Stuart School of Business

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Master of Business Administration:
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Business at IIT

IIT Stuart School of Business provides intellectually rigorous business and management education at all levels, from baccalaureate to doctoral. All IIT Stuart programs are designed to educate tomorrow's global innovators through the unique concept of strategic competitiveness. Constructs including creativity, innovation, entrepreneurship, incisive decision-making, leadership, and sustainability are interwoven throughout coursework and professional development opportunities, offering students thorough preparation for the challenges of the Next Economy.

Established in 1969 with a gift from IIT alumnus and Chicago financier Harold Leonard Stuart, IIT Stuart offers a wide range of challenging business and management programs taught from a practical perspective, with an emphasis on analytic skills and the relation between business, management, and technology. AACSB-accredited programs include the M.B.A., Ph.D., four industry-responsive master's programs, and two bachelor of science in business programs. IIT Stuart also offers a Master of Public Administration (M.P.A.) degree.

Stuart faculty, in addition to their scholarly and teaching activities, are consultants to major national and international corporations. Their expertise has been called upon by local and federal government agencies, including the Environmental Protection Agency, National Institute of Standards and Technology, Metropolitan Sanitary District, Department of Housing and Urban Development, and Department of Energy. Many IIT Stuart students are also working professionals from Chicago's preeminent business, public administration, and finance communities.

Student resources include a Career Management Center with services available to current students and alumni; an Office of Student Services; the Stuart Business Library; and state-of-the-art technological resources, including more than 100 student workstations, interactive computer labs featuring the latest industry software, and a fully wireless downtown campus.

Because many Stuart students work full time, all graduate classes are offered as weekday evening classes at least once a year. Courses are also offered in the day-time and on weekends. All graduate programs are taught on Stuart's downtown campus at 565 West Adams Street in the heart of Chicago's vibrant financial district, the Loop.

Degrees Offered

Master of Business Administration (MBA)
Masters in Mathematical Finance (collaborative program with IIT's Department of Applied Mathematics)
Master of Science in Environmental Management and Sustainability
Master of Science in Finance
Master of Public Administration
Master of Science in Marketing Communication
Doctor of Philosophy in Management Science

Dual Degree Programs

M.B.A./M.S. in Environmental Management and Sustainability
M.B.A./M.S. in Marketing Communication
M.B.A./M.S. in Finance
M.B.A./Master of Public Administration

With the Institute of Design
M.Des/M.B.A.

With the IIT Chicago-Kent College of Law
J.D./M.B.A.
J.D./M.S. in Environmental Management and Sustainability
J.D./M.S. in Finance
J.D./Master of Public Administration

Graduate Certificate Programs

Business

Business Analytics
Innovation and Emerging Enterprises
Marketing Management
Environmental Management and Sustainability

Finance

Financial Toolbox
Fundamentals of Finance
Corporate Finance (post-graduate)
Entrepreneurial Finance Investments (post-graduate)
Financial Economics (post-graduate)
Financial Modeling (post-graduate)
Investments (post-graduate)
Risk Management (post-graduate)
Trading (post-graduate)

Public Administration

Nonprofit Management
Public Management
Public Safety and Crisis Management

Research Facilities

The downtown campus libraries are an open-stack collection of more than 525,000 volumes, including the holdings of the Stuart Business Library, the Chicago-Kent Law Library, and the Library of International Relations, which contains international materials in history, economics, political science, and law. IIT Stuart's downtown facility is equipped with three computer labs, offering more than 100 student workstations linked to the Internet and networked with IIT libraries. The computer labs offer access to a wide range of business software and resources. A Quantitative Research Lab provides an interactive learning environment, featuring simulated trading, investment analysis, and financial industry databases.

The **Center for Financial Markets** provides a unique focus on four interrelated spheres of knowledge needed by any professional who works for a financial intermediary or other capital market institution: financial markets, trading, financial engineering, and information technology. The Center supports Stuart's M.S. in Finance program and promotes scholarship and linkages to Chicago's financial industry, and assists faculty and students to contribute actively to projects in electronic trading, risk management, and new derivative products development. Michael Gorham, director, can be reached at 312.906.6520 or gorham@stuart.iit.edu.

The **Center for the Management of Medical Technology (CMMT)** is the IIT Stuart center for research, education and outreach, and dissemination to the community at large. It is directed by Professors Elie Geisler and Nilmini Wickramasinghe. The mission of the CMMT is to become an international center of excellence at IIT and to advance the state of knowledge in the areas of the management of medical technology, via education, research, and dissemination. For more information on the CMMT, please visit http://www.stuart.iit.edu/cmmt.

The **Center for Strategic Competitiveness** (CSC) is the nerve center for research and outreach activities of the Stuart School of Business, developing global partnerships to enhance innovation and creativity, and providing quality, high level executive education customized to meet discipline-specific demands. Our mission is develop Strategic Competitiveness into a approach to business that enhances the ability of individuals, organizations, and governmental units to respond proactively, innovatively and exceptionally to global market challenges in today's and tomorrow's economy.

The CSC provides a cross-discipline approach to competitiveness, combining psychology (decision making and leadership), design (creativity, innovation, and entrepreneurship), and engineering (sustainability). Our research and program efforts are developed within a network of partnerships, bringing together the knowledge and experience of executives, lawmakers, academics and experts in an array of fields. The CSC is tasked with the responsibility of making certain that the heart of the Stuart School of BusinessStrategic Competitivenessis always evolving and adapting to the present and future demands of global business. We do this, in part, through a major portfolio of research, symposia, public information, and public awareness of competitiveness issues developed in partnership with a variety of funders. Additionally, we provide training for individuals or groups through our custom executive education programs and course offerings, such as the Mini-MBA for Engineering, Science and Technology Professionals program.Director Harvey Kahalas can be reached at 312.567.3472 or csc@stuart.iit.edu.

The **Center for Sustainable Enterprise** has as its mission "to identify, develop, communicate, and help implement practical and equitable business strategies that advance the ecological sustainability of the Chicago area while fostering current and future economic viability." The Center brings together many disciplines at IIT in a collaborative relationship with business corporations, other academic institutions, government agencies, and members of the NGO community. George P. Nassos, director, can be reached at 312.906.6543 or gnassos@stuart.iit.edu.

Faculty

Thomas C. Anderson, Clinical Associate Professor and Associate Dean. B.S.B., M.S., University of Minnesota; M.S. Strategic Leadership, decision-making and women and minorities progression to postsecondary education.

Weslynne S. Ashton, Assistant Professor of Environmental Management and Sustainability. B.S., Massachusetts Institute of Technology, Environmental Engineering; M.S., Environmental Science; Ph.D., Yale University.

Siva Balasubramanian, Stuart Professor of Marketing and Associate Dean. B.S., M.B.A., Osmania University; Ph.D., State University of New York at Buffalo. Managing innovations/new product diffusion, marketing communications and research methods.

Martin L. Bariff, Associate Professor. B.A., M.A.S., Ph.D., University of Illinois, Urbana-Champaign. Impact of information technology on business strategy, organizational structure, management controls and human decision-making.

John Bilson, Professor of Finance and Director M.S. Finance Programs. B.Econ, Monash University, Australia; M.Econ, Monash University, Australia; Ph.D., University of Chicago. International finance, quantitative investment strategies.

Richard Bonaccorsi, Program Director and Senior Lecturer of Public Administration. B.A., DePauw University; M.I.M., American Graduate School of International Management (Thunderbird); Doctorate of Management, Case Western Reserve University, Management.

Sanford A. Bredine, Senior Lecturer, B.A., Trinity College, M.B.A., University of Chicago. Marketing and marketing communications.

Roland Calia, Interim Program Director and Senior Lecturer of Public Administration. M.S., Claremont Graduate School; Ph.D., University of Chicago.

Arjun Chakravarti, Assistant Professor of Management. B.A., University of Colorado, Economics and Cognitive Psychology; M.B.A. and Ph.D., University of Chicago, Management and Marketing.

Greg Chaudoin, Instructor. B.S.B.A./B.S. University of Louisville; M.S., University of Illinois, Urbana-Champaign; PhD. Cand., Illinois Institute of Technology. Portfolio theory and risk analysis and management.

Rick A. Cooper, Senior Lecturer of Finance. B.S., University of Chicago, mathematics; M.B.A. and Ph.D., Vanderbilt University, Finance.

Elizabeth J. Durango-Cohen, Assistant Professor. B.S., Sonoma State University; M.S., Ph.D., University of California, Berkeley. Supply chain management, supply chains, inventory and production planning, and capacity and pricing.

Krishna Erramilli, Professor and Director M.B.A. Program. M.S., M.B.A., University of Poona, India; Ph.D., University of Arkansas. International marketing strategy, foreign market-entry strategy, competitive advantages of global firms and growth strategies in emerging markets.

Eliezer Geisler, Distinguished Professor. Ph.D., Northwestern University. Organizational behavior, health care technology management, management of information and telecommunication technology, strategic management.

Joel Goldhar, Professor. B.Ch.E., Rensselaer Polytechnic Institute; M.B.A., Harvard University; D.B.A., George Washington University. Computer- integrated manufacturing, the impact of technology on business strategy.

Michael Gorham, Industry Professor and Director Center for Financial Markets. B.A., University of Notre Dame; M.S., University of Wisconsin; M.S., University of Florida; Ph.D., University of Wisconsin.

Charles T. Hamilton, Clinical Associate Professor. B.S., M.A.S., Ph.D., University of Illinois, Urbana-Champaign. Accounting education, the behavioral factors that influence audit judgment.

Geoffrey Harris, Assistant Professor. A.B., Ph.D., University of Chicago. Financial models and derivatives.

M. Zia Hassan, Professor and H. L. Stuart Dean Emeritus. B.Sc., University of Punjab (Pakistan); M.S., Ph.D., Illinois Institute of Technology. Effective organizations, strategic and quality issues in organizations.

Harvey Kahalas, Professor of Organizational Management, Dean. B.S., Boston University; M.B.A., University of Michigan; Ph.D., University of Massachusetts. Economic development, organizational competitiveness.

Nasrin R. Khalili, Assistant Professor and Academic Director, Environmental Management. B.Sc., M.S.P.H., Tehran University (Iran); Ph.D., Illinois Institute of Technology. Atmospheric chemistry, environmental impact analysis, environmental system analysis, and waste engineering.

Thomas W. Knowles, Professor Emeritus. B.S., Purdue University; M.B.A., Ph.D., University of Chicago. Mathematical and computer modeling.

Jianwen (Jon) Liao, Associate Professor. B.S., Northwestern University; M.A., People University of China; Ph.D., Southern Illinois University Carbondale. Entrepreneurial dynamics, venture formation, technology innovation and business planning.

Suzanne Mueller, Senior Lecturer. B.A., University of Rochester; M.B.A., University of Chicago. Strategic marketing, marketing research and new product development.

George P. Nassos, Industry Associate Professor. B.S., University of Illinois, Urbana-Champaign; M.S., M.B.A., Ph.D., Northwestern University. Sustainable strategies for the business enterprise, small wind turbine technology, renewable energy technologies.

Michael K. Ong, Professor. B.S. Physics, University of the Philippines, M.A. Physics, M.S. Applied Mathematics, Ph.D. Applied Mathematics, State University of New York at Stony Brook. Risk management- market risk, credit risk, operational risk and regulatory issues. International finance and capital markets. Financial risk modeling.

Scott Peters, Senior lecturer of Public Administration. B.A., Macalester College; J.D., Washington University; Ph.D., University of Illinois, Chicago.

Navid Sabbaghi, Assistant Professor Management Science. B.S., B.A., University of California, Berkeley; M.S., Ph.D., Massachusetts Institute of Technology. Supply Contracts, and capacity pricing in supply chain management.

Joing Sun, Assistant Professor. B.Sc., Shanghai Jiao Tong University; M.Eng., National University of Singapore; M.S., Ph.D., Carnegie Mellon University. The interaction of technology, firms, markets and the environment.

Nick T. Thomopoulos, Senior Lecturer. B.S., M.A., University of Illinois, Urbana-Champaign; Ph.D., Illinois Institute of Technology. Forecasting, inventory, assembly line systems.

Khairy A. Tourk, Professor. B.S., University of Alexandria (Egypt); M.A., Vanderbilt University; Ph.D., University of California, Berkeley. Evolution of the Asian enterprise, economics of the newly industrializing Asia.

John R. Twombly, Clinical Professor. B.S., University of Pennsylvania; M.B.A., Ph.D., University of Chicago. Financial and managerial accounting.

Benjamin Van Vliet, Lecturer. B.A., Calvin College; M.Sc., Illinois Institute of Technology.

Liad Wagman, Assistant Professor of Economics. B.A. and B.S., University of North Carolina, Mathematics and Computer Science; M.S., Stanford University, Computer Science; M.A., and Ph.D., Duke University Economics.

Haizhi Wang, Assistant Professor of Finance. B.S., Wuhan University, China; M.S., East China Normal University, China; Ph.D., Rensselaer Polytechnic Institute. Corporate Finance, Financial Institutions, Entrepreneurial Finance, Mergers and Acquisition, Strategic Alliances.

Tao Wu, Assistant Professor of Finance. B.A., Columbia University; Ph.D., University of Pennsylvania. Asset Pricing, investments, derivatives, fixed-income, international/ corporate finance.

Lulu Zeng, Assistant Professor of Finance. B.S., M.S., Tsinghus University, China; M.A. Ohio State University; M.S.I.A., Ph.D., Carnegie Mellon University. Asset Pricing, Portfolio Choice, DSGE and Real Estate Finance.

Admission Requirements

Admission to the Stuart School of Business is based on a profile combination of undergraduate GPA, GMAT test scores (some M.S. programs accept GRE scores in place of GMAT scores), and work experience. Applicants to all master's programs, including the M.B.A., must have, or are expected to have completed prior to enrollment, a four year undergraduate degree from an accredited institution. Applications are accepted throughout the year, and part-time students may enter most programs at the beginning of any semester. Applicants must submit essays, letters of recommendation, official transcripts, a recent GMAT score report, and a summary of work experience. Applicants from non-English-speaking countries must also submit TOEFL (Test of English as a Foreign Language) scores of at least 600 (250 computer/80 internet), unless they received an undergraduate or graduate degree from an accredited U.S. institution. Applicants who score less than 600 must enroll in English for International Students during their first semester.

Applicants to the Ph.D. program in management science must have completed a masters degree with a graduate level business core, or a Masters in Finance or equivalent degree. For applicants who have a masters degree but have not completed the business core, some prerequisite courses will be required.

Graduate Programs

All graduate programs in business are subject to continuous improvements. Prospective students are urged to refer to the Stuart Home page for the most current description of all programs and degree requirements.

Master of Business Administration (M.B.A.)

The M.B.A. program requires students to successfully complete 48 semester hour credits of 16 courses, 3 credit hours each. This includes the completion of ten core courses, two concentration electives, and four open electives. Courses are offered in the day-time, evenings, and weekends on the Downtown Chicago campus. The program is flexible and accomodates the needs of both full-time and part-time students.

Master of Business Administration Curriculum

Core Courses

MBA 501 Financial and Managerial Accounting
MBA 503 Organizational Behavior
MBA 505 Managerial Economics
MBA 507 Management Decision Making
MBA 509 Managerial Finance
MBA 511 Marketing Management
MBA 513 Operations Management
MBA 515 Strategic Information Systems
MBA 517 Strategic Competitiveness
MBA 525 Strategic and Functional Management

M.B.A. Concentrations

A concentration consists of a minimum of 6 credit hours in one of the following areas:

Financial Management
Innovation & Emerging Enterprises
Management Science
Marketing
Sustainability

Master of Science in Environmental Management and Sustainability

The Master of Science in Environmental Management and Sustainability integrates law, science and business to answer the increasing demand for a uniquely trained management professional who understands the many complex dimensions of environmental issues today, with an emphasis on sustainability. This program and its courses contributed significantly to Stuart's ranking in the Beyond Grey Pinstripes survey compiled by the Aspen Institute. This survey determines which schools are doing the best in integrating environmental and social sustainability into the business programs.

As it is critical that pollution prevention and environmental protection be addressed, this program focuses on both traditional environmental management as well as sustainability. Consequently, the program prepares students for executive and management environmental positions in corporations, government agencies, consulting firms and not-for-profit organizations. The program is supported by Stuart's Center of Sustainable Enterprise (CSE), founded in late 2000, which has a mission to realign stakeholders in business and community with endeavors that manage all forms of their capital – Natural, Human, Physical and Financial – resulting in consistent beneficial return on investment.

The master's curriculum consists of the equivalent of 11 full-semester courses: five required core courses, five electives of which two must be business electives, and one capstone course. Some of the technical courses have a prerequisite of college-level chemistry and calculus or their equivalents.

Required Courses (full semester)

EM 501 Environmental Law & Regulation
EM 502 Environmental Law & Compliance
EM 507 Industrial Ecology
EM 508 Pollution Control and Remediation
EM 530 Energy Management
MBA Elective I
MBA Elective II

Elective Courses

EM 517 Environmental and Occupational Risk Assessments and Management
EM 520 Issues in Global Sustainability
EM 554 Environmental Economics and Climate Change
EM 597 Independent Study

Capstone

EM 590 Business Strategy: The Sustainable Enterprise

Master of Science in Finance

The M.S. Finance program requires that participants complete a total of 11 semester courses. The typical program will consist of six core cores and five elective courses. However, students may request that they be allowed to substitute an elective course for a core course if they can demonstrate to the program director that they have already mastered the material in the core course.

Core Classes

MSF 501 Mathematics with Financial Applications
MSF 502 Statistical Analysis in Financial Markets
MSF 503 Financial Modeling
MSF 504 Valuation and Portfolio Management
MSF 505 Futures, Options and OTC Derivatives
MSF 506 Financial Statement Analysis

Elective Classes Elective classes are organized into concentrations. Students who complete one or more courses within a particular concentration will have the concentration recognized on their degree and on official transcripts.

Corporate Finance

MSF 534 Corporate Finance
MSF 535 Investment Banking

Financial Economics

MSF 564 Financial Theory
MSF 565 International Finance Theory

Financial Econometrics

MSF 566 Financial Time Series Analysis
MSF 567 Bayesian Econometrics

Financial Engineering

MSF 524 Models for Derivatives
MSF 525 Interest Rates, Term Structure and Credit Models

Financial Markets

MSF 591 Global Financial Markets
MSF 593 Global Investment Strategies

Financial Programming

MSF 574 .NET and Database Management
MSF 575 C++ with Financial Applications

High Frequency Finance

MSF 576 OOP and Algorithmic Trading Systems
MSF 577 High Frequency Trading Systems

Investment Management

MSF 545 Structured Fixed Income Portfolios
MSF 546 Quantitative Investment Strategies

Risk Management

MSF 554 Market Risk Management
MSF 555 Credit Risk Management

Alternative Investments

MSF 547 Alternative Investment Vehicles
MSF 595 Commodities and Managed Futures

Trading

MSF 584 Equity and Equity Derivatives Trading
MSF 585 Fixed Income Options and Securities

Entrepreneurial Finance

MSF 594 Entrepreneurial Finance
MSF 595 The Venture Capital Process

Core Requirement

All M.S. Finance students must complete the six core classes unless they have obtained written permission from their academic advisor to substitute an alternative class for a core class.

Course Substitutions

To the extent that students have completed commensurate coursework or professional experience, substitutions to the required curriculum may be permitted, with the approval of the academic advisor. Qualified students may substitute courses from the M. in Mathematical Finance for elective courses in the M.S. Finance program.

Free Electives

Up to two graduate level electives may be taken from outside the courses prescribed above. These electives may be taken from other offerings at the Stuart School of Business, the Chicago-Kent College of Law, or Main Campus graduate programs, provided that: (1) they are consistent with the M.S. Finance program objectives; (2) they have been approved, prior to the student's registration, by the M.S. Finance program director or the student's academic advisor.

Students may also transfer up to two classes from a graduate program at another AACSB accredited university if the student has not used the classes to satisfy the requirements for a degree at the university. Additional classes may be transferred with the permission of the program director.

Prerequisite Courses

Some students may be required to take prerequisite courses in mathematics, statistics, or computer programming before being admitted to a graduate course. Undergraduate course offerings, which typically are listed with a primary numeral of four or below (i.e. FM 492) cannot be used as free electives in the M.S. Finance program.

Master's in Mathematical Finance

The M. in Mathematical Finance is a degree offered jointly by the Stuart School of Business and the IIT Department of Applied Mathematics. Students are required to complete a total of 11 semester courses, including seven core courses and 4 elective courses.

Core Classes

MSF 515 Futures, Options and OTC Derivatives
MSF 543 Computational Finance
MATH 542 Stochastic Processes
MATH 548 Mathematical Finance I
MATH 565 Monte Carlo Methods in Finance
MATH 582 Mathematical Finance II
MATH 586 Theory and Practice of Fixed Income Modeling

Elective Classes from the Department of Applied Mathematics

MATH 512 Partial Differential Equations
MATH 513 PDE's for Finance
MATH 540 Probability
MATH 543 Introduction to Stochastic Analysis
MATH 544 Stochastic Dynamics
MATH 545 Stochastic Partial Differential Equations
MATH 546 Introduction to Time Series
MATH 566 Multivariate Analysis
MATH 567 Advanced Design of Experiments
MATH 569 Statistical Learning
MATH 577 Computational Mathematics I
MATH 578 Computational Mathematics II
MATH 579 Complexity of Numerical Problems
MATH 583 Quantitative Modeling of Derivative Securities
MATH 584 Mathematical Portfolio and Investment Theory
MATH 587 Theory and Practice of Modeling Credit Risk and Credit Derivatives
MATH 589 Numerical Methods for PDEs
MATH 590 Meshfree Methods

Elective Classes from the Stuart School

MSF 524 Models for Derivatives
MSF 525 Interest Rates, Term Structure and Credit Models
MSF 545 Structured Fixed Income Portfolios
MSF 546 Quantitative Investment Strategies
MSF 554 Market Risk Management
MSF 555 Credit Risk Management
MSF 556 Enterprise Risk Management
MSF 564 Financial Theory
MSF 565 International Finance Theory
MSF 566 Financial Time Series Analysis
MSF 567 Bayesian Econometrics
MSF 574 .NET and Database Management
MSF 575 C++ with Financial Applications
MSF 576 OOP and Algorithmic Trading Systems
MSF 584 Equity and Equity Derivatives Trading
MSF 585 Fixed Income Options & Securities

Core Requirement

All Mathematical Finance students must complete the seven core classes unless they have obtained written permission from their academic advisor to substitute an alternative class for a core class.

Course Substitutions

To the extent that students have completed commensurate coursework or professional experience, substitutions to the required curriculum may be permitted, with the approval of the academic advisor.

Electives

At least two electives must be taken in Finance and at least one elective must be taken in Math from the elective options listed above.

Free Electives

One graduate level elective may be taken from outside the courses prescribed above. These electives may be taken from other offerings at the Stuart School of Business, the Chicago-Kent College of Law, or Main Campus graduate programs, provided that: (1) they are consistent with the M. in Mathematical Finance program objectives; (2) they have been approved, prior to the student's registration, by the M.S. Finance program director or the student's academic advisor.

Students may also transfer up to two classes from a graduate program at another accredited university if the student has not used the classes to satisfy the requirements for a degree at the university. Additional classes may be transferred with the permission of the program director.

Prerequisite Courses

Some students may be required to take prerequisite courses in mathematics, statistics, or computer programming before being admitted to a graduate course. Undergraduate course offerings, which typically are listed with a primary numeral of four or below (i.e. FM 492) cannot be used as free electives in the M.S. Finance program.

Master of Science in Marketing Communication

The new technologies of the 21st century have totally transformed both the business model and vehicles companies use to communicate with their various stakeholders. Stand alone elements like advertising and public relations are no longer effective in and of themselves. Today, marketing products, services, and ideas to the public must synthesize all of these activities into the cohesive whole called integratedmarketing communication with the ability to surround the prospect with the brand message.

As one of a handful of marketing communication programs offered at an accredited business school, IIT Stuart's Marketing Communication program will effectively prepare you for this exciting and challenging environment. Our program is intended to marry the core critical thinking values of creativity, innovation, and design taught by our M.B.A. faculty, with the practical state of the art applications taught by our extensive and talented faculty of practicing professionals who teach the skills necessary to thrive in today's rapidly evolving technology-focused environment.

All this is designed to prepare you for a career developing and implementing creative innovative marketing strategies with the potential to transform attitudes and ultimately product performance in the marketplace.

The M.S. curriculum consists of eleven 3 hour courses, structured to emphasize strategies for transformational leadership. Students will be required to take 6 core courses plus the Practicum, plus the equivalent of four Elective courses.

Core Courses

MC 510 Marketing Foundations: The Art of Marketing
MC 514 Marketing Communication Plan: Developing Transformative Marketing Strategies
MC 516 Marketing & Advertising Research: Building Consumer Insight Through Research
MC 520 Understanding the Target Audience
MC 522 Media Strategy and Implementation for the 21st Century
MC 524 Creative Strategies
MC 536 Practicum

Electives

MC 503 Strategic Brand Management
MC 533 Database and Direct Marketing
MC 535 Sales Promotion and Alternative Media Techniques
MC 546 Communications Strategies for Emerging Technologies
MC 554 Customer Relationship Management
MC 555 Marketing Analyses
MC 563 Web Page Design

Master of Public Administration

The graduate program in Public Administration (M.P.A.) emphasis the fields of urban government and community affairs, policy analysis, organization and management of work, public finance, public safety and nonprofit management.

IIT has offered educational programs in public administration since the 1940s and has awarded the Master of Public Administration (M.P.A.) degree; the most widely recognized professional credential, since themed-1960s. Building on the foundations laid by former department faculty members Herbert A. Simon (Nobel Laureate), Victor Thompson and Donald Smithburg, the current program continues to present a practical focus on the characteristics and responsibilities of the effective governmental manager. Nearly all public administration students have substantial work experience in public or nonprofit agencies. Most courses meet during the evening hours on IIT's Downtown Campus near transportation facilities to accommodate the needs of themed-career public service professional that constitute most of the programs student body.

The M.P.A. Program offers specializations in Public Management, Nonprofit Management, Public Safety and Crisis Management and Public Works.

Master of Public Administration

32 credit hours
Preliminary Exam

The Master of Public Administration program, which is designed for the working professional, combines rigorous instruction with a practical orientation toward public and nonprofit management and policy analysis. Students encounter this balance between the academic and the practical in the teaching faculty, course materials and classroom exercises. The program emphasizes both administrative knowledge and managerial skills related to the formulation of policy, the acquisition of human and financial resources, application of sound methods of organization and management, and the development and execution of effective implementation strategies. The curriculum allows students a significant amount of flexibility in selecting courses that meet their personal educational and professional objectives, while also assuring them of a sound foundation in all key areas of the discipline.

The M.P.A. degree requires a minimum of 32 credit hours of graduate work. No more than six credit hours may be taken in IIT courses numbered between 400 and 499. A maximum of nine credits of graduate-level coursework may be transferred from another accredited university if these have not been used toward a degree and upon approval of the student's advisor and Program Director. The normal program of study requires completion of the following core courses:

PA 501 Introduction to Public Administration
PA 502 Complex Organizations
PA 503 Public Administrative Law **OR**
PA 505 The Law and the Nonprofit Sector
PA 522 Public Personnel Administration
PA 532 Principles and Practices of Public Finance
PA 542 Strategic Planning
PA 509 Practicum in Policy Analysis

In addition, the program requires completion of PA 510 Managerial Communications for the students who do not place out of that course pursuant to department procedures.

Students must complete a minimum of 32 semester hours. Elective courses may be selected from courses in public administration or such other fields as architecture, business, city and regional planning, civil engineering, computer science, design, environmental engineering, humanities, psychology, social sciences or law. These courses are to be chosen with the help of his/her advisor to help further the student's career objectives. Prior to enrolling for their second semester, full-time students are required to successfully complete a preliminary exam in public administration theory and organization theory. Part-time students must take the preliminary exam before enrolling for their fifth course. Students are urged to begin their program with courses in public administration theory and organization theory in preparation for this exam. A capstone project is part of the PA 509 Practicum in Policy Analysis course, and is required for this degree.

Master of Public Administration with Public Management Specialization

In 2007, the GPPA initiated a Public Management specialization. Students interested in a career in public management take the regular M.P.A. core curriculum and up to four to five electives from the public management courses offered in the program. The program is designed for the working professional combining rigorous instruction with practical orientation toward public management.

Master of Public Administration with Nonprofit Management Specialization

Students from nonprofit organizations and students interested in the nonprofit sector take the regular M.P.A. core curriculum and up to four to five electives from the nonprofit courses offered in the program. This program is designed for the working professional combining rigorous instruction with practical orientation toward nonprofit management and policy analysis.

Master of Public Administration with Public Safety/ Crisis Management Specialization

Students take the regular M.P.A. core curriculum and up to four to five electives from the public safety and crisis management courses offered in the program. This program is designed for the working professional combining rigorous instruction with practical orientation toward public safety management and policy analysis.

Master of Public Administration with Public Works Specialization

In 1982, the GPPA initiated a public works specialization in conjunction with IIT's Department of Civil and Architectural Engineering, the Chicago Metropolitan Chapter of the American Public Works Association (APWA), and the Education Foundation of the APWA. Students from public works agencies, especially those with engineering and technical backgrounds, take the regular M.P.A. core curriculum and PA 551 (Public Infrastructure Management) and may also take appropriate engineering courses for elective credit. In addition, the M.P.A. program cooperates with the Department of Civil and Architectural Engineering in their offering of a Master of Public Works (M.P.W.) degree.

Certificate Programs

Three graduate certificate programs are offered in public administration. These programs provide students with a post-baccalaureate knowledge of an area of specialization with public administration. Students in these programs register as certificate students. Certificate programs require a set of four courses. Students who are admitted to a master's degree program may apply coursework previously taken in a certificate program toward the requirements for the master's degree.

Public Management

This program is designed for those interested in increasing their knowledge and skills in public management but do not currently have the time to pursue an M.P.A. with a specialization in Public Management.

The student will take at least 3 of the courses described below:

PA 539 Local Government Management and Public Safety
PA 541 Performance Measurement in Nonprofit and Public Management
PA 560 Information Technology in Public Administration
PA 508 Seminar in Public Management
PA 513 Public Policy Analysis and Evaluation
PA 531 Governmental Accounting and Budgeting
PA 533 Advanced Financial Management for the Public and Nonprofit Sectors
PA 556 Management Strategy and Tools in the 21st Century
PA 562 Urban and Metropolitan Government

AND 1 M.P.A. course

Recommended is PA 502 Complex Organizations

With permission from the M.P.A. program director, the student may choose another course.

Nonprofit Management

This program is designed for those interested in increasing their knowledge and skills in the nonprofit sector but do not currently have the time to pursue an M.P.A. with a specialization in Nonprofit Management.

The student will take at least 3 of the courses described above and below:

PA 505 The Law and the Nonprofit Sector
PA 534 Financial Management of Nonprofit hspace5ptOrganizations
PA 535 Resource Development in the Nonprofit Sector
PA 541 Performance Measurement in Nonprofit and Public Management
PA 543 Public Policy, Nonprofits and Philanthropy
PA 565 The Nonprofit Sector
PA 566 Nonprofits and the Public Sector
PA 570 Social Capital and the Community

AND take 1 M.P.A. course

Recommended is PA 502, Complex Organizations

With permission from the M.P.A. program director, the student may choose another course.

Public Safety and Crisis Management

This program is designed for those interested in increasing their knowledge and skills in the public safety field but do not currently have the time to pursue an M.P.A. with a specialization in Public Safety Management.

The student will take 3 of the courses described below:

PA 536 Strategy and Structure: Homeland Security
PA 537 Homeland Security/Crisis Management
PA 538 Information Systems Security/Cyber-crime
PA 539 Local Government Management and Public Safety
PA 553 Public Safety Administration
PA 588 Incident Response, Disaster Recovery and Business Continuity

AND 1 M.P.A. course:

Recommended is PA 502, Complex Organizations

With permission from the M.P.A. program director, the student may choose another course.

Doctor of Philosophy in Management Science

14 courses:
Four required core courses
(12 semester credit hours)
Eight elective courses in area of interest
(24 semester credit hours)
Two advisor-approved open electives
(6 semester credit hours)
Optional practicum in teaching and curriculum
(1 semester credit hour)
Qualifying exam upon completion of core coursework
Comprehensive exam upon completion of all coursework
Research (21 semester credit hours)
Submission of dissertation
Oral defense of dissertation

The Ph.D. in Management Science Program at IIT prepares students and working professionals for careers in university teaching and research and for executive and management positions in business, government and consulting firms. Approximately half of the program's graduates have chosen academic careers.

The program is selective and small with a high degree of interaction between faculty and students and a mentor relationship with a faculty adviser. The Ph.D. Area Committee carefully matches the interest of the student with the expertise of the faculty member. The program offers two concentrations: Operations and Finance.

Operations Concentration

At the IIT Stuart School of Business, operations is taught as the design and implementation of systems that improve the effectiveness and efficiency of organizations. Candidates in the program learn to understand how the optimization of resourcespeople, technology, finance and informationcan be effectively integrated for competitive advantage. Management today realizes the value of operations in any organization, whether it produces products or provides services.

Areas of research in operations pursued by faculty and students include design of quality systems, strategic quality management, forecasting, materials management, scheduling, optimization, capacity planning, manufacturing strategy, and strategic management of manufacturing firms.

Finance Concentration

The Ph.D. with a finance concentration is offered only as part of the Master of Science in Finance/Ph.D. Dual Degree Program, unless the applicant has earned a graduate degree that is equivalent to the program at IIT Stuart, as determined by the program director. Students in this dual degree program may earn both an M.S. in Finance and a Ph.D. in Management Science.

Graduates of the Ph.D. program who concentrate in finance have a wide choice of careers. In addition to a traditional career in teaching and research, graduates may also work in investment and commercial banking, trading and risk management. Dissertation research in this area has been focused on risk modeling, financial time series analysis, and investment analysis.

Ph.D. Program of Study

IIT requires that at least two semesters of study be completed on a full-time basis. The semesters need not be consecutive but must occur within the six years prior to the awarding of the degree. Research may be done off campus if suitable arrangements for supervision can be made. Upon a student's admission to the program, the dean of the Stuart School appoints the student an advisor. The advisor helps the student to formulate an overall plan of study, including coursework, reading, independent study, and a plan of research, which must be approved by the dean of the Stuart School.

Upon completion of core coursework, a written qualifying examination is required. The qualifying examination is diagnostic in purpose, and the school determines its form and scope. After completion of all coursework, a written comprehensive examination is required. This examination is a rigorous review of the level of competency achieved as a result of the entire program of graduate study (except for the dissertation) as approved by an advisory committee and specified in the program of study. There may also be an oral component to the comprehensive examination. Qualifying or comprehensive examinations may be taken only twice. If the student fails the qualifying exam on the second attempt, the student will be transferred from the Ph.D. program to a Stuart Master's program. If the student fails the comprehensive exam on the second attempt, the student will be released from the Ph.D. program.

When a student is ready to begin research, he or she is appointed a mutually acceptable research advisor by the dean of the Stuart School. A research project must be an original investigation of high quality, and the results must be submitted in the form of a dissertation and of a related publishable paper. After submitting a completed dissertation, the student will appear before an oral thesis defense committee composed of at least four full-time faculty members, one of whom will be a representative from outside the student's field. There must be a period of at least one semester between the date of the comprehensive examination and the final defense.

Students may take up to six years to complete the degree. After six years, students may petition for an extension, but they must reapply to the program and may be required to retake a comprehensive examination. A cumulative GPA of 3.0/4.0 in an approved program of study is required for the Ph.D. program.

Students entering the program may transfer up to two classes from a graduate program at another AACSB accredited university if the student has not used the classes to satisfy the requirements for a degree at the university. Additional classes may be transferred with the permission of the program director.

Some students may be required to take prerequisite courses in mathematics, statistics, or computer programming before being admitted to a graduate course. Undergraduate course offerings, which typically are listed with a primary numeral of four or below cannot be used as freed electives in the Ph.D. program

Doctor of Philosophy in Management Science Curriculum

Operations Management Core

ECON 570 Theory of the Firm
MSC 530 Probability and Statistics
MSC 538 Simulation and Data Analysis
MSC 560 Optimization Techniques I

Operations Management Elective Courses

MSC 534 Queuing Theory
MSC 543 Time Series
MSC 550 Topics in Quality Management
MSC 562 Optimization Techniques II
MSC 564 Optimization Techniques III
MSC 568 Supply Chain Methods
MSC 574 Scheduling Theory
MSC 576 Practicum in Teaching and Curriculum Skills
MSC 595 Operations Management Seminar

Finance Elective Courses

MSF 503 Financial Modeling
MSF 506 Financial Statement Analysis
MSF 523 Marketing of Financial Products
MSF 524 Models for Derivatives
MSF 525 Interest Rates, Term Structure and Credit Models
MSF 534 Corporate Finance
MSF 535 Investment anking
MSF 545 Structured Fixed Income Portfolios
MSF 546 Quantitative Investment Strategies
MSF 554 Market Risk Management
MSF 555 Credit Risk Management
MSF 564 Financial Theory
MSF 565 International Finance Theory
MSF 566 Financial Time Series Analysis
MSF 567 Bayesian Econometrics
MSF 574 .NET and Database Management
MSF 575 C++ with Financial Applications
MSF 576 OOP and Algorithmic Trading Systems
MSF 584 Equity and Equity Derivatives Trading
MSF 585 Fixed Income Trading Strategies
MSF 591 Global Financial Markets

Elective Courses from the Department of Applied Mathematics

(Participation in Mathematical Finance classes will require the approval of the director of the M. in Mathematical Finance program and the course instructor. Participants who plan to take mathematical finance electives should consult with their program director regarding appropriate core classes.)

MATH 512 Partial Differential Equations
MATH 513 PDE's for Finance
MATH 542 Stochastic Processes
MATH 543 Introduction to Stochastic Analysis
MATH 544 Stochastic Dynamics
MATH 565 Monte Carlo Methods in Finance
MATH 582 Mathematical Finance
MATH 583 Quantitative Modeling of Derivative Securities
MATH 584 Mathematical Portfolio and Investment Theory
MATH 586 Theory and Practice of Fixed Income Modeling
MATH 587 Theory and Practice of Modeling Credit Risk and Credit Derivatives
MATH 589 Numerical Methods for PDEs

Dual Degree Programs

Several dual-degree programs are offered, including programs in which enrollees are eligible to earn a law degree from IIT Chicago-Kent College of Law. To help plan a program of study, students will be assigned advisors from both programs in which they are studying. Simultaneous enrollment is required for varying periods of time, depending on programs. Students should consult advisors from both programs for further information. Candidates for a dual-degree program must apply to and be accepted by each program separately. Current LSAT scores are required for admission to Chicago-Kent College of Law. Current GMAT or GRE scores are required by the Stuart School of Business, but current LSAT scores may be substituted in some programs. Interested students should contact program advisors from either program for other specific requirements.

All graduate programs in business are subject to continuous improvements including dual-degree programs. Prospective students are urged to refer to the Stuart Home page for the most current description of all programs and degree requirements.

M.B.A./M.S. in Environmental Management and Sustainability

The M.B.A./M.S. in Environmental Management and Sustainability is designed to prepare professionals for management-level positions in corporations, government agencies and consulting firms. This program requires 22 semester courses of 3 credits each as specified by the Program Directors to fulfill this dual-degree program. The courses will be drawn from the M.B.A. and the M.S. in Environmental Management Programs. This dual-degree program is typically completed in three years of full-time study or in five years of part-time study. Dual enrollment can reduce degree requirements by as many as five courses.

M.B.A./M.S. in Marketing Communication

The M.B.A./M.S. in Marketing Communication program is designed to prepare students and working professionals who wish to pursue a career in marketing at the managerial or executive level at advertising agencies, public relations firms, and marketing firms or in the functional area of marketing at corporations. A combination of 24 M.B.A. and M.S. in Marketing Communication courses makes up the dual curriculum. Both degrees are usually earned in three years of full-time study or in five years of part-time study. Dual enrollment can reduce degree requirements by as many as three courses.

M.Des./M.B.A.

Offered in conjunction with the IIT Institute of Design, the Master of Design / Master of Business Administration (M.Des./M.B.A.) dual degree program combines graduate professional education in both design and business. The first program of its kind in the world, IIT's M.Des./M.B.A. marks an important milestone in the coevolution of design, management, and innovation. Please consult the M.B.A. Program Director or the Stuart website for the current requirements for this dual-degree program.

M.B.A./M.P.A.

The Master of Public Administration program, designed for the working professional, emphasizes the formulation of policy, the acquisition of human and financial resources, and the application of sound methods of management in public and nonprofit organizations. The M.B.A./M.P.A. is ideal for students who intend to work in an environment that combines aspects of both public- and private-sector management and for those who expect to move between business and government positions during their career. Both degrees are usually earned in three years of full-time study or in five years of part-time study. Please consult the M.B.A. Program Director or the Stuart website for the current requirements for this dual-degree program.

J.D./M.S. in Environmental Management and Sustainability

The Master of Science in Environmental Management and Sustainability integrates managerial and technical skills into Chicago-Kent's renowned Environmental and Energy Studies Program. This dual program is particularly well integrated because the two schools have offered it for about 10 years and have continually updated the courses and options for the students. Both degrees are usually earned in about three and a half years of fulltime study or in five to six years of part-time study. Dual enrollment is required in order to have courses apply to both programs and reduce the total course load.

J.D./M.B.A.

The J.D./M.B.A. program is offered in conjunction with Chicago-Kent College of Law. The management expertise and business skills that participants acquire in the M.B.A. program can be important skills in the legal profession. A solid understanding of the business world can be invaluable in many areas of law, especially for corporate attorneys or legal/management consultants. An M.B.A. degree prepares lawyers for management responsibility in their firm. Please consult the M.B.A. Program Director or the Stuart website for the current requirements for this dual-degree program.

B.S./M.P.A.

The requirements for the B.S. in Political Science/M.P.A. degree may be completed in five years of full-time study. Qualified students interested in careers in the public sector are encouraged to begin their preparation at the undergraduate level and follow a course of study that will allow them to move directly into the M.P.A. program. For detailed information, prospective students should contact the the coordinator of the B.S./M.P.A. program.

J.D./M.P.A.

A J.D./M.P.A. program, offered in conjunction with IIT's Chicago-Kent College of Law, allows students to receive both a Juris Doctor degree and a Master of Public Administration degree in a reduced time period, depending on undergraduate preparation. This program is particularly valuable for administrators whose work is guided and circumscribed by a web of legislation, rules and judicial decisions, including persons interested in city management, labor and personnel work, police administration, and public policy analysis. Students must be admitted to both programs separately. For detailed information, prospective students should contact the coordinator of the J.D./M.P.A. program, Professor Scott Peters.

M.B.A./M.P.A.

Many managers wish to increase their understanding of and ability to operate effectively in both the public and private sectors. This desire flows from the extensive interaction between the two sectors in such areas as procurement, contracting, consulting and economic development, as well as opportunities for career mobility. The dual-degree M.B.A./M.P.A. program reduces course requirements by as many as six courses from the requirements for the two degrees taken separately. For detailed information, prospective students should contact academic advisors and the program director at the Stuart School of Business.

Course Descriptions

Numbers in parentheses represent class, lab and total credit hours, respectively.

ECON 570
Theory of the Firm
The basic objective of this course is to present in mathematical form the basic theories that comprise what is accepted today as orthodox microeconomics. Topics covered are economic models, comparative statistics applied to supply and demand, consumer choice, the economics of production, factor markets, market structure and resource allocation.
(3-0-3)

EM 501
Environmental Law and Regulation
This course will introduce students to the major federal and state statutes and regulatory programs that govern pollution from industrial, commercial, and public sources. The course will emphasize the organization of the government regulatory agencies, the techniques of environmental regulation, the interplay of federal and state environmental regulation, environmental enforcement, and environmental litigation. The National Environmental Policy Act (NEPA), the Clean Water Act, Safe Drinking Water Act, Clean Air Act, Toxic Substances Control Act (TSCA), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Endangered Species Act will be the main statutes used to illustrate the workings of the pollution control statutes. The role of environmental law in the international arena will also be discussed.
(3-0-3)

EM 502
Environmental Law and Compliance
This course begins with an analysis of The Solid Waste Disposal Act (and Resource Conservation and Recovery Act, RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). It will then familiarize students with an environmental manager's duties in permitting, reporting, record keeping and sampling. It emphasizes a systematic approach to identifying obligations with respect to regulated media and developing appropriate responses. Obligations under United States environmental laws, their relationship to state and local laws, and state and local obligations are considered as a model for analysis and response. Practical applications of permitting, monitoring, record keeping and reporting will also be included. Prerequisite: EM 501.
(3 hours)

EM 507
Industral Ecology
This course introduces the students the philosophy of Industrial Ecology, and how this systems-based approach can move society toward a more sustainable future. Industrial Ecology is an interdisciplinary field involving technology (science and engineering), public policy and regulatory issues, and business administration. The major goal of this course is to promote creative and comprehensive problem solving as it might be applied to product, business and systems models. The course introduces tools such as Industrial Metabolism, Input-Output Analysis, Life Cycle Assessment, and Design for the Environment. Individual and team projects are a significant part of the learning experience in this course.
(3 hours)

EM 508
Pollution Control and Remediation
This course provides a comprehensive analysis of the pollution prevention and cleaner production processes. Waste minimization, recycling, and reuse options are examined and applicable control technologies to industrial waste minimization and treatment are discussed. Relevant remediation options including effective use of technologies for clean up of contaminated sites are reviewed through extensive use of case studies. Prerequisite: College level Chemistry and Calculus.
(3 hours)

EM 517
Environmental and Occupational Risk Assessments and Management
The course provides an overview of the tools and techniques used to (1) assess environmental (human health), ecological, and occupational risks associated with exposure to environmental pollutants resulting from natural phenomena, economic development and industrial growth, (2) examine current risk management and mitigation methods and strategies, and (3) design visionary risk management strategies grounded on a framework of operations in line with the principles of sustainable development.
(3-0-3)

EM 520
Issues in Global Sustainability
The increasing complexity of environmental problems warrants an integrated, multidisciplinary approach to developing management strategies for local, regional and global sustainability. This course provides an overview and analysis of some of the most significant environmental issues facing communities across the planet including water availability, air pollution, ecosystem degradation and climate change. The objectives of course are to 9!0 identify and evaluate the severity of current and emerging environmental challenges impacting societies around the world; (2) understand the linkages among scientific, economic and social dimension of these issues; (3) gain a real-world perspective on developing viable technical, policy and business solutions to these problems; and (4) practice effective research and communications skills by collaborating on a group project.

EM 530
Energy, Environment, and Economics
This course deals with the linkage of energy, environmental and economic issues. The impact of energy supply and end-use on human well-being and the ecosystem is covered. It also includes a comprehensive approach to the resolution of resource, technical, economic, strategic, environmental, socio- and geopolitical problems of the energy industries. In addition, pathways to a sustainable global energy system are presented.
(3 hours)

EM 554
Environmental Economics and Climate Change
An overview of the modeling market process is provided focusing on externalities, environmental problems and environmental quality. Economic solutions to environmental problems are discussed using a market approach which includes modeling emission charges, modeling a product charge, modeling per unit subsidy on pollution reduction and modeling pollution permit trading systems and practice. The course examines intuition economic solutions to address environmental problems such as climate change, global warming and water scarcity.
(3-0-3)

EM 590
Business Strategy: The Sustainable Enterprise
This course integrates environmental management issues with use of strategic planning tools for assessing and responding to the driving forces of the "next" economy: globalization, technology, demographics and the environment. The course looks at the challenge of corporations competing in the global economy of the new millennium in such a way that will allow the planet to support them indefinitely. Emphasis is on the company's ability to build and sustain a competitive advantage utilizing traditional management concepts as well as new sustainability practices. Topics include: The Natural Step, the "Base of the Pyramid" strategy, the "servicizing" concept, and biomimicry; and various case studies showing how an enterprise can meet the "triple bottom line" while guest speakers present real world examples. Prerequisite: Capstone course requires enrollment in the last semester of program or approval of program director.
(3-0-3)

EM 597
Independent Study
This full semester or half-semester course allows a student to conduct research on a project proposed by the student, an outside organization or by the supervising professor. The student is required to submit a proposal that includes the research plan and expected outcomes. Regular meetings with the professor are required as well as a final report at the end of the eight- or 16-week period, depending on the scope of the project.
(1.5 or 3 hours)

MSF 501
Mathematics with Financial Applications
This course provides a systematic exposition of the primary mathematical methods used in financial economics. Mathematical concepts and methods include logarithmic and exponential functions, algebra, mean-variance analysis, summations, matrix algebra, differential and integral calculus, and optimization. The course will include a variety of financial applications including compound interest, present and future value, term structure of interest rates, asset pricing, expected return, risk and measures of risk aversion, capital asset pricing model (CAPM), portfolio optimization, expected utility, and consumption capital asset pricing (CCAPM).

MSF 502
Statistical Analysis in Financial Markets
This course presents the major conclusions of the econometric techniques used in finance. Ordinary least squares, maximum likelihood, generalized method of moments, and simulation methods are covered. These tools are presented through computer simulation of the various models, followed by detailed analysis of the distributions of estimators. Hypothesis testing is covered in detail. Particular attention is placed on the properties of various estimators when model assumptions do not hold. For students who qualify, a final project applying econometrics to a financial modeling problem may be chosen. Students not familiar with matrix algebra and elementary statistics should plan to make up the deficit early in the course. Additional lectures will be provided for these students.

MSF 503
Financial Modeling
This course presents the major conclusions of the econometric techniques used in finance. Ordinary least squares, maximum likelihood, generalized method of moments, and simulation methods are covered. These tools are presented through computer simulation of the various models, followed by detailed analysis of the distributions of estimators. Hypothesis testing is covered in detail. Particular attention is placed on the properties of various estimators when model assumptions do not hold. For students who qualify, a final project applying econometrics to a financial modeling problem may be chosen. Students not familiar with matrix algebra and elementary statistics should plan to make up the deficit early in the course. Additional lectures will be provided for these students.

MSF 504
Valuaion and Portfolio Management
The course is a survey of asset pricing theory. The fundamentals of bond and option pricing are covered as well as the CAPM, APT and the Fama-French models. Excel spreadsheet modeling is used to illustrate and understand the concepts of Markowitz's Mean Variance Optimization, equity valuation, option pricing, and utility theory. The courses place a special emphasis on the relationship between macroeconomic conditions and investment opportunities.

MSF 505
Futures, Opions, and OTC Derivatives
This course provides the foundation for understanding the price and risk management of derivative securities. The course starts with simple derivatives, e.g., forwards and futures, and develops the concept of arbitrage-free pricing and hedging. Based upon the work of Black, Scholes, and Merton, the course extends their pricing model through the use of lattices, Monte Carlo simulation methods, and more advanced strategies. Mathematical tools in stochastic processes are gradually introduced throughout the course. Particular emphasis is given to the pricing of interest rate derivatives, e.g., FRAs, swaps, bond options, caps, collars, and floors.

MSF 506
Financial Statement Analysis
After reviewing the content of the major financial statements, the course examines ratios, inventories, long-lived assets, income taxes, debt, leases, and pensions, among other topics. U.S. practices are compared to practices in other major countries. This course is intended for those who will examine financial statements of outside organizations.
(3-0-3)

MSF 524
Models for Derivatives
The practice of financial engineering requires skill in financial theory and practice, mathematics and programming. This course includes instruction in all of these areas. In this class, students will learn mathematical and computational methods that are applicable to the pricing and risk management of derivatives. The class provides an introduction to option pricing theory, covering stochastic calculus, the Black-Scholes partial differential equation, risk-neutral valuation and hedging and portfolio replication. The course will focus on important numerical techniques used in finance, including variance reduction techniques in Monte Carlo Simulation and finite difference methods applied to partial differential equations. These methods will be applied to the pricing of exotic options. In this class, students will learn to program and implement financial models in Matlab. Prerequisites: MSF 503 required, MSF 505 recommended.
(3-0-3)

MSF 525
Term Structure Modeling and Interest Rates
Upon completion of this course, students should know the strengths, weaknesses, appropriate uses and ways of implementing the major term structure models that are in common use. The course will begin with bootstrapping of forward curves, principal component analysis and a review of basic fixed income derivatives (swaps, swaptions, caps and floors). We will then implement short rate models, such as Ho-Lee, Black-Derman and Toy, and Extended Vasicek/Hull-White, followed by the Heath-Jarrow-Morton model and market rate models. Students will implement these term-structure models in Excel/VBA and Matlab. Prerequisites: MSF 524.

MSF 534
Corporate Finance
This course is an advanced introduction to modern corporate finance. Topics include cash flow forecasting, optimal dividend policies, mergers and acquisitions, structured finance, capital at risk, and the risk of adjusted return on capital. The philosophical foundation of the course is the concept of shareholder value added. Students will learn how financial decisions can contribute to the value of a modern corporation. Prerequisite: MSF 506.

MSF 535
Investment Banking
This course covers the financing and formation process of private companies from product concept and angel investors to the Initial Public Offering. Exit strategies for private investments are discussed, including IPOs, mergers and acquisitions. Strategic and financial buyers play a key role in the valuation of a newly public or recently acquired firm. All of the players are discussed, including venture capitalists, entrepreneurs, investment bankers, attorneys, public shareholders, merger partners, institutional investors and private equity/buyout firms. Students will discuss business models; construct staffing and compensation schemes; practice valuation analysis; compare and contrast alternative financial sources; structure business plans; review the types of securities to offer; examine private placement processes; analyze negotiation strategies; and review the implications of financing terms and the role of venture capital and private equity investment in institutional portfolios. The challenges of completing mergers and integrating merged companies are also discussed. Sarbanes-Oxley, antitrust requirements and other regulatory issues will be presented. Prerequisite: MSF 506.

MSF 543
Computational Finance
Because of the widespread adoption of computer trading platforms, the computational efficiency of financial models has become an issue of increasing concern. This course concentrates on numerical techniques for pricing derivatives found in modern markets. It includes an extensive treatment of numerical solutions of the Black-Scholes equation, using techniques such as efficient binomial/trinomial trees, finite-difference solutions of partial differential equations and Fast Fourier transforms. We will cover optimization theory as used in model calibration. We will apply these methods to various pricing models, such as stochastic volatility models and models used to price credit derivatives. Model implementation will be in Matlab.

MSF 545
Structured Fixed Income Portfolios
This course will cover the characteristics, valuation and risk management of fixed income instruments. These instruments include bonds, repos, interest rate derivatives, inflation indexed securities, mortgage-backed and asset-backed securities, CDOs and default swaps. The focus will be on understanding how these instruments are structured and used. Term structure modeling and hedging techniques will be presented, with a minimum of mathematics.

MSF 546
Quantitative Investment Strategies
This course develops the primary quantitative tools used in the portfolio selection process. The applied focus of the course centers on the process of moving from a data set of historical information to the formulation of a forecasting model, the estimation of mean-variance efficient portfolios, and the testing of efficiency hypotheses within an in-sample and post-sample setting. The course covers the estimation of efficient portfolios, factor models, forecasting models, and risk analysis. Prerequisite: MSF 414.

MSF 554
Market Risk Management
This course introduces the importance of financial risk management by developing practical risk measurement tools. The risk measurement aspect of the course begins with the development of the Value-at-Risk (VaR) methodology for financial instruments traded in open markets including equities, bonds, foreign currencies and their derivatives. The course develops analytic VaR models for instruments with non-linear payoffs and non-normal distributions and it also develops simulation methodologies for risk analysis. Statistical tools in volatility forecasting, tail events, and expected shortfall are introduced as appropriate. The emphasis of the course is on market risk, but in addition to the traditional analysis of trading rooms, the course also considers regulatory and compliance risk, corporate risk and risk analysis for investment managers. Prerequisite: MSF 505.

MSF 555
Credit Risk Management
The extensive use of leverage by individuals, corporations, hedge funds and private equity managers has led to a significant increase in the demand for models that analyze credit risk exposures. For many users, the credit risk function has evolved from models used to analyze the quality of an individual borrower to models that aggregate exposure across borrowers, industries and geographic regions. This course provides an extended overview of the exciting and rapidly developing field of credit risk analysis. Prerequisite: MSF 505.

MSF 556
Enterprise Risk Management
This course follows up on MSF 581 (Market Risk Management). It focuses on the other two main silos of risk in the financial industry, namely, credit risk and operational risk. The course will also discuss asset and liability management, interest risk management, integration of credit risk and market risk, regulatory and compliance issues, and performance measurement and capital management. The quantitative aspects of the course include: volatility and correlation modeling, Monte Carlo simulation, stresstesting and scenarios analysis, extreme and tail events modeling. Prerequisite: MSF 505.

MSF 564
Financial Theory
This course covers the foundations of financial economics and the theoretical underpinnings of contemporary asset pricing models. We will explore the many uses and extensions of the fundamental pricing equation: where Pt is the current price, is the pricing kernel or stochastic discount factor, and is a future random payoff. The "art" of asset pricing is in how one specifies the functional form of the pricing kernel. With different assumptions yields the Capital Asset Pricing Model, the Consumption-CAPM, the Black-Scholes-Merton option-pricing model, and many popular term structure models. The Consumption -CAPM does not fare well in the empirical literature motivating the study a promising group of nextgeneration risk/return models. The latter part of the course will be devoted to continuous-time asset pricing of options and the modeling of the term structure. The emphasis will be on risk-neutral, Martingale pricing methods, rather than solving partial differential equations. This material is a theoretical complement to the Computational Finance and Financial Modeling sequences. Prerequisite: MSF 501.

MSF 565
International Finance Theory
This course will focus on the determination of prices, interest rates and exchange rates within the context of neo-classical equilibrium models. The theoretical foundations of the course will be supplemented by extensive exercises in econometric testing of maintained hypotheses and exercises in real time trading. Prerequisite: MSF 501.

MSF 566
Financial Time Series Analysis
This course develops a portfolio of techniques for the analysis of financial time series. Distribution theory covers the normal, Student T, Chisquared and mixture of normals models. Technical analysis covers a variety of trading rules including filters, moving averages, channels and other systems. The first two topics are then combined into an analysis of non-linear time series models for the mean. The course concludes with a review of volatility models including GARCH, E-Garch and stochastic volatility models. Prerequisite: MSF 502.
(3-0-3)

MSF 567
Bayesian Econometrics
Most statistical applications in finance require that the forecasting models be revised in response to the arrival of new information. This course develops the Dynamic Linear Model (DLM) as an updating model based upon Bayesian decision theory. Applications of the DLM, including regressions, autoregressions, and exponential trend models will be covered. Special emphasis will be given to the development of intervention and monitoring systems and the use of simulation methodologies. Students not familiar with matrix algebra and elementary statistics should plan to make up the deficit early in the course. Prerequisite: MSF 502.

MSF 574
.NET and Database Management
The course provides students with a comprehensive knowledge of .NET (VB and C#) programming, relational database design and SQL as they apply to quant finance and real-time trading. Specifically, topics covered include the .NET framework and libraries, ADO.NET, OOP, generics, market data feeds, XML and the Unified Modeling Language, as well as an overview of the hardware and network infrastructure necessary to enable electronic trading.

MSF 575
C++ with Financial Applications
This course presents the C/C++ programming language. Students learn the language from the ground up, from data types, to functions, arrays, classes, dynamic memory management, data structures and the Standard Template Library. Object-oriented programming is also discussed, including a review of commonly used design patterns. The focus is to understand C/C++ as it applies to financial mathematics and several practical examples from computational finance are presented.

MSF 576
OOP and Algorithmic Trading Systems
In this course, students learn advanced programming topics in .NET for real-time financial applications and automated trading systems, including multithreading, sockets, APIs, synchronization, the FIX and FAST protocols, and object oriented design for event-driven applications. Also, project management and software quality are covered in depth. Lastly, topics related to latency in real-time financial applications and alternative network architectures are also discussed. Students are expected to propose, design, document and develop an original project combining concepts from quantitative finance and trading strategy (presented in other courses) into a working software application.

MSF 584
Equity and Equity Derivatives Trading
This course will provide students with an opportunity to learn the latest Equity Trading Strategies used by large banks, brokerages and hedge funds. The instructor will present strategies on equity option trading, pairs trading, program and basket trading, risk arbitrage trading, structured product trading, and dispersion trading (time permitting). Equity trading theory and practical examples will be discussed. Students will be required to structure and adapt equity trading positions based on a range of actual and theoretical market conditions. In addition, students will collaborate with each other and the course instructor to analyze and evaluate the implementation of the above-mentioned strategies. Prerequisite: MSF 504.

MSF 585
Fixed Income Options and Securities
This course will present basic trading concepts related to fixed income instruments. Also covered will be the analysis of repos and fixed income derivatives, such as f orwards and futures, options and spreads. Trading strategies will be discussed, including yield curve strategies, basis trading, and various types of spread trading using many different instrument types. Students will make trading decisions and modify their portfolios in order to familiarize themselves with the instruments and techniques introduced. Swaps, Swaptions, Caps and Floors will be introduced, time permitting. Prerequisite: MSF 504.

MSF 591
Global Financial Markets
This course will enable the student to understand the basics of financial markets and how they function in the global arena. The student will learn how the equities market, the bond market, the money market, the foreign exchange market and the derivatives markets are set up and operate. We will focus on the instruments, the players, the jargon, the details of the trade, and the institutional framework for each market. We cover both OTC and exchangetraded markets, and explore the dramatic transformation of these markets. The student will learn how each of these markets operates in the US, but will also learn how practices differ in Europe, Asia and Latin America.

MSF 593
Market Microstructure
Market microstructure is one of the youngest but most rapidly growing areas of finance. It focuses on the organization of traded markets, including those for equities, bonds, money market instruments, foreign exchange and derivatives (including futures, options and swaps). It explores the concepts of liquidity, transparency, the information content of bids, offers and trades, information asymmetries, order flow externalities, principal-agent problems, the design of markets, the rules of markets, the volatility of markets, the failure of markets, the regulation of markets and the costs of trading. Empirical work in this area typically involves huge datasets. Students will leave this course with a thorough understanding of the structure of the markets in which they will likely spend their careers. Prerequisite: MSF 501.

MBA 501
Financial & Management Accounting
An introduction to the basic financial and managerial accounting topics: GAAP, the major financial statements, accrual accounting, financial reporting alternatives, financial statement analysis, cost behavior, cost systems, short- and long-term decision-making and product costing.
(3-0-3)

MBA 503
Organizational Behavior
Builds awareness and understanding of the behavior of individuals and groups in organizations, preparing managers to be more effective within their organizational contexts. Topics include individual differences in motivation, perception, culture and learning style; group and organizational dynamics; and the impact of organizational structure and culture on behavior. Leadership techniques for influencing other organizational members, creative problem-solving and decision-making, ethics and values- based managing are covered. This course helps students relate basic theories, concepts, and techniques to real-world situations through the extensive use of case studies.
(3-0-3)

MBA 505
Managerial Economics
The behavior of firms and households and the determination of prices and resource allocation in a market economy. Topics include empirical demand, production and cost functions, monopoly, oligopoly, and pricing practices.
(3-0-3)

MBA 507
Managerial Decision Making
The course introduces the business research process and teaches analytical statistical methods that can be used for managerial decision-making. It also covers managerial decisionmaking under uncertainty. Topics include probability, sampling, estimation, hypothesis testing, linear regression, and goodness-of-fit tests.
(3-0-3)

MBA 509
Managerial Finance
An introduction to the basic concepts and practices used by managers in making financial decisions. Topics include cash flow analysis, capital budgeting, short- and long-term financial planning, cost of capital, financial leverage, and dividend policy.
(3-0-3)

MBA 511
Marketing Management
This is an introductory course in marketing designed for graduate students. It takes the "customer value" perspective and defines marketing as a business process that chooses value, creates value, communicates value and delivers value. This course helps you understand intricacies involved in the value creation and delivery process in a 21st century firm that competes for customers in a highly competitive global marketplace. In terms of teaching pedagogy, the course employs a theoretically rigorous, yet practically relevant, approach. There will be interactive lectures and analyses of real-life marketing decisions. The course will also feature an exciting computer simulation project which gives students an opportunity to "get their hands dirty", and allows them to learn not only the development of marketing strategy, but the implementation and execution of such strategy.
(3-0-3)

MBA 513
Operations Management
The course focuses on decisions to be made by operating managers in managing the technology, capital, and human resources of organizations in the process of producing goods and services. Topics include: equipment, technology, and process selection; product/process integration and innovation and the basic tools required for process design; work force, materials, and quality management; and aggregate planning and scheduling.
(3-0-3)

MBA 515
Strategic Information Systems
The effective planning and deployment of information technology [IT] will enable your organization to compete aggressively, rapidly, and globally in this digital age. A critical ingredient of success is the alignment of expectations by senior executives and IT management for leveraging IT investments to create business value. We will analyze the key decisions involved in the planning, operations, and control of IT. Additional emphases will be devoted to e-business integration, knowledge management, and emerging information technologies. Cases and PC exercises will provide practical applications of IT. Tools include business process analysis, IT portfolio management, online analytical processing, and data mining.
(3-0-3)

MBA 517
Strategic Competitiveness
The student will gain an understanding of the concept of Strategic Competitiveness (SC), with a command over powerful concepts including strategic positioning, industry clusters, the economic diamond, the corporate value chain, and the global supply chain. The student will apply the appropriate SC concepts through analysis of "real-world" situations. The goal is to equip students to be able to articulate economic strategies in a compelling way to private and public leaders. The student will understand the important dynamic operations among the various societal sectors and the concept of economic development in urban environments within a global economy. The student will apply "cutting-edge" business and social science methods by means of case studies, class discussions, and project requirements. The course offers students a strategy and leadership laboratory, with peer and external interactions essential for success in today's fast-changing business environment.
(3-0-3)

MBA 525
Strategic and Functional Management
This is a two-part capstone course for all MBA students. In the first part of the course, through the CAPSIM simulation project, students will learn how to implement business strategy and tactics. Emphasis is on how the various business functions could be integrated for the purpose of creating superior customer value. In the second part of the course, students will learn an integrative approach to the role of the general manager and the tasks of creating an effective business unit: crafting strategy; designing and maintaining an organization for implementing strategy; leadership and change management; and corporate governance. The course is designed around a model of the "fit" between industry structure-business strategy, organization design, and financial, operational and behavioral outcomes-and the complex task of maintaining that "fit" over time. Special attention is paid to drivers of change and sources of complexity, such as size, market diversity, and rate of growth. Case studies are used to develop total organization perspectives, to focus on individual leadership and management skills, and to emphasize the linkages between theory and practice. As the capstone course of the MBA program, this course must be taken during the final semester. Prerequisite: To be taken in last semester; or advisor approval.
(3-0-3)

MBA 552
Strategically Managing Cost and Investment Decisions
This course builds on the financial and management accounting foundation presented in MBA 501. Competitive strategy is linked with management decisions concerning the understanding of costs and investment decisions. Managerial topics, i.e., activity based costing, the theory of constraints, strategic decision making, management and operational control, cost estimation, budgeting and cost allocation, will be covered so that the student willdevelop a betterunderstanding of the underlying costs. There will be discussion of "green accounting" techniques as well. Investment decisions are based on understanding the financial statements of potential equity investments. Ratioanalysis is covered as an evaluation tool, and detailed coverage of significant financial accounts; inventory, fixed assets, debt, leases, pensions, and others, will address the necessary manipulations that will place the underlying accounting methodology on a comparable basis. These equity investment decisions will also be discussedin relation to the organizations competitive strategy. Pre-requisite: MBA 501 Financial and Managerial Accounting, or equivalent
(3-0-3)

MBA 553
Data Mining
The digital enterprise captures significantly more data about customers, suppliers, and partners. The challenge, however, is to transform this vast data repository into actionable business intelligence. Data mining and predictive analytics can provide valuable business insights. A leading data mining tool, e.g., IBM/SPSS Modeler will be used to investigate hypotheses and discover patterns in enterprise data repositories. Both data cleaning and analyses will be discussed and applied to sample data. Analysis tools include decision trees, neural networks, market basket analysis and discriminant analysis. More recent approaches, e.g., geographical, text and web data mining will be addressed. Applications of data mining in a variety of industries will be discussed. Software exercises, case studies and a major project will prepare you to use these tools effectively during your career. Prerequisite: MBA 507 or instructor consent.
(3-0-3)

MBA 554
Project Management
This course addresses both analytical and behavioral skills for effective project management. You will learn how to select a project portfolio, develop a work breakdown structure, estimate task times and costs, allocate and level resources, prepare Critical Path and PERT analyses, and assess earned value project performance. A leading project management tool, e.g., MS Project will be used for project management exercises. Much of the course content will be drawn from the Project Management Institute Common Body of Knowledge and Certification Program. Management of project risks, structure, team building and conflict will be addressed. A Project Management simulation game provides an opportunity to apply your team-based skills. A variety of project management cases across industries will be studied.
(3-0-3)

MBA 555
Contemporary Issues in International Business
To operate in the complex environment of a globalized world, managers must develop an in-depth understanding of current events. The international business professional must develop an appreciation for topics such as the OPEC oil cartel, international risk analysis, technological advances as a driver of global markets, major international strategies, cross-cultural competence, the political economy of modernization, collaborative ventures, and international acquisitions. The course also provides rigorous economic analysis of the modern theory of trade as well as government trade policies. It deals with the factors that determine the exchange rates under the floating and fixed exchange rate systems. Furthermore, the course analyzes the crises in emerging markets and the need to revamp the international financial system. In the area of trade, topics covered include: the Doha round, economic integration (i.e. the EU, free trade areas), and the meteoric rise of sovereign wealth funds (SWF).
(3-0-3)

MBA 556
Operating System and Supply Chain Management
We will present models and practices to optimize the management of both demand and supply for a company's products or services, with an emphasis on the integration of business and technology aspects. This course will first introduce an integrated view of the production and logistics functions in organizations such as capacity analysis, inventory management and logistics management. The course then discusses topics involved in the interaction of a firm with other players in a supply chain such as value of information, supply contracts, price-based RM and quantity-based RM. Prerequisites: MBA 507 and MBA 513.
(3-0-3)

MBA 557
Contemporary Business Law
This course will introduce graduate business students to legal issues that are pertinent to working in the modern American business environment. It will cover legal issues pertaining to business organizations (e.g., essentials of forming a partnership or corporation and corporate governance); ethics; transactions (e.g., basics of the Uniform Commercial Code, anti-trust issues in pricing and market share; representations to customers, contract formation, performance, contract disputes); personnel (e.g., hiring practices, anti-discriminations laws, including those that address age, gender, etc., and accommodations under the Americans with Disabilities Act); international business (e.g., U.S. boycott and anti-boycotts laws; U.S. Foreign Corrupt Practices Act; Contract for the International Sale of Goods); and e-commerce.
(3-0-3)

MBA 558
Global Expansion Strategy
Global expansion represents an attractive growth strategy for many companies. In particular, China, India, Brazil and other emerging countries represent very good opportunities for growth. However, there are significant risks as well in global expansion. Firms could take advantage of opportunities while simultaneously reducing risks if they develop a systematic strategy to enter foreign markets and expand in them. This course teaches students how firms could develop and implement comprehensive strategies to achieve their global growth objectives. Topics covered include: Alternative growth strategies, the global expansion option, assessment of opportunities abroad, selection of markets, foreign-market entry modes, market development strategies, regional and global coordination. Prerequisite: MBA 511; or instructor consent.
(3-0-3)

MBA 561
Models for Decision Making
Models for decision analysis in various functional fields including finance, marketing, and operations. Applications include media selection, capital budgeting, portfolio selection, advertising effectiveness, plant location, distribution planning, and production planning. The focus of the course is building models and using software to aid in decision-making. Prerequisite MBA 507.
(3-0-3)

MBA 562
Spreadheet Modeling
Spreadsheets are a popular modelbuilding environment for managers. Add-ins and enhancements to Excel have made powerful decision-making tools available to the manager. This course covers how to use the spreadsheet to develop and utilize some of these decision-making aids. Visual Basic for Excel allows the nonprogrammer to create modules for functions, subroutines, and procedures. Topics include forecasting (both regression and time series), decision-making under uncertainty and decision trees, using SOLVER for optimization, and probabilistic simulation using @RISK. Prerequisite MBA 507.
(3-0-3)

MBA 565
Advanced Data Analysis
An examination of the methods for analyzing data. Topics include analysis of variance, multiple regression, nonparametric methods, Bayesian and decision analysis. Sampling methods and multivariate analysis, including the bivariate normal, confidence interval and hypothesis tests of the centroid, discriminant analysis, conjoint analysis and factor analysis. Prerequisite MBA 507
(3-0-3)

MBA 575
Creativity and Contemporary Entrepreneurial Opportunities
Entrepreneurship focuses on the concepts, skills, and know-how, information, attitudes and alternatives that are relevant for start-up and early-stage entrepreneurs, entrepreneurial managers and the relevant stakeholders. Specifically, this course provides an introductory overview of the knowledge and skills needed for the identification, evaluation, and exploitation of opportunities in a variety of circumstances and environments. It concentrates on the study of various innovative thinking in strategy, identifying and screening a business opportunity, developing business models, preparing business plans, securing financing and managing high growth firms. It integrates knowledge gained from the prior core business courses (i.e., management, marketing, finance, accounting) to sharpen the student's ability to "think strategy innovatively and think entrepreneurially" and form new ventures. Further, it is a course that mixes theory with practices covering industries such as computer, cell phone, biotech, wireless, to name just a few. You will be challenged to apply principles, concepts and frameworks to real world situations, culminating in a formal business plan. Prerequisites: MBA 509, MBA 511; or instructor consent.
(3-0-3)

MBA 576
Creating and Financing New Ventures
The course concentrates on the study of entrepreneurship, preparation of business plans, methods for evaluating and screening new venture ideas, formulation and implementation of business strategies for new ventures, development of a business plan, the financing of new ventures and venture growth strategies and exits. It integrates knowledge gained from the prior core business courses (i.e., management, marketing, finance, accounting) to sharpen the student's ability to "think entrepreneurially" and form new ventures. The course will also focus on identifying, examining and evaluating various sources of original and growth capital. Emphasis will be on legal, financial and tax issues related to capital formation as well as specific problems experienced by the small-to-medium-sized firm undergoing rapid growth. Topics discussed will include venture valuation, financing startups, financial planning and strategy, going public, selling out and bankruptcy. A formal proposal for capital acquisition developed through field research will be required of each student. Prerequisites: MBA 509, MBA 511; or instructor consent.
(3-0-3)

MBA 581
Marketing Research
An overview of the marketing research process, the course focuses on basic principles that permit the decision-maker to understand and make better use of research results. Topics covered include problem identification, research and data instrument design, and sampling. Methods for estimating short- and long-term market potential for new and existing products will also be discussed. Prerequisites: MBA 511.
(1.5-0-1.5)

MC 503
Strategic Brand Management: Creating Brand Ownership (elective)
The most valuable assets that a company has are the brands that it has developed and invested in over time. Students will explore the components of a brand, its equity and emotional benefits and an understanding of how to develop a meaningful "brand relationship" with the customer or prospect to optimize the brand or brand portfolio. The class will also explore the various aspects required to champion a new product or service from development to launch by optimizing the execution through all the marketing efforts of the firm. Students will address positioning, channel strategies, trade promotion, budgeting as a part of the planning process, new product development, packaging and merchandising and the management of agency relationships. Like people, brands have unique personalities that differentiate them and drive their ability to grow or limit their ability to expand.
(3-0-3)

MC 510
Marketing Foundations: The Art of Marketing (core)
This course provides students with a holistic examination of the theory and practice of marketing. Learning will concentrate on how marketing can transform how companies look at customers and how innovation and creativity can enhance competitive performance. Topics include: how to interpret overall company business plans; how products/services are designed, created, tested, produced, priced, positioned and distributed; market segmentation and product life cycles; the economic foundations of marketing; and sales and cost-benefit analyses. Marketing models from contemporary thought-leaders and case studies are employed.
(3-0-3)

MC 514
The Marketing Communication Plan: Developing Transformative Marketing Strategies (core)
In this course, students learn how to identify and evaluate the full gamut of competitive strategic alternatives in both business to business and business to consumer marketing using a wide variety of analytic tools to develop and analyze consumer insights. Based on this analysis, the major elements of a communication plan are put in place: media, message, target audiences, testable objectives, and budgets. Students learn to measure consumer and business target audiences by their demographic, psychographic and attitudinal characteristics and to analyze the style and appeal of messages within campaigns. Students also learn how to develop a balanced marketing communication plan utilizing the multitude of vehicles available to reach a target audience using the latest technological tools and media.
(3-0-3)

MC 516
Marketing and Advertising Research: Building Consumer Insight Through Research (core)
This course is an introduction to the purposes and methods of research. The course is a state-of-the-art hands-on course that concentrates on how research provides critical information for marketing and communication decisions. Topics include identification of the research problem, research design, data-gathering techniques, sampling procedures, data analysis, and report preparation. The course exposes the student to basic statistical methods using both qualitative and quantitative research methodology.
(3-0-3)

MC 520
Understanding the Target Audience (core)
Understanding the demographics and psychographics of target audiences is essential to an effective marketing communication strategy. From data to information to insightful strategic marketing, this course covers what's important to know to make more effective marketing decisions. Social, cultural, psychological and attitudinal factors are explored with particular attention to motivation, how attitudes are shaped and altered, how information is processed, and the role of learning in the formation of purchasing decisions. Theories and models of consumer behavior are examined to develop incisive insights into consumer behavior that can build strong brands.
(3-0-3)

MC 522
Media Strategy and Implementation for the 21st Century (core)
This course focuses the massive transformations based on new technologies that are occurring in today's communication environment, and the wide variety of consumer contact points it generates. Students will develop an understanding of how the industry is organized and how marketing communications flow from the source company to the target audience. The course examines the major aspects of developing and evaluating media plans, beginning with the development of media strategies that flow from overall marketing communication goals. The course analyzes various media from the perspectives of cost, targeting, audience characteristics, and the nature of product/service. The course also includes examinations of information sources, such as Arbitron, Nielsen, and Simmons, and software, such as Manas, IMS, Telmar, Adware, and Tapscan.
(3-0-3)

MC 524
Creative Strategies (core)
This course deals with translating business and marketing strategies into creative executions that deliver effective messages to the intended target audience. The course focuses on the analysis of consumer information for meaningful insights, and translating those insights into incisive strategies for execution in print, TV, radio, direct mail, Internet, and other delivery vehicles to consumer and business audiences. Based on the development of creative goals and strategies, the major elements of advertising are studied: the central idea to be communicated (unique selling proposition, positioning, brand personality, or campaign theme), the appeal of the creative concept (informational, news, emotional), and the style or approach of the creative message (slice of life, testimonial, corporate image, celebrity presenter). The creative process of "brainstorming" is used to hone creative thinking skills to see beyond existing paradigms to develop innovative executions capable of transforming consumer attitudes and beliefs.
(3-0-3)

MC 533
Database and Direct Marketing
This course introduces the students to the critical nature of information gathered in real-time directly from important constituencies or third party sources. It explores the ability of data based marketing to match consumers with products based on behaviors. Students learn to access and analyze database information, as well as develop programs to illicit a direct and immediate response using a variety of direct to consumer/direct to business tools including electronic marketing.
(3-0-3)

MC 535
Sales Promotion and Alternative Media Techniques
This course provides an overview of the more specialized applications and techniques of alternative media channels including public relations, event marketing, social media, free media and sales promotion, and how they fit into an overall marketing communication plan. Special emphasis is given to an overview of strategically sound merchandising and sales promotion programs, and how they can enhance the other communication efforts of the company or brand.
(3-0-3)

MC 536
Practicum (core)
This capstone course is designed to integrate all the skills learned in the Marketing Communication program in a practical context. Student teams will compete as mini agencies with an assignment from a major Chicagoarea marketer. Briefed in detail by their client, they will develop a marketing strategy and a complete, detailed marketing communication plan. Based on secondary research and original research conducted by the teams, the marketing communication plan will include a media plan, a creative program, budget recommendations, and recommendations for the use of public relations, database marketing, promotion, online marketing, event marketing, as well as other media vehicles. Teams will make formal presentations of their plans to client senior management.
(3-0-3)

MC 546
Communication Strategies ifor Emerging Technologies
Advertising on the Internet is governed by an entirely different set of parameters. This course explores the different skill sets involved in promoting in the on-line environment, from search engine optimization, banner ads, to permission e-mail marketing, with its own rather intricate set of rules. With more money invested in search engine marketing than network television, companies are finding that the Web is among the most important media vehicles in the marketing arsenal. For the marketing communication professional, these new digital tools and tactics will be essential for success.
(3-0-3)

MC 554
Customer Relations Management (concentration)
In a world where it costs five times as much to acquire a new customer as it does to keep an existing relationship, companies are learning that they must manage those current customer relationships in order to survive. Around this insight, a new discipline has emerged, using some of the tools of database management and some of the new tactics of digital communication to reduce attrition, and maximize the lifetime value of a customer. Customer Relationship Management (CRM) is making fundamental changes in the way companies operate. It is a critical point of merger, where e-business becomes a part of all business. This course will engage the student in the diagnosis of CRM issues, the building of CRM plans, the measurement of their effectiveness, and the new tools available to get all these things done economically, in Internet time.
(3-0-3)

MC 555
Marketing Analytics
With the proliferation of data has come new and exciting ways to manipulate that data to significantly enhance our marketing efforts. More and more, analytics is being applied to seek answers to marketing and advertising issues. Marketing Analytics can be used to optimize strategies, commercial messages, as well as visual content of that message. Students will use proprietary software in simulated class exercises to seek optimal strategies and messages for class projects.
(3-0-3)

MC 563
Web Page Design (elective)
The content, organization, presentation, and functionality of Web sites are critical to attracting and retaining customers or members of an audience. Subtle issues of design and organization can have profound consequences on a site's ability to persuade, communicate, compete, and close a transaction. Principles of effective site design will be used to evaluate existing sites. An authoring tool, e.g., Dreamweaver or Frontpage will be used to build a Web site.
(3-0-3)

MSC 530
Probability & Statistics
The students will learn the fundamentals of probability and how to use this tool to solve common problems in industry. The course material includes a large variety of topics in business, engineering and management science. The topics include the fundaments of probability, random variables, transformations, discrete, continuous and joint distributions, normal, lognormal, bivariate and sampling distributions, parameter estimating methods, confidence intervals, hypothesis testing, and regression.
(3-0-3)

MSC 534
Queueing Theory
The students will learn how to solve many of the queuing problems that are found in common industry situations. The course will show how to formulate and solve the more complex queuing problems and the methods in probability that are used in formulating the queuing models. The fundamentals of matrix systems, priority systems, Erlang systems, simulated queues, stochastic processes and markoff chains are described. Prerequisite: MSC 530.

MSC 538
Simulation and Data Analysis
The objective is to learn how to generate solutions to problems, not known otherwise how to solve. The class emphasizes how a simulation project is formulated from computer programming. The student learns how to generate random responses for continuous, discrete, poison process and multivariate distributions. Methods to determine the probability distribution to use and the techniques to estimate the parameter values are shown along with examples. Ways to analyze the output results from transient, steady state and fixed event models are shown. The use of response surfaces, single-factor, multi-factor, fractional, and non-linear design of experiments, non-parametric methods and min and max distributions are given. Prerequisite: MSC 530.
(3-0-3)

MSC 543
Time Series
The course gives a cross section on the methods of forecasting with emphasis on production and inventory. For each method, a description is given on the mathematical basis, the calculations to carryout and an example problem. The student becomes aware of the powerful tool of forecasting and how they apply in a wide range of business and industrial problems. The course covers filtering, horizontal, trend, seasonal, multi-location, smoothing, discounting, adaptive control, adaptive smoothing, trigonometric and Box- Jenkins forecast models and forecast errors. Also how the forecast are used in decision making in production and inventory operations. Prerequisite: MSC 530.
(3-0-3)

MSC 550
Topics in Quality Management
The understanding, development and implementation of total quality management approaches with a focus on customer satisfaction and economics of quality. Concepts and tools of quality design, quality of conformance and quality of performance will be discussed. Theoretical and empirical research will be the basis of this course. Prerequisite: MSC 530.
(3-0-3)

MSC 560
Optimization Techniques I
Optimization techniques, with the primary emphasis on linear programming, and application interspersed to illustrate the applicability of the optimization techniques. The majority of the course will be linear programming techniques, including the simplex-method and its variants, interior point algorithms, and duality and sensitivity analysis. The other part of the course discusses model formulation with integer variables and develops the theory of computational methods of integer linear programming: cutting plane, branchand- bound, and Lagrangian relaxation methods.
(3-0-3)

MSC 562
Optimization Techniques II
The theory and computational methods of nonlinear programming is the majority of the course, including convex analysis and unconstrained methods, Kuhn-Tucker theory, saddle points and duality. Algorithms discussed include one for quadratic programming, linearly constrained, nonlinearly constrained, penalty and barrier methods. Prerequisite: MSC 560.
(3-0-3)

MSC 564
Optimization Techniques II
The course covers Dynamic programming formulation of deterministic decision process problems, analytical and computational methods of solution, application to problems of equipment replacement, resource allocation, scheduling, search and routing. Introduction to decision making under risk and uncertainty. Prerequisite: MSC 560.
(3-0-3)

MSC 568
Supply Chain Methods
The course gives a cross section on the production, distribution and retail stages along the supply chain. Emphasis is presented on the inventory needs at the various stages and the methods that are used in their control. A quantitative description on the tools and methods used are presented along with examples. The student becomes aware of the needs and techniques at the various stages across the supply chain. The course gives the fundamentals on forecasting, order quantity, safety stock, replenishment, stock-keeping units, production, reusable inventory, assembly, logistics, multiple locations, low demand items, initial order quantity, all time requirements, late delivery and lost sales. Prerequisite: MSC 530, MSC 538.
(3-0-3)

MSC 574
Scheduling Theory
This course introduces students to theory, cases and current research in classic and new scheduling approaches. In addition to continuous scheduling systems found in the manufacturing sector and in the service sector, finite life project scheduling topics are also covered. New evolutionary optimization solution approaches such as Genetic Programming, Tabu Search and Simulated Annealing are explained in detail. Complexity theory, as applied to the modeling and the solution of large scale optimization problems, is also covered. Student initiated scheduling scenarios that may lead to further research or dissertation topics are encouraged and solved with the help of the professor. Prerequisite: MSC 564.
(3-0-3)

MSC 576
Practicum in Teaching and Curriculum Skills
This course enables PhD students to address overall issues of pedagogy, as well as the development of personal classroom skills. The course covers curriculum development, sources of classroom materials and use of various teaching methods.
(1-0-1)

MSC 595
Operations Management Seminar
This course focuses on the intersection of Economics and Operations Management. In particular, we examine the influence of microeconomic theory, particularly game theory, on analytical OM research. Topics covered will include incentives, information sharing, competition and coordination in inventory and supply chain management. The course material will revolve around classic and recent publications in well-known journals. The course is a discussion-based course. Prerequisite: Advanced standing and instructor's consent.
(3-0-3)

PA 501
Introduction to Public Administration
Analyzes what public managers actually do in relation to elected officials, agency personnel, client groups, the press and the public, including attention to the value conflicts they confront and must resolve. Considers both classical and contemporary views and emerging issues. Introduces the student to the systematic analysis of government operations.
(3-0-3)

PA 502
Complex Organizations
Analyzes how large public and nonprofit administrative agencies are organized, led and managed. Examines relationships between the chief executive, line management operations and support staff. Considers relations between the organization and its environment, the importance of interorganizational networks, and the role of power in organizational life.
(3-0-3)

PA 503
Administration Law
Considers the role of statutes, case law and administrative law in the establishment, operation and control of public agencies. Examines how legislation and administrative procedures direct and constrain the exercise of discretion by public managers and how they ensure accountability and the fair treatment of the public. Prerequisite: PA 501.
(3-0-3)

PA 505
The Law and the Nonprofit Sector
Examines local, state, and Federal law as it pertains to the nonprofit sector. This includes such things as the IRS, lobbying, human resources, property, and contracts.
(3-0-3)

PA 508
Seminar in Public Management
Students attend lectures and make site visits to state and local agencies and governments, learning about special problems encountered by leadership for each agency and the solutions that the agencies have devised. This course offers students an opportunity to interact with a group of agency directors, public officials and staff about their experience and solutions to common management problems. Students compare experience of local leaders with theoretical public administration material. Prerequisites: PA 501 and permission of Program Director.
(3-0-3)

PA 509
Practicum in Policy Analysis
A student project course that concludes the required core course sequence. Focuses on the analysis of a complex, real-world administrative or policy problem. Requires analyses of legal, financial, personnel, organizational and political aspects of this problem, followed by the preparation of a thorough written and oral report, including recommendations for action. Prerequisite: All other core courses.
(3-0-3)

PA 510
Managerial Communications
Provides hands-on training and practice in the effective styles of writing and related communications skills needed by all public managers, including memoranda, letters and formal reports. Emphasis is placed on learning and practicing effective writing and communication related to real-world administrative and managerial situations relevant to the student's particular current or chosen professional position.
(3-0-3)

PA 511
Comparative Public Administration
An introduction to comparative analysis of systems of public administration in selected nations, including Great Britain, Japan, China, and major non-governmental organizations such as the European Union and the United Nations. The nations and organizations discussed will be compared to each other and to the United States. Areas explored will include: the historical antecedents of current national administrative systems (including the development of the nation-state), public administration models and structure in both developed and developing nations, the relationship between bureaucracies and political systems, the rise of the international nongovernmental organization, and the impact of corruption on public administration.
(3-0-3)

PA 512
Public Advocacy
The goal of this course is to assist students function as strong advocates in their future careers and to help them prepare for their thesis or final presentation. This is an advanced research and writing course. Public Advocacy is the study of effective argument. The course is designed to allow students to focus their prior learning experiences through problem analysis and advocacy. Using individual topics, students will address the problems of advocacy: different types of advocacy situations, requiring different information, analyses and presentations. Substantive topics of current interest and controversy will be discussed in the context of developing and advocating a particular position.
(3-0-3)

PA 513
Public Policy Analysis and Evaluation
Explores techniques of policy analysis and program evaluation having practical application in such fields as transportation, education, housing, criminal justice and environmental quality. Includes those research and analytical methods most frequently applied in governmental decisionmaking. Prerequisite: PA 501.
(3-0-3)

PA 514
Government Management and Information Systems
A practical introduction to database management programs. Demonstrates the use of a variety of other office automation software tools (including graphics, desktop publishing, telecommunications/file transfer, bibliographic text retrieval, computer-aided instruction, and expert systems). Considers issues relating to effective computer management, including computer ethics, security, needs assessment and training. Prior working knowledge of personal computer operating systems, word processing, and spreadsheet programs is needed. Prerequisite: PA 501.
(3-0-3)

PA 516
Information Technology in Public Administration
The course has the learning objective of becoming aware of the general management challenges that the use of information technology presents for governments and to be able to develop appropriate policies that address these challenges. Upon completion, students should be able to apply best practices to the management of computer hardware, software, networking, and other technologies in government and appreciate how the use of "electronic government" technology can transform government and be able to help governments develop and manage effective programs of e-government use.
(3-0-3)

PA 522
Public Personnel Administration
Reviews development of meritbased civil service, examining implications of political accountability, and patronage and professional responsibility. Considers personnel recruitment, examination and promotion procedures in light of collective bargaining, affirmative action, and employee productivity and performance evaluation. Prerequisite: PA 501.
(3-0-3)

PA 531
Government Accounting and Budgeting
Focuses on the budget as policy and management control mechanism in public and nonprofit agencies. Introduces students to concepts, principles, and procedures of governmental accounting. Links budgeting to program management, accounting, financial reporting and auditing. Prerequisite: PA 532.
(3-0-3)

PA 532
Principles and Practices of Public Finance
A general review of public finance management. This course is designed to provide students with an understanding of the public finance environment and an opportunity to explore practical challenges in managing governmental resources. Includes basic accounting, analytical tools, budgeting, purchasing, and cash management. Examines the integrated role of the various finance functions. Prerequisite: PA 501.
(3-0-3)

PA 533
Advanced Financial Management for the Public and Nonprofit Sectors
An advanced course focusing on the application of techniques used by financial managers to evaluate government financial condition and performance. Students will conduct case studies in which they apply tools such as performance measurement, budget analysis, priority-setting and financial indicator analysis to evaluate core public financial documents including budgets, capital improvement plans and audited financial statements. Prerequisite: PA 532.
(3-0-3)

PA 534
Financial Management of Nonprofit Organizations
Nonprofits are businesses organized on many of the same principles as for-profits, but there are differences including financial reporting to boards of directors, donation accounting, reporting to government funding sources, tax reporting, and even investment strategies (for example program related investing). This course will equip a nonprofit manager to responsibly guide the complex financial life of a modern nonprofit. Prerequisite: PA 532.
(3-0-3)

PA 535
Resource Development in the Nonprofit Sector
Provides insight and learning into fundraising, marketing, and strategic planning in the nonprofit sector. This course offers an in-depth look into finding and securing the resources necessary to the success of nonprofit organizations.
(3-0-3)

PA 536
Strategy and Structure: Homeland Security
Students are introduced to the National Strategy for Homeland Security and the structure under which it was originally designed, the events that have affected the original concept and the various changes that it has undergone since the events on 9/11/2001. An emphasis on the overall integration of state, local, tribal and private sectors will enable the student to apply the tenets of Homeland Security to their own situations. Other topics include an understanding of how to conduct threat assessments as well as a cursory understanding of the intelligence cycle.
(3-0-3)

PA 537
Homeland Security/Crisis Management
This course is taught by experts from various disciplines and provides a basic overview of homeland security including a brief history of terrorism. Specifically, the course is intended to provide the audience issues related to homeland security, awareness on the types of threats (damage to buildings, processing plants, public facilities, etc.) and the type of risks involved. Other relevant aspects include types of weapons used by modern terrorists; how one goes about estimating risk and threat to a facility; how buildings and people respond when subjected to blast and fires; the role of search and rescue operations; weapon effects; building security; facility analysis to identify vulnerable areas given a threat; procedures for minimizing vulnerability; effective fire safety; contingency plans, etc. At the conclusion of this course the student will know how to estimate the risk and threat to a given facility, prepare a basic security audit; develop a basic contingency plan, develop a passive/ active security system for a given facility and develop post event search and rescue operations.
(3-0-3)

PA 538
Information Systems Security/Cyber Crime
Provides an introduction to information systems security, an in depth review of topics in cyber-crime issues in the public safety field and identifies methods of preventing cyber-crime in organizations. It includes issues involved with policy and legal issues of enforcement of cyber-crime laws, as well as tools used for network security.
(3-0-3)

PA 539
Local Government Management
Examines the governmental structure in which public safety administrators work and studies the interrelationship of public safety administrators with the rest of the organization. The leadership and management roles of public safety officials, finances and budgeting in local government, and ethics in the profession will be examined.
(3-0-3)

PA 540
Dispute Resolution
Reviews development of merit-based civil service, examining implications of political accountability, and patronage and professional responsibility. Considers personnel recruitment, examination and promotion procedures in light of collective bargaining, affirmative action, and employee productivity and performance evaluation. Prerequisite: PA 501.
(3-0-3)

PA 541
Performance Measures in Public and Nonprofit Management
Governments at all levels, as well as foundations, trusts and other funders now require performance measurement systems to improve management and gain the power to demonstrate results to officials, taxpayers, donors and decisions makers. This is an applied course which will help students understand performance measurement concepts, develop specific performance measures, and apply performance measurement techniques to solve real world problems in both the nonprofit and public sectors.
(3-0-3)

PA 542
Agency Planning and Policy Analysis
Designed to present practical, costeffective techniques that can be used to make better decisions regarding the allocation of scarce resources. Includes problem identification, goal development, data needs and collection, generation of alternative solutions, projecting impacts, goalsoriented evaluation and strategies for implementation. Prerequisite: PA 501.
(3-0-3)

PA 543
Public Policy, Nonprofits, and Philanthropy
Examines the long history of charitable giving across the globe, with special emphasis on the United States. In particular this course will focus on the philosophical roots of philanthropy, organized giving, and the role philanthropy has played in the development of modern public policy, as it pertains to health and human services.
(3-0-3)

PA 551
Public Infrastructure Management
Considers the status and operation of public infrastructure facilities in the United States generally and in the Chicago metropolitan area, with particular attention to the responsibilities and roles of the public works manager. Explores the relationships between the engineering, administrative and political aspects of public works management. Focuses on critical infrastructure issues through case studies.
(3-0-3)

PA 552
Human Services Policy and Administration
Examines the major issue associated with the administration and operation of social welfare and health services in the United States by governments and nonprofit organizations. Designed for students who work in such agencies and for those who have regular contact with them or their clientele. Structure, funding, staffing and other operating characteristics are examined.
(3-0-3)

PA 553
Public Safety Administration
Deals with contemporary public safety and security management in communities for public safety professionals, public administrators and law enforcement officials who deal with public safety issues, existing in post-9/11 American society. Examines the relationship between police/public safety policy, operations and administration. Addresses various current problems and issues through case studies. Focuses mainly on the City of Chicago and surrounding metropolitan area.
(3-0-3)

PA 555
Introduction to Urban and Regional Planning
Governmental and private sector activities that influence the maintenance and development of the built environment. Students learn both quantitative and qualitative analysis and are introduced to planning systems incorporating fiscal analysis, social analysis, transportation analysis, demographic and economic analysis. They will also learn about various processes providing participation and citizen input to the development of plans for the built environment. Regulatory tools covered include zoning, comprehensive plans, neighborhood planning and subdivision regulation.
(3-0-3)

PA 556
Management Strategy and Tools in the 21st Century
In the United States, an increasing proportion of the goods and services traditionally provided by governmental employees in the context of a governmental bureaucracy are now provided by outside contractors, or through indirect means such as social, economic regulation, tax policy, loan guarantees, vouchers, and manipulation of incentives for the private sector. This course is intended to provide students with an understanding of various tools used by governments throughout the West as the traditional rule based bureaucracy is replaced by other types of institutions and other means to provide goods and services traditionally provided by government.
(3-0-3)

PA 557
Urban and Regional Development
Covers materials on infrastructure management, and the interrelationship of infrastructure management to urban and regional development. The course acquaints students with the increasing role of the private sector in infrastructure maintenance, development, and management. Students learn various analytic techniques useful for officials responsible for urban and regional development (including development of new infrastructure) and for the continuing maintenance and management of existing infrastructure. Students learn analytic techniques relating to management and planning.
(3-0-3)

PA 558
Energy and Environment Policy
Places energy and environmental policy in domestic and global contexts. Traces the economic and political implications of dependence on fossil fuels and the attempt to develop alternate energy sources and promote conservation. Assesses the environmental effects of resource consumption and the effort to control these effects by increased efficiency and regulation of pollution. Explores such problems such as nuclear waste, acid rain, global warming, and deforestation. Examines national and international attempts at economic, political, and technological solutions.
(3-0-3)

PA 559
Issues in Globalization
Globalization has become a powerful buzzword in social science and in popular discourse. This course utilizes a sociological perspective to examine the economic, socio-political, and cultural aspects of globalization within the context of contemporary debates about the phenomenon.
(3-0-3)

PA 560
Political Economy
exploring the relationship between economy and government or political system. Role of the state, role of the market, impact of the economic ideologies on political and economic systems will be examined. Structure of political and economic interests and the mediating effects of institutions on political and economic outcomes will be examined. Normative issues connected to ideal political and economic institutions and appropriate political and economic institutions and outcomes will be examined.
(3-0-3)

PA 561
The Political Process and Administration
Addresses the relation between democratic institutions and processes of American politics and the administrative agencies of government. Examines obligations of citizenship, influence of private interests on public purposes, and effects of demographic, economic and technological change on self-government.
(3-0-3)

PA 562
Urban and Metropolitan Government
Analyzes the decision-making process in urban and metropolitan governments. Emphasizes the role of elected and appointed officials, business, organized labor, community organizations and the electorate. Also focuses on the major problems of city-suburban relations.
(3-0-3)

PA 565
The Nonprofit Sector
Considers the role played by the nonprofit sector in the larger American society and economy. Topics include major organizational forms, financial management, human resource policies, leadership, board-executive relations, and private-public connections.
(3-0-3)

PA 566
Nonprofits and the Public Sector
Provides an overview of the complex and important relationship between government and nonprofits. This course includes a review of the history, funding schemes, the differences between grant and contract funding, recent trends, and much more.
(3-0-3)

PA 567
Regulatory Policy and Politics
Examines the changing role of government regulation of private and public activities from a political and administrative perspective. Explores the reasons for growth and reform of economic and social regulation. Investigates the regulatory process, including standards for rule-making and the involvement of organized groups and the courts.
(3-0-3)

PA 568
International Business, Strategy, and Government
This course provides both public and private sector perspectives in a globalizing environment. The course traces the evolution of industrial systems in various countries and the institutions that participate in the world economy. Th foundations of international business and strategy are studied and applied to cases involving public and private sectors, with emphasis on global strategy, leadership, economic development, and the world economy. An emphasis on the role of government and on Strategic Competitiveness will be emphasized more than normally covered in other international business and strategy courses.
(3-0-3)

PA 570
Social Capital and the Community
The 21st century confronts the public sector with new challenges and opportunities. Many of these challenges and opportunities will take place on the community level; and many of those challenges and opportunities will be centered on the notion of social capital and the community. Social Capital means the building of and use of community assets, those resources available to the community through its residents or citizens, associations, institutions, and its economic life. Using an Asset Based Community Development Approach the objective of this course is to help the student understand and use the concepts of asset based approaches to social capital and community as it relates to public administration.
(3-0-3)

PA 577
Topics in Public Management
A reading and seminar course on a contemporary topic in public administration or policy. Subject matter will change in successive offerings of the course. May be taken more than once.
(Credit: Variable)

PA 579
Ethics and Professional Responsibility in Public Service
Focuses on the ethical problems and issues faced by individuals in public service organizations. Examines questions related to corruption, abuse of power, financial impropriety, ethics codes and standards in government and professional fields, whistle-blowing, and many other topics related to front-page concerns and individual problems of conscience and judgment. Traces the growth of concern about the standards of ethical behavior in government in the U.S.
(3-0-3)

PA 588
Incident Response, Disaster Recovery and Business Continuity
Students learn to design and manage key business information security functions including incident response plans and incident response teams; disaster recovery plans; business continuity plans; and crisis management teams and plans. Reporting, response planning and budgeting are all addressed. Students working in teams will prepare an incident response, disaster recovery, business continuity, or crisis management plan for a real world organization such as a business or a governmental body or agency.
(3-0-3)

PA 590
Internship in Public Administration
Supervised practical experience in public administration. May be taken only by students lacking extensive work experience in governmental administration. Prerequisites: PA 501 and departmental permission.
(Credit: Variable)

PA 592
Directed Readings in Public Administration
Consists of independent reading and analysis centered on particular problems and supervised by a member of the public administration faculty. Prerequisite: Instructors consent.
(Credit: Variable)

PA 597 Credit:
Special Problems
Subject matter will vary with the interests and background of the students and the instructor. May be taken more than once.
(3-0-3)

Variable, Max 6 hours

PA 600
Continuation of Residence.
(0-0-1)