

M.S.in Technology Commercialization & Entrepreneurship Fall 2017 & Spring 2018

2 - Required Professional Development & Career Workshops

MGMT 7770 Prof. Development Workshop 1/Career Workshops (Fall) Wed. 9am, 12pm or 3pm

The PDW sequence is designed to develop the professional skills of students in the MS Programs that are needed to be a successful contributor in a business setting. PDW I follows a framework of Leadership, Followership, and Membership in a professional community. Students will gain practical experience through exposure to experts in specific skill areas, role play and practice sessions, and exercise completions. The fall semester concentrates on individual skills development in presentation, communication and networking. Additionally, membership in one's professional community will be emphasized through engagement in two activities specific to the student's MS Program. Building on the skills and abilities obtained earlier in your career, this PDW is geared toward a higher level of professionalism inherent in a successful business environment.

MGMT 7780 Prof. Development Workshop 2/Career Workshops (Spring) Wed. 9am, 12pm or 3pm

The PDW sequence is designed to develop the professional skills of students in the MS Programs that are needed to be a successful contributor in a business setting. The PDW II will continue to follow a framework of Leadership, Followership and Membership in a professional community. Students will gain practical experience through exposure to experts in specific skill areas, role play and practice sessions, and exercise completions. The second semester emphasizes developing influence skills, understanding and shaping group dynamics, and navigating organizational politics. Additionally, membership in one's professional community will be emphasized through engagement in four hours of activities specific to the student's M.S. program.

5 - Required Business Core:

MGMT 6040 Talent Management (Fall) Mon. 2-4:50pm

This course is designed to develop skills in understanding human behavior in organizations and how to effectively manage the talent that resides within employees. Students will learn about essential aspects of managing and developing talent, including individual differences, employee hiring, motivation, team dynamics, leadership, and influencing others. Through a discussion of concepts in human behavior, students will learn useful analytical frameworks for understanding the complexities of managing talent in order to best achieve organizational success.

MGMT 6060 Business Implications of Emerging Technologies (Fall) Tues. 6-8:50pm

This course investigates the business dimensions of major technological advances, highlighting how industry structures an organization, the dynamics of competition,

patterns of innovation, operational decisions, and financial investment are all influenced by various types of technical breakthrough. Students also get to explore the interplay between emerging technology development and commercialization. The challenges associated with intellectual property protection and utilization, as well as the socio-economic and ethical dimensions of new technology adoption, are explored. Each year, a different set of key technologies will be examined and analyzed.

MGMT 6190 Introduction to Accounting and Financial Management (Fall) Thurs. 6-8:50pm

This course introduces accounting and financial management to first-semester M.S. students. The interpretation and preparation of basic financial statements such as the balance sheet and income statement are introduced along with relevant regulation and practice. In addition, the course introduces the student to basic financial concepts and techniques such as time value, risk, equilibrium asset pricing models, capital budgeting, cost of capital and capital structure and discusses their applications in practice.

MGMT 6590 Commercializing Advanced Technologies (Spring) Mon. 6-8:50pm

This 3-credit course views potential breakthrough innovation from the perspective of the project manager, either in the firm or as a startup organization. The course offers methods and frameworks for commercializing nascent technologies that offer potentially breakthrough value to the market and, therefore, enormous reward for the firm. Additionally, legal and ethical consequences are considered.

Choose one:

MGMT 6620 Principles of Technological Entrepreneurship (Spring) Tues. & Fri. 10-11:50am

An introductory graduate course in initiating new technology-based business ventures and developing them into self-sustaining and profitable enterprises. Examines the process whereby a person decides to become an entrepreneur, screens opportunities, selects an appropriate product/market target, and obtains the necessary resources. Provides the theoretical and practical knowledge for the preparation of formal business plans. Students enrolled in the full-time MBA program cannot use this course on the Plan of Study. This course is intended for students enrolled in the part-time MBA, M.S. in Management or those seeking degrees in other schools at Rensselaer.

MGMT 6700 Corporate Entrepreneurship (Spring) Monday & Thursday 4–5:50pm

Organizations that increase their capacity for entrepreneurship build a foundation for long-term competitiveness. This course examines how organizations can build management systems to enable entrepreneurial activities while simultaneously addressing current operational concerns. This tension differentiates the corporate entrepreneurial challenge from the start-up venture. The course focuses on both the organizational and project levels, studying how organizations can build an entrepreneurial capacity and how project champions can ensure their projects are effectively evaluated, supported, and managed.

2 – *Law Courses:

MGMT 6007 Contracts I (Fall) Mon. Tues. & Thurs. 11-11:50am or Mon. Tues. & Thurs. 12-12:50pm

In the Fall and Spring semesters, Contracts will cover the principles governing the formation of the contract relation; reality of consent; capacity of the parties; consideration; legality of subject matter; form required under the Statutes of Frauds; construction and operation of contracts; methods of discharge; illegal arrangements; remedies for breach; statutory modifications of common law principles; and various sections of Article Two of the Uniform Commercial Code. We will also discuss why the theory of contract formation is at odds with the reality of ubiquitous form contracts and contracts of adhesion.

MGMT 6007 Cyberspace Law (Spring) Taught online

This graduate level course exposes students will provide students with an opportunity to review and understand how the internet influences and changes legal analysis, either by changing the focus of legal reasoning or by changing statutory rules for behavior online (and off). Topic areas will include jurisdiction, freedom of speech, content online, control over the Internet, and others, all in the explicit context of today's information society.

3 – Technology Core under one of 3 Tracks - See sample courses from each track below:

Stem Technology – e.g. *Engineering Science, Materials Science, IT, Computer Science or Biology Biomedical Engineering etc.*

BMED 6550 Cell Biomechanics

This is an undergraduate/graduate course on the mechanics of biopolymers, cell cytoskeleton, cell membrane, the whole cell, and multicellular structures in the context of the modulation of cell function by mechanical stresses. Topics include state-of-the-art experimental techniques in cell biomechanics, and cutting-edge research in stem cell mechanobiology, cell motility, collective cell behavior, neurite growth, osteocyte sensing, cardiovascular diseases, and immunology.

BMED 6700 Ethical Issues in Biotechnology

This discussion course reviews the principles of ethical behavior and responsible conduct of research and then discusses specific areas of biotechnology research, medical research, and societal issues in the context of these principles. Representative topics include genetic engineering, stem cell research, assisted reproduction, human subjects, animal research, and nanotechnology. Class performance is dependent on active participation and discussion, student presentations, and the submission of analytical essays.

BIOL 4400 Bioterrorism, Biowarfare & Biodefense

Policy

STSS 4310 Energy Politics

Through lectures and in-class discussions, this course explores the history, domestic and international politics, policy, philosophy, economics, environmental consequences, media coverage of, and alternatives to, the US addiction to fossil fuels. Students, who may earn either humanities or social science credit, maintain analytical blogs with twice-weekly posts or write and present semester-length research papers, take a midterm exam and a comprehensive final exam. This is a communication intensive course. Satisfies the PDI II Requirement.

STSS 6961 Epochal Technologies

STSS 4962 Economics, Technology & Sustainability

Technology Management

MGMT 6630 Starting Up a New Venture (Fall) Wed. 6-8:50pm & (Spring) Mon. & Thurs. 10-11:50am

An understanding of the critical issues related to starting up a new business is gained through team-based experiential learning. Small teams of students develop a comprehensive business plan that can be used to raise money for a new or relatively new venture. The experiential learning process is enhanced through team meetings with faculty and/or course advisers and through oral presentations to the entire class.

MGMT 6260 Entrepreneurial Finance (Spring) Thurs. 6-8:50pm

The overall objective of this course is to understand how entrepreneurs and investors create value, noting that their interests do not always coincide. This involves learning about topics, which trace out the “venture capital cycle”: opportunity recognition; valuation and evaluation; negotiation; structuring financing contract; managing investment; exit strategy. This course is structured into three modules: valuation, private equity market, and harvesting entrepreneurial value.

MGMT 6580 Marketing High-Tech Products (Spring) Wed. 6-8:50pm

This course deals with the peculiarities of marketing products and services in high-tech environments. High-tech environments are characterized by high dynamism, high uncertainty, and compressed time cycles. The course consists of case studies, computer simulations, and a team project.

*** Law classes, taken at Albany Law School, begin:**

Fall - August 21, 2017

Spring - January 15, 2018

Technology Management Electives List:

MGMT 6640 – Invention, Innovation, and Entrepreneurship (F)

Creativity is the starting point for technological entrepreneurship. Through interaction with faculty and guest speakers, students increase their understanding of the creative process and some of the tools that can be implemented to stimulate and/or manage individual and collective creativity. In addition, through application of these techniques in course activities, students explore and attempt to enhance their own creativity.

MGMT 6260 – Entrepreneurial Finance (S)

The overall objective of this course is to understand how entrepreneurs and investors create value, noting that their interests do not always coincide. This involves learning about topics which trace out the “venture capital cycle”: opportunity recognition; valuation and evaluation; negotiation; structuring financing contract; managing investment; exit strategy. This course is structured into three modules: valuation, private equity market, and harvesting entrepreneurial value.

MGMT 6630 – Starting Up a New Venture (F, S)

An understanding of the critical issues related to starting up a new business is gained through team-based experiential learning. Small teams of students develop a comprehensive business plan that can be used to raise money for a new or relatively new venture. The experiential learning process is enhanced through team meetings with faculty and/or course advisers and through oral presentations to the entire class.

MGMT 6530 – Making Business Happen (F)

Analyze the process of identifying prospective markets and customers, developing channels, defining the value proposition, selling products and services, and managing a sales force. Learn about tools ranging from customized consultative sales to commodity brokering, customer relationship management systems to trade press articles. Develop the skills to effectively listen, recognize opportunity, verbally persuade, handle objections, and prospect. Develop an understanding of customer needs, approach strategies, and effective presentations.

MGMT 6580 – Marketing High-Tech Products (S)

This course deals with the peculiarities of marketing products and services in high-tech environments. High-tech environments are characterized by high dynamism, high uncertainty, and compressed time cycles. The course consists of case studies, computer simulations, and a team project.

MGMT 7070 – Managing on the Edge (S)

This course investigates the challenges of managing and leading organizations in situations characterized by their non-linear, unpredictable nature. Students will be challenged to develop innovative responses and solutions, drawing upon the full array of knowledge, skills, and insights they have gained from their two years of MBA study. Along with learning to deal with risk and uncertainty, the soon-to-be MBA graduates will

be prepared for addressing the increasing degrees of fluidity and turbulence found in today's business, economic, and competitive environments.

MGMT 6600 – Research and Development Management (F) upon availability of instructor

The course deals with the responsibilities of and operating problems faced by managers of research and development. The following areas are included: technology forecasting, technology planning, selection and evaluation of R&D projects, resource allocation, planning, control, and measuring results of R&D. Particular attention is given to creative problem solving, motivating and managing creative individuals, barriers to innovation, and organization alternatives for R&D, including matrix and project organizations.

MGMT 69xx – Social Entrepreneurship – upon availability of instructor

Social entrepreneurship is defined as using business principles to build organizations that address social problems. Whereas business entrepreneurs measure performance in terms of financial return, a social entrepreneur focuses on furthering social and environmental goals such as poverty, hunger, homelessness, and all forms of pollution. Although social entrepreneurs are most commonly associated with the voluntary and not-for-profit sectors, this need not necessarily be the case. This course examines social entrepreneurship as an emerging business form. The course covers historical and contemporary business model approaches to social entrepreneurial ventures via cases and the popular press. In addition, students work with an organization that is developing a social entrepreneurship venture to help apply business principles to the growth challenges it is facing.

MGMT 6050 – Organizational Design and Change—upon availability of instructor

This course addresses how to manage organization-wide structural and cultural changes that lead to organizational designs to enhance the effectiveness of the organization. We will explore change issues of managing growth, resistance, intervention phases, crisis management and inter-group conflict/power, as well as organizational design issues of balancing innovation with predictability and balancing decentralization with centralization. Upon successful completion of this course, students will be able to explain the mechanics of modern organizations, and utilize the principles of organizational theory to design and change their organizations to increase organizational effectiveness.

MGMT 69xx – Energy, Environment and Economy (S)

This course is designed to provide students with skills to address the complex challenges created by our energy requirements. The underlying science and technology of energy sources and solutions including fossil fuels, nuclear energy and renewable energy are presented in the context of their advantages and limitations with respect to technological, social, environmental and economic considerations. Interdisciplinary teams of students develop multifaceted analysis of a specific energy issue addressing needs of a potential customer, such as industry, service entity or local and state

governments. The team research and activities will lead to a report and proposed path for further development of the opportunity or solution.