanding of how organizations work and their interrelationship with the external environment. Examines the process by which managers select and manage aspects of structure and culture to achieve organizational goals. Topics include characteristics of bureaucracy, adhocracy, sub-optimization, human dynamics and informal systems; influence and control systems; management of technology; and planned change. Examination of organizations through research and case studies. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 6321 GLOBAL HUMAN RESOURCE MANAGEMENT (1.5 Credits)***Typically offered occasionally*

An overview of human resource management practices in today's global work environment. Topics addressed include international/socio-cultural diversity; key characteristics of select countries international business behavior; international strategic alliances; identification, recruiting and selection of international personnel; training and development of expatriates and homecountry nationals; evaluation and coaching of employees in international organizations; intercultural skills acquisition for the line manager and human resources professional; team development strategies; and design of practical language learning tools for the HR professional and the line manager. | Co-requisite: MG-GY 6123 or instructor's permission. Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6333 Research Methods in Organizational Behavior & Human Capital Systems (3 Credits)***Typically offered occasionally*

This course introduces theories and techniques related to research methods applied to organizations. It also provides an understanding of why and how organizational research is carried out. The focus is on analyzing organizational problems and using research as a problem-solving tool. Topics include problem definition, theoretical framework, hypothesis development, research design, experimental designs, measurement, data-collection methods, sampling strategies and preparing research proposals. Students develop a research proposal they apply to a problem of interest. | Prerequisite MG-GY 5050 or undergraduate statistics course and Graduate standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6343 HUMAN CAPITAL ENGINEERING & ANALYTICS (3 Credits)***Typically offered occasionally*

This course examines and applies the valuation and management of intangible assets in designing and managing post-industrial organizations. As organizations increasingly rely on technology to produce value, these technological solutions require interactions with other forms of value creation like Human Capital Management, Intellectual Property development and Organization Culture. The first part of the course focuses on human capital engineering using an interdisciplinary approach, drawing on diverse fields including industrial-organizational psychology, industrial engineering, economics and artificial intelligence to create a holistic view of how work in its various forms creates value. The second part of the course addresses workforce analytics, providing the student with a knowledge and understanding of current best practices, issues, and decision points in building an effective human capital analytic program. This part of the course will also focus on data structure and design to enable automation and predictive modeling and will place an emphasis on technology-enabled reporting.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6353 Quality Management (3 Credits)***Typically offered occasionally*

Companies have found that focusing on quality and overall customer satisfaction as a primary objective of manufacturing and service operations is a proven competitive weapon. This course examines the concepts and methods to building quality into the management process. Total quality management (TQM) and similar approaches are covered through readings, case studies and examples. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6361 MANAGING BUSINESS PROCESS REENGINEERING (1.5 Credits)***Typically offered occasionally*

Explores the organization effectiveness issues associated with large scale change through Process Reengineering, Toyota Production System (TPS), and Six Sigma programs. The course develops a thorough understanding of how processes can be designed, measured and maintained to optimize customer value creating performance.

Techniques for defining performance requirements and managing process improvement on a large or small scale will be explored. | Prerequisites: MG-GY 5050 or equivalent

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6373 Human Capital Big Data, Predictive Analytics, & ROI (3 Credits)***Typically offered occasionally*

This course examines theories and applications of human capital, including its definitions, predictive analyses, and determining its value to the business by leveraging big data. The course will take a systems view and integrate human capital perspectives, concepts, and methods from economics, finance, psychology and business process re-engineering. Students will learn statistical methods to build predictive models of human capital and the software tools to conduct predictive analytics with big data. They will learn how to determine the economic and productivity benefits of human capital and human capital interventions (e.g., monetary and non-monetary rewards, job re-design, engagement, etc.) and how to communicate these benefits to senior management and key stakeholders in support of important organizational decisions.

| Prerequisites: Graduate Standing & MG-GY 5050; Corequisite: MG-GY 6123

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**Corequisites:** MG-GY 6123.**MG-GY 6383 Seminar in Managing HR Analytics & Big Data (3 Credits)***Typically offered occasionally*

Rapid changes in HR are resulting in revolutionary transformations of the field. As HRIS has become ubiquitous and the volume of available information continues to explode, organizations are requiring that HR shift its perspective to become a critical contributor in decision making. Fluency in the benefits and potential applications of Big Data, Predictive Analytics, and Data Science as applied to Human Capital have become essential for HR practitioners. These topics are addressed by experts from many of the leading corporations and consulting firms which are at the forefront of HR analytics and Big Data. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**Prerequisites:** Graduate Standing.

**MG-GY 6391 Managing Knowledge-Based Enterprise (1.5 Credits)***Typically offered occasionally*

This course addresses the organizational and management issues surrounding the emergence of knowledge as a key factor in the competitive advantage of an organization. The focus is on knowledge as a manageable asset and how and why organizations use, or, do not use what they know. New technologies for handling information and knowledge will be examined. Students will "create" knowledge by researching knowledge-based organizations as well as via other approaches. The course will address how knowledge management techniques can improve business performance, as well as strengthen management and leadership capabilities. Note: Not open to students who have completed MG-GY 6393.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6393 MANAGING KNOWLEDGE-BASED ENTERPRISES (3 Credits)**

This course addresses the organizational and management issues surrounding the emergence of knowledge as a key factor in the competitive advantage of an organization. The focus of the first part of this course is on knowledge as a manageable asset and how and why organizations use, or, do not use what they know. New technologies for handling information and knowledge are examined. Students "create" knowledge by researching knowledge-based organizations as well as via other approaches. The second part of the course addresses how knowledge management techniques can improve business performance, as well as strengthen management and leadership capabilities. The application of individual and team based strategies for augmenting human capital performance are examined in the context of knowledge management. Classic cases of leadership knowledge excellence in applying intelligent human capital acquisition and deployment are provided.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6401 Employee Engagement: Theory and Practice (1.5 Credits)***Typically offered occasionally*

The course explores the science and practice of employee work engagement from the perspective of the linkage between an engaged workforce and important business outcomes such as higher productivity, employee retention, and customer satisfaction. Different facets of this emerging construct are examined at the individual and group level with a focus on creating a culture and work environment of engagement that will foster positive attitudes and proactive work behaviors. The meaning of engagement and its relationship to other important psychological constructs such as organizational commitment, job satisfaction, and organizational citizenship behavior are also reviewed. Note: Not open to students who have completed MG-GY 6403.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6463 Supply Chain Management (3 Credits)***Typically offered occasionally*

This course introduces supply-chain management and covers its qualitative and quantitative aspects. The underlying objective is to: (1) introduce students to the standard business concepts (and associated terminology) involved in the retailing and supply-chain management; (2) develop skills in understanding and analyzing retailing, marketing, logistics, operations, channel management and allied issues and the interactions between them; and (3) examine and discuss the important role played by technology and integration at various points in the supply chain. | Prerequisite: graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6503 MANAGEMENT OF INFORMATION TECHNOLOGY AND INFORMATION SYSTEMS (3 Credits)***Typically offered occasionally*

This course is designed for managers who need to understand the role and potential contribution of information technologies in organizations. The focus of the course is on different information technologies and their applications in managing business critical data, information and knowledge. The course concentrates on the current state of IT in organizations, challenges and strategic use of IT, IT infrastructure and architecture, building, implementing and managing IT applications, and emerging issues such as intelligent systems, business process reengineering, knowledge management and group support systems. |

Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6523 Telecommunications Policy (3 Credits)**

This course looks at relationships among the development of the telecommunications industry and national growth and examines the development of telecommunications-policy issues as well as policy-making organizations. The course analyzes the major issues that affect the telecommunications industry and commerce and society. The options and opportunities afforded by recent regulatory and policy issues are examined.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6543 ECONOMICS FOR INFORMATION SECTORS (3 Credits)**

This course in applied competitive strategy draws upon recent experiences associated with the impact of information technology upon diverse industries. Students completing this course will have mastered a basic understanding of the economic and competitive implications of information technology. This competence in analysis is arrived at through understanding how availability of information (through technology or otherwise) affects the basic strategic options available and how firms and industries are likely to be affected. In addition, students will be introduced to the often poorly structured process of evaluating the economics of potential systems innovations. They will then be able to participate in strategic systems planning from a managerial point of view.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 6553 Telecommunications Management I (3 Credits)***Typically offered occasionally*

This course introduces the fundamentals of modern telecommunications and networking for current and future managers. Topics include basic concepts such as components of data communication, data transmission, Open System Interconnection (OSI), TCP/IP and other models, data link and network layers and local area networks (LANs). The course expands technical knowledge and discusses related managerial issues. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6563 Telecommunications Management II (3 Credits)***Typically offered occasionally*

This course explores advanced issues and trends in modern enterprise networking. The course also examines the implications of such developments in the business environment and the infrastructural needs of organizations and clusters of organizations; reviews ramifications of the TCP/IP revolution leading to commercialization of the Internet/World Wide Web; discusses the network infrastructure required to implement Intranets/Extranets, electronic commerce and inter-organizational business communication and collaboration generally; evaluates emerging technologies (such as electronic payment systems, corporate digital libraries, push technology, multicasting, firewalls and digital signatures); and deals with the implications of Internetworking, such as digital cities, smart buildings, distance learning, telecommuting and teleconferencing. | Prerequisite: MG-GY 6553.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6603 MGMT OF NEW & EMERG TECH (3 Credits)***Typically offered occasionally*

This course surveys and explores the business implications of selected new and emerging technologies with the potential to change business practices and create new industries. Technologies discussed include new Internet architectures, Wikis, Open Source, security issues, new Web services, social networking and Web 2.0. This course is for the manager who is interested in staying current with, and learning about, new technologies for use in business. No specific engineering background is required. A variety of reference texts, journals, case studies and websites is used. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6643 Management and the Legal System (3 Credits)**

This course discusses the impact of the legal system on corporate strategy, managerial decisions and planning processes. Issues covered include protection of intellectual and technological properties; consumer, contract and commercial laws; employer liability; negligence and risk-management from legal and corporate viewpoints; and constitutional and regulatory aspects of conducting business.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6703 Operations Management for Knowledge-Based Enterprises (3 Credits)**

This course focuses on developing a deeper understanding of the role that operations management plays in determining business strategy and in developing competitive advantage. The primary emphasis is on developing and effectively managing operations in knowledge-intensive enterprises. Students discuss the operational design and managerial implications when the emphasis of the operations group is more on knowledge management than on managing production and facilities; managing the effective integration of technology, people and operating systems; understanding the complexities and challenges of operations management; meeting the challenges of developing and managing supply-chain networks; and understanding the critical role of technology in developing an organization's operational capabilities. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6753 MEDIA ENTERTAINMENT SECTOR: STRUCT, ORG, MGMT (3 Credits)**

This course introduces the various industries that compose the media sector and outlines the major issues confronting these industries as they grapple with incorporating digital-based and mobile innovations into their businesses. Discussions cover the structure of industries within the sector and how managers are recalibrating their business models and redesigning their organizations to compete in the current media and entertainment sector. Other issues covered include the new media industry as a catalyst for change; the transformation of traditional content-intensive industries such as the motion picture business; the book publishing business; the newspaper business and the music industry and the newly defined role of users and customers. Participants read case studies and articles and access other relevant materials in electronic and print format. Emphasis is on interactive discussions in class and on projects developed by individual participants and teams of participants. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6763 Managing Emerging Technologies in the Media and Entertainment Sector (3 Credits)**

This course focuses on selected emerging technologies that are changing the nature of competition in the media sector. The dynamic relationships involving changing technology, business processes and management response are viewed in light of new digital platforms and applications, standards development, as well as legal and legislative initiatives. Topics include intellectual property rights and digital rights management; content-on-demand; and the management, archiving and preservation of digital content. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 6773 ADVCD TRENDS IN INNO AND TECH IN MEDIA AND ENTRNMT SECTOR (3 Credits)**

This course explores important trends and issues with a significant impact on managing technological innovation in the media sector. The course covers a range of topics, which may vary year to year and which serve as a culmination of the ideas and issues discussed in the MOTIME track. Participants develop projects that reflect their interests in particular aspects of the sector. Examples are redefinition of the notion of convergence; the intersection of design, content and technology; and the globalization of the media industry. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 6933 Information Technologies, Systems and Management in Organizations (3 Credits)***Typically offered occasionally*

This course is for managers who need to understand the role and potential contribution of information technology (IT) within organizations. The focus is on information technology and its business applications. The course concentrates on the current state of IT in organizations: challenges and strategic use of IT: IT infrastructure and architecture: the technical foundation of IT: building and implementing organization information systems: and emerging issues in IT, such as intelligent systems, business process re-engineering, knowledge management and group support systems. Course format is interactive with concept presentation followed by open discussion on real-world applications of IT and business cases. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7173 Enterprise Data Systems (3 Credits)***Typically offered occasionally*

The course addresses modern issues of large-scale information and knowledge management through the design, development and implementation of different kinds of database technologies. The course introduces and elaborates data modeling through relational models, SQL applications, database architecture, different types of database-management systems, and data integrity and administration. The course introduces emerging database technologies, such as distributed Internet-based databases, distributed client/server databases, multidimensional databases, groupware, data warehousing, and data mining for decision support. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7183 Strategy for the Modern Enterprise (3 Credits)**

This course provides an overview of strategic decision making for the modern enterprise. It introduces general management perspectives of strategy, competitive strategy, emerging analytical characteristics of strategy, and current innovation and global dimensions of strategy. The course concludes with an integrative approach for strategic decision making. Such an approach is geared to a business environment that is increasingly fast-paced, complex, knowledge-intensive, global and changing continuously.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7193 ETHICAL DIMENSIONS OF MODERN MANAGEMENT (3 Credits)**

Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7203 Intercultural Dimensions of Global Management (3 Credits)**

This course focuses on the critical intercultural dimensions of global management. Topics covered include identifying key culture-related factors essential for effective global management, communicating across different cultures, building effective trans-cultural organizations, developing capable cross-culture managers and leveraging cultural diversity.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7283 MBA CAPSTONE PROJECT COURSE (3 Credits)**

The Polytechnic MBA Capstone experience constitutes a unique 3-credit-learning experience, and usually occurs in the final semester. While the Capstone may have some classroom components, the overwhelming part of the Capstone takes place in the field. The Capstone Project Course experience can be local and/or global, i.e. taking place in New York City and/or overseas. The Capstone Project Course also brings together the concepts, theories, and insights gained throughout the Poly MBA Program. Because one of the critical underlying themes of the entire Poly MBA Program is commitment to one's community, service is a major component of the MBA Capstone Project Course. It is assumed that a major part of the Capstone work will entail contribution to the community in some fashion. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7503 DIGITAL BUSINESS MANAGEMENT (3 Credits)***Typically offered Fall and Spring*

This course will explore several trends that have emerged in Digital Business in terms of Customers, Competition, Data, Innovation, Technology and Value Propositions. We will learn about the world's most innovative Digital Business companies, their organization and strategies. We will also examine the failures and lessons learned of legacy business in the digital age. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7653 THE RETAILING INDUSTRY: STRUCTURE, ORG AND MGMT (3 Credits)**

This course introduces the emerging structure of the modern retailing industry and effective retailing management. Students investigate how key firms in the modern retailing sector are managed and how pacesetting firms are organized and structured at both the strategic and operational levels. The course covers physical and internet-based retailing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7663 MANAGING TECH INNO AND EMERGING TECH IN RETAILING INDUSTRY (3 Credits)**

This course introduces technological innovation and emerging technologies in retailing. The focal point is the effective management of technological innovation in modern retailing. Also discussed are the role of technology platforms and applications, technology development and use, and the relationships between technologies and business processes.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 7671 GLOBAL RETAILING AND SUPPLY CHAIN MANAGEMENT (1.5 Credits)**

This course focuses on current theory and practice in global retailing and supply-chain management and the link between globalization and supply-chain management. The course examines the flow and transformation of goods from the raw-material stage to the end user. Another focus is the globalization of retailing, which has triggered a range of supply-chain innovations. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 7693 Managerial Analytics (3 Credits)**

This course focuses on the use of “analytics” –a fast-growing element in modern management—for achieving more effective operations and heightened competitive advantage. The course provides a managerial overview of current deployment of a diverse range of analytics—internally-oriented and externally-oriented. The course also identifies the impact of analytics on a firm’s performance and explores their strengths and weaknesses. The course presents best practices of analytics from a range of industries, including retailing, hospitality, financial services, consulting, healthcare and logistics. | Pre/Co-Requisites: MG-GY 6083 Economics AND MG-GY 6093 Accounting and Finance.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7703 ENTREPRENEURSHIP (3 Credits)**

*Typically offered occasionally*

This course focuses on entrepreneurship and venture creation as key engines for wealth creation and successful business strategy in the modern, innovation- intensive, high-tech economy. The course deals with key issues such as: (1) assessing attractiveness of opportunities; (2) launching a new venture; (3) nurturing, growing and entrepreneurial venture; (4) obtaining the necessary financial, human and technology resources; (5) managing the transition from a small entrepreneurial firm to a large, sustainable, professionally managed but still entrepreneurial corporation; and (6) being an entrepreneur and promoting entrepreneurship in a large corporation. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7713 THE BIO-PHARMA SECTORS: STRUC, ORG AND MGMT (3 Credits)**

This course introduces effective management in the modern bio-pharma sectors. Students investigate how key bio-pharma firms are organized and managed at both the strategic and operational levels. Particular attention is paid to various forms of technology and innovation management in the bio-pharma arena.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7723 MANAGING TECH INNO AND EMNGNG TECH IN BIO-PHARMA SECTOR (3 Credits)**

This course introduces technological innovation and emerging technologies that are changing the nature of competition in the bio-pharma sectors. It focuses on modern approaches for research and discovery of new molecules and on developing processes to manufacture them in large quantities. The course explores the two major routes for discovery and manufacturing: the “chemical” route and the “biological” route. Students receive a blend of conceptual overviews, essential technical and scientific basics, competitive, and the regulatory and management implications of the developments, cases and industry examples that are studied.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7733 SERVICES INNOVATION (3 Credits)**

*Typically offered occasionally*

This course deals with services innovation. Services have eclipsed manufacturing and dominate a modern, advanced economy. According to some estimates, services account for close to 80 percent of U.S. employment. This course examines how value creation occurs in a range of fast-growing services sectors, including retailing, hospitality, financial services, professional services, travel, logistics and healthcare. The course emphasizes that services are diverse, and distinguishes explicitly between traditional and high-value services. This course focuses especially on high-value services. A key objective of this course is introducing best practices for nurturing modern services innovation. | Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7743 ADVANCED TRENDS IN TECHNOLOGY MANAGEMENT & INNOVATION (3 Credits)**

This course explores several trends that have emerged in the technology management and innovation arena in the past decade. These include the advent of digital-based innovation in the late 1990s which has had a profound affect on how many firms conduct business; the effect of the crash of the NASDAQ in March 2000 and the September 11 event which had a major effect on corporations which now had to operate within major economic and creative constraints; the development of the concept of networks as it relates to the organization and strategy of the firm; the development of the wireless technology platform and its effect on technology innovation; and the development of a new innovation paradigm which suggests a relationship between information technology, creativity, and business practices. The course emphasizes classroom discussions as well as team based and individual projects. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7782 INNOVATION MGMT IN MONEY, BANKING FINANCIAL MARKETS (2.5 Credits)**

The perspectives of this course extend beyond a managerial focus within individual enterprises to encompass also the financial services industry as a whole. The course focuses on modern financial innovation. It also analyzes key environmental variables that have a significant impact on how financial services companies innovate. Topics include monetary policy, which determines interest rates; and regulatory policies and prescribe constraints within which financial services companies innovate. The course also deals with the important role of information technology plays in the payments system and the functioning of the overall financial system.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7811 SELECTED TOPICS IN NETWORKING AND INFORMATION TECHNOLOGIES (1.5 Credits)**

This course explores in depth selected modern networking and information technologies. Specific topics vary year to year. Examples are mobile communications, IP telephony, enterprise data systems. The course builds on previous TIM courses. Students receive a solid technology grounding in a learning context that also emphasizes how these selected technologies affect markets, industries, providers, integrators and users. The course’s technical content is supplemented by case examples and guest speakers. | Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** Yes

**MG-GY 7841 Negotiation in Technology-Intensive Sectors (1.5 Credits)**

Negotiation is the art and science of creating good agreements. This course covers the science of negotiation by discussing and applying theories of negotiation. Students develop the art of negotiation by negotiating with each other in realistic cases. A wide variety of negotiation applications is covered, including single and multi-issue negotiations and two-party and multi-party bargaining. Special emphasis is placed on negotiations in technology-intensive environments. The course uses the case method. Many examples are cases that students actually negotiate with each other. Students' grades are based on their performance in these negotiations and on class participation. | Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7851 LEADERSHIP (1.5 Credits)**

Leaders set a vision, communicate it well and influence and inspire others to achieve their vision. However, there are many ways to achieve these goals and many challenges and ineffective ways in implementing them. This course develops the student's leadership style by analyzing individual styles, understanding their impact and enabling each student to create the right leadership style. This course addresses fundamental leadership issues and frameworks, drawing on current organizational research. Most of all it provides students with ways to gain insights on their own leadership style. The course emphasizes hands-on experience and focuses on experiential learning. Course objectives include assessment of leadership styles; developing leadership skills; and understanding the role of leadership coaching in managing teams. | Prerequisite(s): Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7861 High-Technology Entrepreneurship (1.5 Credits)**

This course focuses on entrepreneurship as a critical engine for wealth creation in the high-technology and innovation-intensive economy. The covers covers such key issues as: (1) assessing attractiveness of opportunities; (2) launching a new venture; (3) obtaining the necessary financial, human and technology resources; (4) managing the transition from a small entrepreneurial firm to a large, sustainable professionally managed but still entrepreneurial corporation; and (5) being an entrepreneur and promoting entrepreneurship in a large corporation. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7871 INTRODUCTION TO MANAGING INTELLECTUAL PROPERTY (1.5 Credits)**

*Typically offered occasionally*

This course focuses on the role of intellectual property (e.g., patents, trade secrets, copyrights, trademarks, etc.) as a major element in modern technology and information strategy. Relevant concepts and case studies use examples of classical and digital innovations. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7873 MANAGING INTELLECTUAL PROPERTY & INTELLECTUAL CAPITAL (3 Credits)**

*Typically offered occasionally*

This course focuses in detail on managing intellectual property, a major strategic and financial asset of a modern business. IP can be employed to protect existing products, services and business methods and to accelerate development of new products, services and business methods. IP also can be leveraged to enhance a firm's competitiveness, value and profitability. This leverage is true in the physical world and in the online world of the Internet and e-Business (where traditional principles of Intellectual property rights are often stretched and may need reinterpretation and even modification). Intellectual property is becoming increasingly complex as emerging digital technologies advance. | Prerequisite: Adviser's approval and graduate standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7881 MODERN SUPPLY CHAIN MANAGEMENT: INTEGRATION THROUGH TECHNOLOGY (1.5 Credits)**

This course introduces the role of information technology in supply-chain management. Both qualitative and quantitative aspects of supply chain management are covered. Students discuss and analyze articles pertaining to leading-edge research and management thought. The underlying objective is to prepare participants to develop useful skills for analyzing technology, marketing, logistics, operations and broader channel management issues. Classes use the case method. A high level of class interaction is expected. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7883 INFO SECURITY & PRIVACY: SYSTEMS (3 Credits)**

This course centers on management issues in information security and privacy in systems planning and development. Students learn to take a risk-based approach to integrating security into the planning and development of information systems at organization and enterprise levels. Topics covered: Risk analysis and management; integrating security into system design processes; security policies; legal, ethical, and privacy issues; and security in the software design process.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7891 SPECIAL ELECTIVE TOPICS (1.5 Credits)**

This course covers selected key emerging trends and issues in the MOT and IM domains. The course provides topical treatment of technologies, markets, business practices, government regulations and the relationships among them. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** Yes

**MG-GY 7953 Global Innovation (3 Credits)**

*Typically offered occasionally*

This course focuses on global technology-enabled innovation. Topics covered include accessing global sources of innovation, coordination and organization of activities worldwide, new product development globally, the role of revitalized global R&D, growing prominence of IT and e-Business in global innovation, and the role of alliances and linkages with customers, suppliers and other third parties. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7963 MODERN FINANCIAL INSTITUTIONS & THEIR COMPETITIVE ENVIRONMENT (3 Credits)**

This course focuses on managing modern financial enterprises, innovation and technology management in these organizations, and the risk-return tradeoff from a financial-institution perspective. It deals with the theory and practice of financial institutions by analyzing the regulatory, technological and competitive factors that define the dynamics of this rapidly changing industry. Knowledge in this course is developed primarily with a mix of textbook reading and discussions of concepts in real business contexts through case studies. The objective is to provide technology managers with a firm knowledge of the normative consequences on financial-management decision making to create shareholder value. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7971 FINANCING FOR VALUE CREATION (1.5 Credits)**

financial skills required by managers of entrepreneurial and innovative firms at various stages of evolution: from new, stand-alone entrepreneurial ventures to innovative, technology-driven projects of established corporations. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7983 MANAGING TECHNOLOGICAL INNOVATION AND EMERGING TECHNOLOGIES IN FINANCIAL SERVICES (3 Credits)**

This course, for current and future managers, introduces emerging information technologies and their applications in financial services industries. It covers three major financial services industries: banking, investment and insurance. Students develop a deeper understanding of concepts and analyze real-business context through case studies. The course provides adequate technical knowledge and discusses related managerial issues in depth.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 7993 MODERN FINANCIAL PRODUCTS (3 Credits)**

*Typically offered occasionally*

Examines critical management issues of the technology domain that characterizes modern financial products used for investment, hedging or trading purposes. The description and use of these instruments were introduced in MG-GY 796 and MG-GY 693, which provide the necessary background discussion of information technologies and systems.

Course's principal focus is on managing the technological challenges in the valuation and risk management of these data-intensive modern financial products. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8203 PROJECT MANAGEMENT (3 Credits)**

*Typically offered occasionally*

This course focuses on managing technology-based projects, ranging from individual research and development to large-scale and complex technological systems. It covers topics such as feasibility and risk analyses, project selection and portfolio optimization, functional and administrative structures, coordination and scheduling of activities, personnel planning, negotiations and contracts, cost estimation, capital budgeting, cost controls and effective matrix management. | Prerequisite: Adviser's approval and Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8223 AGILE PROJECT MANAGEMENT (3 Credits)**

*Typically offered Fall and Spring*

This course will prepare studies to apply agile methods in project management. The class is designed to be highly interactive, with students working through case studies throughout the semester and applying the strategies and processes to project management simulations. At the end of the course, students will be able to describe the history, principle, and values of the Agile Manifesto and agile project management. Students will be able to justify the need for agile project management for specific projects, define why it is different from other project management lifecycles, and describe the methodologies for application. Students will be prepared to begin studying for Agile professional licensure exams once completing this course. | Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8233 QUALITY MANAGEMENT/SIX-SIGMA (3 Credits)**

*Typically offered Fall and Spring*

Quality Management is a comprehensive approach for leading and operating an organization, aimed at continually improving performance over the long term by focusing on customers while addressing the needs of all stakeholders. The bottom line of QM is results: increased productivity, efficiency, customer satisfaction/delight, and world-class performance. This course will present the various QM frameworks, concepts, and quality improvement tools, including, TQM, Six Sigma, Lean and Lean Six Sigma, etc. that are necessary for implementing the quality culture that characterizes world-class organizations of the 21st century. We will, explore the key actions necessary for transforming manufacturing and service firms into world-class organizations that deliver ever-improving value to their customers, clients, and constituents.

| Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8253 Project Management for Construction (3 Credits)**

The course covers topics specific to developing and coordinating large projects, including organizational structures, management functions, pricing and estimating project costs, bidding and contracting, risk allocation, scheduling, time and cost control, labor relations, quality management and project life-cycle activities.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8273 Contracts and Specifications (3 Credits)**

This course covers principles of contract law as applied to the construction industry and legal problems in preparing and administering construction contracts. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8303 HUMAN RESOURCE MANAGEMENT SYSTEMS (3 Credits)***Typically offered Fall and Spring*

The workforce or the "human" resource is the one resource that cannot be copied by a company's competitors. As such, the management of the Human Resource is most critical in the eventual survival of any organization. The role of technology as a point of leverage will greatly enhance the ability of the HR staff and management in harnessing the Human Resource, such that it supports the company's goals, strategies and thus its resultant performance, economically and ethically. Topics include specific functions and processes within the HR function such as recruiting, performance management, benefits administration and government compliance, as well as an understanding of the overall objective of the function itself in helping any organization achieve and maintain success and profitability. Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**Prerequisites:** Graduate Standing.**MG-GY 8333 INFORMATION SECURITY & PRIVACY: OPERATIONS (3 Credits)**

This course focuses on management issues related to information security and privacy in operations. Students design security programs and processes that foster strong lifecycle security. Topics addressed include security organization structure, security program models, economics of security, security management of operations, incident response, contingency planning, compliance, security considerations of outsourcing and global operations, and security audits.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8401 PROGRAMMING FOR BUSINESS INTELLIGENCE AND ANALYTICS (1.5 Credits)***Typically offered Fall and Spring*

Data will increasingly drive business decisions across industries. While statistics provides methods for analyzing, forecasting and evaluating data, programming provides methods for extracting, manipulating and visualizing data. This 1.5 credit course will meet for 7 weeks throughout the semester to complement Statistics for Business Analysts. Through a focus on case studies, students will gain the programming experience needed for electives in several knowledge areas pertinent to data science. By learning integrative approaches to formulating problems, students can take programming out of the lab and into industry.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8411 DATA ENGINEERING (1.5 Credits)***Typically offered Fall and Spring*

This course complements Statistics for Business Analysts, in coordination with Programming for Business Intelligence and Analytics. Through a focus on case studies, students will gain the experience needed for electives in several knowledge areas pertinent to data science. By learning how to structure and organize data for descriptive (unsupervised) and predictive (supervised) modeling, students can take preparation of data for AI out of the lab and into industry.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8413 BUSINESS ANALYTICS (3 Credits)***Typically offered Fall and Spring*

Business analytics is a set of data analysis and modeling techniques for understanding business situations and improving business decisions. This course introduces business analytics concepts, methods and tools with concrete examples from industry applications. In the first part of the course, we will focus on descriptive analytics and exploratory data analysis concepts with a refresher on basic probability and statistics. In the second part, we will cover principles, techniques, and techniques for spatial data, time series, and text as data. The final part of the course will introduce a project that links business impact and modern data analytics techniques for managerial decision making in functional areas, including finance, marketing, and operations. | Prerequisites: (MG-GY 6193 or MG-GY 9753) and MG-GY 8401 and Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8423 MACHINE LEARNING FOR BUSINESS (3 Credits)***Typically offered Fall and Spring*

Machine learning is about extracting or discovering knowledge from data. This course will cover fundamental machine learning algorithms used to understand business situations and improve business decisions. In machine learning, there are three types of commonly used algorithms: supervised (predictive), unsupervised (descriptive) and reinforcement learning algorithms. In the first part of the course, we will focus on supervised learning algorithms including K-Nearest Neighbors, Linear Regression, Logistic Regression, Decision Tree, Support Vector Machine (SVM), Naive Bayes, bagging and boosting algorithms. The second part of the course will cover unsupervised algorithms including K-means clustering and dimensionality reduction. The last part of this course will cover Reinforcement learning algorithms, especially Markov Decision Process. We will use python as our main programming language.

| Prerequisites: (MG-GY 8413 or MG-GY 9753) and MG-GY 8401 and Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8573 MANAGING CLEANTECH & RENEW ENERGY INNOVATION (3 Credits)**

Focuses on cleantech/renewable energy innovation and technology management and entrepreneurship. Covers technology management in several distinct cleantech/renewable technology regimes in varied company venues (e.g. small, medium size and large firms). Encompasses local and global modes of cleantech/renewable energy innovation and diverse innovation perspectives. Throughout, maintains a primarily managerial perspective. Students are often asked to assume the role of managers charged with the responsibility of designing, supporting and implementing a cleantech/renewable energy innovation strategy.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 8603 Financial Planning and Control (3 Credits)**

This course examines the latest and most relevant approaches for modern financial planning and control. Specific examples of best practices are studied. Topics covered include an overview of financial planning and control, operational-level financial planning and control, management reporting, forecasting, the application of technology and analytics, the relationship between strategic planning and operational-level financial planning and control, the challenges of implementation and emerging trends in the financial planning and control area. The course emphasizes trade-offs and balance, e.g., a need for financial planning and control and a desire to also have employee empowerment in modern firms. | Prerequisite: MG-GY 6093.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8613 PRODUCT DESIGN STUDIO (3 Credits)**

*Typically offered Fall and Spring*

This course is formulated as a semester long industrial/product design process exploration with a focus on human centered design, innovation, and collaboration. Students will start with a broad design brief and develop their ideas from idea to prototype. We will explore the industrial design process, including researching and establishing user and client needs, developing product specifications, conceptual and visual design, design iteration and prototyping methods, detail design, design for manufacturing, and design for environmental sustainability. We will draw, make models, develop CAD skills and learn 3D printing techniques. This course is taught as a combination of lecture and working class or studio time. | Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8623 DESIGN STRATEGIES (3 Credits)**

*Typically offered Fall and Spring*

As change has become one of the only constants in today's economy, established businesses are being disrupted, and business strategies need to be constantly re-framed. To be successful companies cannot only acquire more customers. They also need to successfully meet their customers' changing needs, leverage technology to create new value propositions that are meaningful to them and generate revenues and sustainable growth for the business. To address these new demands, managers and entrepreneurs alike need a different set of tools and frameworks. Design thinking, a human-centered approach to innovation, one that starts with understanding what customers need and strategically connects to the organization that offers such a set of tools. This course draws on design thinking to equip students taking this class with tools to address business challenges and develop innovative new products, services, and brand experiences, transformative value propositions and creative strategies and business models. The course's premise is that strategy in design rather than simply problem-solving. In other words, to resolve a given strategic issue, one needs to truly explore options before making a choice. Participants in this class will learn tools and develop skills that allow them to explore multiple options and develop new, creative and sustainable strategies. | Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8633 Market Research (3 Credits)**

This course deals with the role of market research in modern firms and with the ways market research can help to make business decisions. The focus is on how market data and information is gathered, analyzed and used. Topics include experimental and questionnaire design, use of various analytical tools, interpretation of findings and development and execution of plans based on market research results. The strengths and drawbacks of various techniques are examined. | Prerequisite: MG-GY 6073.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8643 NEW PRODUCT DEVELOPMENT (3 Credits)**

*Typically offered occasionally*

The dynamics of technology and the pressures of competition drive enterprises to make their product development and production processes strategically more effective and economically more efficient in time and cost. The course deals with the state of the art in new product activities for services and manufacturing firms and examines in-depth the marketing, technology and manufacturing technology linkages. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8653 MANAGING TECHNOLOGICAL CHANGE & INNOVATION (3 Credits)**

*Typically offered occasionally*

The course focuses on effectively managing technological change and innovation, which is accomplished with a dual perspective. One perspective is based on individual, group and organizational theory, research and practice. This body of literature, viewpoints and experience provide essential guides to manage successfully the introduction of new technologies. Realizing the full potential of new technologies requires effectively managing change to assure the commitment of all stakeholders. The second perspective is based on innovation theory, research and practice. This body of literature, viewpoints and experience provide key insights to for effectively managing the process of innovation and the impact of innovation on all parts of an enterprise. Specifically, the course explores a firm's explicit need to manage and inspire people so they can communicate and innovate effectively. | Prerequisite: Adviser's approval and graduate standing

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8663 Technology Policy (3 Credits)**

This course focuses on the macro-environment that influences and is relevant to technology decision making, strategy and innovation in firms, government agencies, non-profit institutions and other organizations. Primary concerns include introducing effective approaches to analyze and evaluate societal-wide factors that influence innovation; to assess various attempts and policies to stimulate innovation in a city, region, nation or globally; to explore the role of technology and innovation in diverse managerial, economic and social contexts (e.g., advanced economies, rapidly emerging economies and Third World economies); to examine the relationship between business-government and NGOs in promoting and sustaining innovation; to explore the impact of global rivalry and global cooperation in the technology and innovation arena; and to understand the place of technology and innovation in the post-Cold War era and in the early 21st century.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**MG-GY 8673 Technology Strategy (3 Credits)***Typically offered occasionally*

This course examines in depth the strategic technological decisions that a general manager faces. From entrepreneurial start-ups to established companies, in dynamic as well as mature environments, a firm must create a conscious process of formulating and implementing a technology strategy to serve its business interests. Such a strategy guides investments in research and development, selection among and timing of alternate technologies, organization and communications, formation of alliances and funding of ventures. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8683 ECONOMICS AND STRATEGIES FOR DIGITAL PLATFORMS (3 Credits)***Typically offered Fall and Spring*

The goal of this course is to equip students with the economic tools and strategic thinking necessary to understand how platform markets function and how to carefully analyze, evaluate and develop strategies for digital platforms. This course will cover topics that help inform platform strategy, such as two-sided markets, first mover advantage, network effects, the chicken-or-egg dilemma, monetization strategies, freemium models, intellectual property rights, startup strategy, crowdsourcing applications, platform governance and regulation issues, among others. The course will apply strategic thinking to the study of business cases of different platforms. | Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8691 AI-BASED BUSINESS MODEL INNOVATION (1.5 Credits)***Typically offered Fall and Spring*

This course offers the students an opportunity to grasp the background and practices of Artificial Intelligence (AI) for business innovation. The students will develop a sound understanding of the concepts, terminology, methods, technologies, and use cases related to AI-based challenges and opportunities in contemporary business practice and innovation. The students will learn the key concepts and methods of AI, data science (DS), machine learning (ML), neural networks (NN), deep learning (DL), exploratory data analysis (EDA), advanced analytics, and modeling and their applications. To mimic today's business realities, the students will form small teams (made of four-to-five students) to collaboratively work on real-life use cases across diverse industries. The students will communicate in writing and present orally their findings, focusing on actionable insights related to AI Based Business Innovation. We will examine the privacy, regulatory and ethical corollaries of AI applications and how AI can be used to improve decision-making, strategy, execution, & customer experience and transform business. | Prerequisites: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8693 SPECIAL TOPICS (3 Credits)**

Individualized readings on special topics assigned by instructor.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8703 INTRO TO MOD INFO TECH STRAT (3 Credits)**

This course deals with applied competitive strategy. Students completing this course master a basic understanding of the competitive implications of information technology and the strategies for using information technology in business. This competence in analysis is arrived at through understanding how availability of information (through technology or otherwise) affects the basic strategic options available, and how firms and industries are likely to be affected. In addition, students are introduced to the process of evaluating potential systems innovations. They then are able to participate in strategic and systems planning from a managerial point of view.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8711 INTRO TO ENTREPRENEURIAL FINANCE (1.5 Credits)***Typically offered occasionally*

This course introduces the financial requirements of entrepreneurial ventures and the different sources of finance available to entrepreneurs. The course shows students how to understand and assess entrepreneurial-financial strategies. It also examine the unique roles played in the entrepreneurial finance arena by such actors as retail banks, investment banks, VCs, angels, internal sources of capital and incubators | Prerequisite: Adviser's approval and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8713 ENTREPRENEURIAL FINANCE (3 Credits)***Typically offered occasionally*

This course focuses in detail on the financial requirements of entrepreneurial ventures and on different sources of finance available to entrepreneurs. Students develop an understanding of how to assess entrepreneurial financial strategies. It also examines the unique roles played in the entrepreneurial finance arena by such actors as retail banks, investment banks, VCs, angels, internal sources of capital and incubators. | Prerequisite: Adviser's approval and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8721 Introduction to Managing Growing Enterprises (1.5 Credits)***Typically offered occasionally*

This introductory course deals with a critical challenge that potentially confronts all successful entrepreneurial small- or medium-size firms: how to sustain and accelerate major growth. At some point in the life of all growing enterprises, a firm usually must change. This course introduces several ways a growing firm can transform itself from a small to a larger enterprise. The course explores how such companies can maintain the benefits of an entrepreneurial commitment and spirit while obtaining needed skills associated with professionally managed larger firms. The program will consider offering this course only at the request of other departments. This course is not open to MSM and continuing MBA students. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 8723 MANAGING GROWING ENTERPRISES (3 Credits)***Typically offered occasionally*

This course focuses in detail at a critical challenge facing all successful entrepreneurial small- or medium-size firms: how to sustain and accelerate major growth. At some point in the life of all growing enterprises, a firm usually must change. This course introduces ways a growing firm can transform itself from a small to a larger enterprise. It explores how such companies can maintain the benefits of an entrepreneurial commitment and spirit while still obtaining needed skills associated with professionally managed larger firms. | Prerequisite: Adviser's approval and graduate standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8731 INTRO TO CORPORATE ENTREPRENEURSHIP (1.5 Credits)***Typically offered occasionally*

Although large firms require professional management, to innovate, large corporations often must practice entrepreneurship. This course examines how large corporations nurture and sustain entrepreneurship. | Prerequisite: Adviser's approval and graduate standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8733 Corporate Entrepreneurship (3 Credits)***Typically offered occasionally*

Large firms require professional management. To innovate, however, large corporations often must also practice entrepreneurship. This course focuses on how large corporations nurture and sustain entrepreneurship and on how entrepreneurship is an integral part of a successful large firm's strategy and structure today. This course examines forms of internal entrepreneurship, corporate venture capital, and the obtaining of entrepreneurial capabilities via acquisition. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8741 INTRODUCTION TO ENTREPRENEURIAL MARKETING & SALES (1.5 Credits)***Typically offered occasionally*

This course introduces critical marketing and sales challenges facing entrepreneurial firms. An underlying theme is that successful innovative enterprises must be deeply familiar with relevant markets and must effectively cultivate and reach those markets. Topics include market identification, segmentation, sales, overall market planning, niche and viral marketing, and customers as sources of innovative ideas. | Prerequisite: Adviser's approval and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8743 ENTREPRENEURIAL MARKETING & SALES (3 Credits)***Typically offered occasionally*

This course focuses in depth on critical marketing and sales challenges facing entrepreneurial firms. An underlying theme is that successful innovative enterprises must be deeply familiar with relevant markets and must effectively cultivate and reach those markets. Topics include market identification, segmentation, sales, overall market planning, niche and viral marketing, and customers as sources of innovative ideas. | Prerequisite: Adviser's approval and graduate standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8763 Knowledge Management (3 Credits)**

Knowledge workers, employed primarily in professional and technical occupations, are increasingly becoming an important segment of the U.S. labor force. The success of innovative organizations today often results from the knowledge and skills applied by their professional and technical employees. Effective management of such a work force has become one of the most critical problems faced by organizations in the private and public sectors. Reflecting this problem, the course addresses issues relating to creating, sharing and applying knowledge in organizations. The course examines knowledge management from various perspectives, focusing primarily on the organizational, managerial and technological perspectives.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 8783 CLOUD COMPUTING: PRINCIPLES, ECONOMICS, TECHNOLOGY AND MANAGEMENT PRACTICE (3 Credits)***Typically offered occasionally*

This course provides a comprehensive overview of managing cloud computing. The course starts by developing a comprehensive technology foundation and then deals with the economics of cloud computing by analyzing its benefits, risks and obstacles. The course then examines Virtualization, Automation, and Security, the three essential components of cloud computing. Specific case studies on private and public clouds are illustrated. The course concludes with the development of specific templates and roadmaps that help an organization migrate from managing traditional IT into a cloud based infrastructure. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9013 Design Thinking for Creative Problem Solving (3 Credits)***Typically offered occasionally*

This course explores creativity and design-led innovation, important notions in today's world where companies are looking for creative, innovative and collaborative employees. This course deals in an applied and original way with the topic of creativity. The assumption underlying the course is that there is no such thing as creativity as a concept but that there is a creative process involving people, materials and a context. The emphasis in the course is on experiencing different methods and techniques that can help us be more creative in our work practices, careers and lives. In sum, you will learn creative problem solving techniques and design thinking skills to come up with new ideas and turn problems into opportunity while developing key skills for today's organizations when they are looking at hiring people: communication and collaboration skills, project experience and a portfolio of innovative techniques. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9203 SEMINAR IN MANAGING KNOWLEDGE WORKERS IN INNOVATIVE ORGANIZATIONS (3 Credits)***Typically offered occasionally*

Prerequisite: Graduate Standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** Yes

**MG-GY 9233 SEMINAR IN MANAGING TECH CHANGE & INNOVATION (3 Credits)***Typically offered occasionally*

The objectives of this seminar are to familiarize you with the key viewpoints in the literature on technological innovation. The readings are selected to highlight the most important contributions to the literature by past and current academics. A critical analysis and review of this body of literature will set the stage for future research work in this important area of management. Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9263 STRATEGIC MARKETING SEMINAR (3 Credits)**

This course examines strategic marketing issues that face firms and industries from theoretical and empirical perspectives. The seminar looks at product design, positioning and strategy, distribution, sales force, design of the marketing organization, competition, market structure, problems of information, signaling and pricing, corporate reputation and branding, advertising and promotion, and recent advances in product and service development. | Prerequisite: Doctoral standing or instructor's permission. Co-Requisite: None.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9283 DOCTORAL SEMINAR ON ENTREPRENEURSHIP (3 Credits)**

This seminar familiarizes students with key viewpoints in the literature on entrepreneurship. Readings highlight the most important contributions to the literature by past and current academics. A critical analysis and review of this literature sets the stage for future research in this important management area. | Prerequisite: Doctoral standing or instructor's permission. Co-Requisite: None.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9343 Research Project in Organizational Behavior & Human Capital Systems (3 Credits)***Typically offered occasionally*

Integration and application of advanced research techniques utilized in studies of organizations. Students develop and carry out individual applied research projects. | Prerequisite: Advanced standing and MG-GY 6333 or instructor's permission and graduate standing

**Grading:** Satisfactory/Unsatisfactory**Repeatable for additional credit:** Yes**MG-GY 9413 QUANTITATIVE ANALYSIS I (3 Credits)***Typically offered occasionally*

Prerequisite: Graduate Standing.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9423 QUANTITATIVE METHODS SEMINAR II (3 Credits)**

In this seminar we attempt to gain understanding of the theories that underpin economic and quantitative analysis in business. We examine three different but interrelated academic disciplines to achieve this end: the axiomatic foundations of economics, the assumptions and methods that create the basis for game-theoretic analysis, and the deviations from the economic rationality required by these methodologies that have been identified by the behavioral decision-making literature. Prerequisite: doctoral standing or instructor's permission. Co-Requisite: none.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9433 QUALITATIVE RESEARCH METHODS (3 Credits)***Typically offered occasionally*

The course covers methods that allow you to enter natural social settings to capture data about human behavior in the actual contexts in which people pursue their daily lives. These methods include especially observation and interviewing. The emphasis is on studying first-hand and close-up the ongoing worlds of other people. The course will help participants learn how to make sense of data inductively, i.e., from the bottom up. This course is not about hypothesis testing. It is about building grounded theory. Our focus will be on the coding and categorization of qualitative data (observational notes and interview transcripts). You will learn to go beyond the journalistic description of data to the analysis that characterizes good inductive social science. Prerequisite: doctoral standing or instructor's permission. Co-Requisite: none.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9501 MOT Capstone-1 (1.5 Credits)**

First half of MOT Capstone course. Please see MG-GY 9503 for full description of the this course. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9503 MOT Capstone Project Course (3 Credits)***Typically offered occasionally*

This course provides an integrative and state-of-the-art intellectual experience for participants at the conclusion of the program. The course is divided into two half semesters. The first half semester enables participants to focus on discerning the overarching trends which are driving innovation in various industry sectors. The class is divided into small groups each of which develops a comprehensive view of a particular industry sector. In the second half of the course, participants focus on the culminating project of the IM program. Participants can choose to do their final projects on firms, issues related to technology management or as an outgrowth of the emphasis on entrepreneurship in the program, a business plan. Participants are encouraged to employ relevant concepts and insights that they have acquired during the course of the program. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9511 MOT Capstone-2 (1.5 Credits)**

Second half of MOT Capstone course. Please see MG-GY 9503 for full description of this course. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9611 IM CAPSTONE PROJECT II (1.5 Credits)**

Second half of IM Capstone course. Please see MG-GY 9603 for full description of the this course

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No

**MG-GY 9683 INTERNSHIP AND ACTION LEARNING (3 Credits)***Typically offered occasionally*

This course provides graduate students the opportunity to work in an organization relevant to their field of interest in an action-learning context under faculty supervision. It exposes graduate students to relevant, state-of-the-art and best practices in modern management from the perspective of reflective involvement and interaction in the field. Students submit a paper and oral presentation based on work accomplishments as well as a review of written evaluation by the onsite supervisor. This course may be taken only once. | Prerequisite: Approval of Program Director

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9691 MOD CISO: CHALLENGES & OPPORTUNITIES (1.5 Credits)**

The role of Chief Cyber Security Officer or Chief Information Security Officer has evolved from securing computer systems under the CIO to an executive managing the organization's information security and sitting at the executive table. The officer is a key strategic agent for the organizational use of cyberspace. The CISO has become the key player in the increasingly dangerous and insecure area of cyberspace, where firms must operate for maximum competitive advantage. The CISO is the executive best positioned to manage the security of the firm's assets/ infrastructure and operations in cyberspace. This course helps aspiring CISOs investigate this new and evolving role, using lectures, research, and interviews of industry and public sector CISOs, as well as by studying the market demand for CISO positions.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9703 PROJECT IN STRATEGY & INNOVATION MGMT (3 Credits)***Typically offered occasionally*

This course integrates concepts and theories from several other courses. The course usually considers issues from a holistic and topmanagement perspective; employs case studies and projects to focus on key interrelationships between strategy, technology, innovation, corporate culture, organization structure and human factors; and covers domestic and global corporations, small, medium and large firms; and established and new enterprises. | Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9753 SELECTED TOPICS IN MANAGEMENT (3 Credits)***Typically offered occasionally*

Students analyze and discuss current topics in various fields. | Prerequisites: Graduate standing and Department's Chair's permission.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** Yes**MG-GY 9763 Readings in Management (3 Credits)***Typically offered occasionally*

This directed individual study of supervised readings explores advanced areas of management. | Prerequisite: Department Chair's permission and Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** Yes**MG-GY 9771 Readings in Management (1.5 Credits)***Typically offered occasionally*

This directed individual study of supervised readings discusses advanced areas of management. | Prerequisite: Department Chair's permission and Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** Yes**MG-GY 9781 Selected Topics in Management (1.5 Credits)***Typically offered occasionally*

Students analyze and discuss current topics in various fields. |

Prerequisites: Advanced standing and Department's Chair's permission and Graduate standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** Yes**MG-GY 9861 READINGS IN ORGANIZATIONAL BEHAVIOR (1.5 Credits)***Typically offered occasionally*

Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9873 READINGS IN ORGANIZATIONAL BEHAVIOR (3 Credits)***Typically offered occasionally*

Prerequisite: Graduate Standing

**Grading:** Grad Poly Graded**Repeatable for additional credit:** No**MG-GY 9913 INDEPENDENT RESEARCH (3 Credits)***Typically offered occasionally*

In this course, students undertake directed individual study or supervised readings in advanced areas of the thematic electives and are advised by the doctoral adviser. Three credits required. Prerequisite: Doctoral standing or instructor's permission. Co-Requisite: None.

**Grading:** Grad Poly Graded**Repeatable for additional credit:** Yes