

AREA CHAIR: FALGUNI K. SEN, PROFESSOR

The Masters of Business Administration in Management Systems is a 69-credit program. Management helps organizations grow and sustain performance even during uncertain times. Tomorrow's managers will have to be analytical and creative at the same time, in order to be effective decision makers and lead change. Management techniques are key to making the right decisions regarding strategic investments and day-to-day operational efficiencies. As innovations become the main engine for driving higher value, our courses teach students to create the appropriate strategy, culture, structure,

processes and values needed to produce dynamic and meaningful change. As decision-making becomes more data driven, our courses train students to become efficient in the use of quantitative techniques. The curriculum trains students to combine people and data skills, acquire the necessary tools and helps them discover their own talents at becoming leaders with integrity. Our five areas of specialization are geared towards giving our students an edge in careers in different fields.

MBA IN MANAGEMENT SYSTEMS

PROGRAM PREREQUISITES (three courses, nine credits)

- BE 6220 Managerial Economics (see page 32)
- DG 6810 Mathematical Methods for Business (see page 45)
- DG 6820 Statistics (see page 45)

MBA CORE BUSINESS COURSES (required) (eight courses, 24 credits)

- AC 6111 Fundamentals of Accounting (see page 18)
- BL 6310 Business Law I (see page 50)
- FN 6411 The Financial Environment (see page 29)
(Prerequisite AC 6111)
- IS 6910 Management Information Systems (see page 39)
- MG 6613 Fundamentals of Management (see page 43)
(Prerequisites BE 6220 & DG 6820)
- MK 6710 Marketing Management (see page 47)
(Prerequisite BE 6220)
- MG 6627 Operations Management (see page 43)
(Prerequisite MG 6613)
- MG 7660 Business Policy (see page 44)
(Prerequisites all core courses)
MG 7660 Business Policy, the capstone course of the MBA, should be taken as close to the end of the program as possible and only after the other core courses have been completed. Because of its integral importance to the program, this course will not be waived.

CONCENTRATION (five courses, 15 credits)

There are no specific required courses for students concentrating in Management Systems other than the core requirements: MG 6613 Fundamentals of Management, MG 6627 Operations Management, and MG 7660 Business Policy. The following are suggested specializations and course sequences appear below for students interested in specific career paths. Each consists of five courses beyond the management core requirements.

SPECIALIZATIONS

1. Leading People and Groups

This specialization develops the knowledge and skills to achieve high performance through people and teams. It emphasizes developing leadership, self and other awareness to achieve maximum impact with human resources in executing strategy. Skill and knowledge to make the most of group and team dynamics are covered as well as theories of how to energize and motivate self and others.

MG 7610 Leadership and Change

MG 7625 Team Dynamics

MG 7642 Motivation and Management

MG 7638 Career Management

Plus one other advanced level MG or DG course

2. Competitive Strategy

Focuses on management concepts needed to formulate and implement effective strategies for the long-term health of corporations; intended for students interested in careers in strategic planning and management consulting.

MG 7671 Global Industry Analysis and Strategic Planning

MG 7678 Strategic Management of Global Supply Chains

MG 7673 Strategy Implementation

MG 7675 Strategic Management of Technology and Innovation

Plus one other advanced level MG or DG course

3. Operations

Focuses on understanding process flows (including knowledge flows) and issues of efficiency and quality in the management of operations in industrial and service organizations. Intended for students interested in careers in process improvement, management consulting and quality management.

MG 7605 Process Control

MG 7678 Strategic Management of Global Supply Chains

MG 7621 Studies in Quality Management

DG 7850 Forecasting Models

Plus one other advanced level MG or DG course

4. Innovation Management

Focuses on understanding the complexity of the process of innovating and managing change in industrial and service organizations. Intended for students interested in careers in firms that operate in dynamic environments. They may have responsibilities for managing and leading change due to new product development or creation of new business models or manage growth and competition in entrepreneurial organizations.

MG 7675 Strategic Management of Technology and Innovation

MG 7610 Leadership and Change

MG 7671 Global Industry Analysis and Strategic Planning

MG 7699 Creativity and Entrepreneurship

Plus one other advanced level MG or DG course

5. Applied Statistics and Decision-Making

Focuses on developing skills and capabilities in using quantitative techniques to take optimal decisions. Intended for students interested in careers in research and jobs requiring data-driven decision-making.

DG 7840 Explanatory Models

DG 7850 Forecasting Models

DG 7699 Decision Theory

Plus two other advanced level MG or DG course

THE DEMING SCHOLARS MBA

For more information, see page 59.

Management Courses

Each course carries three (3) credits unless otherwise indicated.

MG 6613 Fundamentals of Management (MBA REQUIRED COURSE)

Presents theories of designing the structure and processes of organizations, as well as the elements of the global competitive environment within which such organizations operate and ways of relating to this environment. Explores critical issues related to the individual and the firm. Focuses on defining management's role and responsibilities in the continual improvement of quality, productivity and the competitive position of the enterprise.

PREREQUISITES: BE 6220, DG 6820.

MG 6627 Operations Management (MBA REQUIRED COURSE)

Studies the operations of both manufacturing and service organizations with the objective of simultaneously optimizing the quality and productivity of the operations systems. Develops techniques for strategic planning and system design, such as quality control, aggregate and capacity planning, project planning, scheduling and control, material and inventory management and just-in-time production.

PREREQUISITE: MG 6613.

MG 7600 Anatomy of Decisions

Examines how modern managerial support systems are evolving from a reliance on data and information to the utilization of knowledge and wisdom. This transition both demands and creates new approaches to decision-making.

MG 7605 Process Control

Introduces and, in an applied framework, examines modern statistical evaluation and control methods to enhance the performance of all productive processes. To improve such processes, managers must evaluate ever-present variability to determine process stability and distinguish normal fluctuations from special disturbances.

PREREQUISITE: MG 6627.

MG 7610 Leadership and Change

Prepares students to meet the requirements of today's economy, where leadership demands a combination of personal capabilities and insights, as well as in-depth knowledge of organizational change processes and practices. Through readings, cases, class discussions, self-assessment exercises and leader-directed learning projects, participants gain important insights into their own management style and develop essential knowledge and skills for successful implementation of major change initiatives.

PREREQUISITE: MG 6613.

ENTREPRENEURSHIP COURSE.

MG 7621 Studies in Quality Management

Applies knowledge of Quality Management to actual human systems, either at the place of students' employment or elsewhere. Working individually or in teams, students prepare Quality Management-related studies and present their final reports to faculty members or client companies.

PREREQUISITES: MG 7605, MG 7610.

MG 7625 Team Dynamics

Focuses on examining and developing interpersonal skills consistent with modern business's evolution toward an integrated, self-managing, team-oriented structure. This structure emphasizes group problem-solving, interpersonal communication and leadership among peers.

PREREQUISITE: MG 6613.

MG 7635 International Dimensions of Business

Uses case studies to explore various strategies of participation in the global business environment and the ways in which multinational corporations and transnational cooperative ventures create new managerial challenges and opportunities.

PREREQUISITES: MG 6613, FN 6411

INTERNATIONAL BUSINESS COURSE.

MG 7636 High Technology Management

Explores the key characteristics of how high technology allows and induces managers to perform differently and to accomplish different things. Examines how the resulting change in the nature of work must be managed through proper organizational and educational transitions.

PREREQUISITES: MG 6613, MG 6627.

MG 7637 Entrepreneurship and New Business Ventures

Focuses on the initiation and development of the first stages of a new business. Students are required to search out business opportunities and develop a business plan. Examines the particular problems of new business start-ups, emphasizing financing arrangements.

PREREQUISITES: MG 6613, FN 6411.

ENTREPRENEURSHIP COURSE.

GLOBAL SUSTAINABILITY COURSE.

MG 7638 Career Management

Helps students plan and control their personal and career development by surveying theoretical concepts and research findings. Through discussions, case analyses and interpretation of diagnostic tests, students acquire the personal insights necessary to complete a self-assessment and career/life plan.

PREREQUISITE: MG 6613.

MG 7640 Corporate Power and the Public

Bridges the gap between awareness of social issues and action by examining the interplay of public responsibility, personal integrity and competitive pressure in the context of the free enterprise system.

ALSO OFFERED AS CM 7561.

MG 7642 Motivation and Management

Concentrates on prominent theories of motivation, as well as implementation skills needed to deal with issues such as evaluation and feedback, compensation and incentives and cultural and group influences.

Emphasizes intrinsic Motivation Theory, referring to the innate desire to be effective at one's job. Uses day-to-day exchanges with employees, including those apparently suffering from a lack of motivation. Reviews current research linking managerial styles and group productivity.

MG 7660 Business Policy (MBA REQUIRED COURSE)

Focuses on defining an organization's mission, establishing its objectives, developing strategies for achieving those objectives and assuring implementation and continual updating of long-term plans. As the capstone of the MBA Program, this course integrates the knowledge and skills developed in the core courses.

PREREQUISITES: COMPLETION OF ALL CORE MBA COURSES.

MG 7670 Management of Human Resources

Studies the personnel function in private and public organizations from the viewpoint of the manager. Topics include recruiting, employment, wage and salary administration, management development, performance appraisal, job evaluation and design, career development, employee turnover, manpower planning, training and affirmative action.

PREREQUISITE: MG 6613.

MG 7671 Global Industry Analysis and Strategic Planning

Discusses techniques for analyzing the long-term attractiveness of different industries and develops a framework to understand the nature of competition and the relative competitive position of firms within industries. Emphasizes global factors that affect industry attractiveness and competitive positioning. In particular, highlights the impact of differences in and the competitive advantages of nations and trade, as well as the development of global standards for the long-term profit potential of industries. While this course emphasizes the industry level, it also includes competitive factors of firms within industries to introduce a framework for strategic planning at the firm level.

PREREQUISITES: MG 6627, FN 6411, MK 6710.

INTERNATIONAL BUSINESS COURSE.

MG 7673 Strategy Implementation

Addresses how managers turn strategy into reality. Increasing evidence suggests that the best companies in globally competitive industries excel through superior implementation of strategy more often than through possession of a superior strategy. Key issues addressed include the acquisition, allocation and use of resources; organizing for performance; selecting and motivating individuals; and controlling strategy implementation.

PREREQUISITE: MG 6627.

ENTREPRENEURSHIP COURSE.

INTERNATIONAL BUSINESS COURSE.

GLOBAL SUSTAINABILITY COURSE.

MG 7675 Strategic Management of Innovations and Technology

Investigates the theoretical and practical issues of managing innovations and technology to achieve competitive advantage. Case studies provide an understanding of how technologically-dependent organizations succeed.

PREREQUISITES: MG 6627, FN 6411, MK 6710.

ELECTRONIC BUSINESS COURSE.

MG 7677 System Dynamics for Strategic Management

Introduces the group model-building process that world-class firms use to improve their institutional learning and performance. Role-playing games and live case studies challenge participants' strategic thinking about global transformations. Course participants build user-friendly graphic computer models of International Business (IB) strategic situations to generate new insight about transnational strategy design and implementation.

INTERNATIONAL BUSINESS COURSE.

GLOBAL SUSTAINABILITY COURSE.

MG 7678 Strategic Management of Global Supply Chains

Increased globalization, the growth of the Internet and the potential for e-commerce have changed the way firms compete. Innovations in the management of supply chains have given rise to new business models and new sources for value creation in a firm. Collaborative information technology-enabled commerce ("e-commerce") is likely to change conventional thinking regarding supply chains. Supply chain management (SCM) represents a philosophy of doing business that stresses processes and integration. It is a system approach to managing the entire flow of information, materials and services from raw materials suppliers through factories, warehouses and distribution channels to the end customer. Managers must understand how to optimize the value-creating potential of supply chains by understanding how they work, the impact of new technologies and their design/redesign. This course prepares students for these tasks and covers operational coordination within a firm; inter-function, inter-firm and international coordination; the role of new information technologies; and the role of supply chain intermediaries. This is a team-taught course featuring lectures, cases and simulations. GLOBAL SUSTAINABILITY COURSE. INTERNATIONAL BUSINESS COURSE.

MG 769X Special Topics in Systems Management

These courses are offered periodically to permit faculty and students to explore a management systems topic of particular interest. The specific topic and prerequisites are announced at the time the course is offered.

MG 8610 Seminar in Systems Management

Offered periodically, this seminar is designed to give advanced students opportunities to conduct integrative research, writing and discussion on selected issues in managing complex organizations. Under faculty supervision, in-depth studies are conducted by students, either individually or in groups. May be offered for fewer than three credits. PREREQUISITES: MG 6613 AND TWO MANAGEMENT SYSTEMS ELECTIVES.

System Design Courses

Each course carries three (3) credits unless otherwise indicated.

DG 6810 Mathematical Methods for Business

(MBA PROGRAM PREREQUISITE)

Studies the fundamental methods of mathematics applied in business statistics and operations research. The course concentrates on linear algebra and differential and integral calculus.

DG 6820 Statistics (MBA PROGRAM PREREQUISITE)

Introduces the basic statistical concepts essential for business research and decision-making. These include descriptive statistics, probability distributions, statistical inference and simple and multiple regression.

DG 7810 Modeling and Representation

Reviews descriptive and analytical tools of mathematics that are indispensable for both the formal representation and computer-integrated modeling of complex business systems. Studies principles of model-building, develops basic tools of formal modeling, and examines the use and implementation of models in business decision-making. PREREQUISITE: DG 6810.

DG 7820 Statistical Reasoning

Explores modern statistical concepts that are essential to describe, analyze and regulate complex business processes, providing the basis for most business decision-making. Discusses the essentials of statistical reasoning and statistical support systems. PREREQUISITE: DG 6820.

DG 7830 Optimal Design

Provides the foundations of modern decision-support systems that help optimize the performance of systems or their parts. Studies examples of flexible manufacturing patterns and just-in-time organizational schemes, problems of queues and congestion, project management and capital budgeting. PREREQUISITE: MG 6627.

DG 7840 Explanatory Models

Focuses on preliminary data analysis, model formulation and estimation, and reliability and sensitivity analysis to understand causal links between various elements of a relationship as the prerequisite for effective system design and control. Multivariate regression models and techniques of experimental design provide the basis for exploring these links. Discusses applications to all areas of business. PREREQUISITE: DG 6820.

DG 7850 Forecasting Models

Introduces and discusses forecasting systems capable of interconnecting separate areas of business. Efficient forecasting systems, based on modern analytical and simulation techniques, can provide necessary insights into the behavior of strategic variables over time. PREREQUISITE: DG 6820.

DG 7860 Conflicts and Decisions

Discusses how business is increasingly characterized by multiple and conflicting criteria for evaluating performance and choosing actions. The simple pursuit of a single goal no longer provides a viable basis for decision-making. Students are introduced to multiple-criteria-based decisions, conflict dissolution and judgmental problem-solving, with examples drawn from all areas of business. PREREQUISITE: MG 6627.

DG 789X Special Topics in Systems Design

These courses are offered periodically to permit faculty and students to explore a systems design topic of particular interest. The specific topic and prerequisites are announced at the time the course is offered.

DG 8890 Seminar in Systems Design

Offered from time to time, this seminar is designed to give advanced students opportunities to conduct integrative research and discussion on selected issues in systems design. Under faculty supervision, in-depth studies are conducted by students either individually or in groups.