

## Management—MGT

- 824 Management and Organizational Behavior**  
Spring. 3(3-0) R: Open only to students in Business Management of Manufacturing, non-business masters students, or doctoral students in all majors. SA: MGT 806  
Micro and macro models of organizational behavior applied to the management of people, group processes, and organization design. Motivation, diversity, leadership, group performance, organization structure and culture.
- 831 Managing Power, Empowerment, and Involvement**  
Fall. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.  
Assessment and evaluation of power and empowerment in organizations. High-involvement management and organizational effectiveness. Ethical issues in the use of power and empowerment as managerial tools.
- 832 Negotiation and Conflict Management**  
Spring. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.  
Negotiation and bargaining to manage people and interpersonal relations. Developmental processes, stages, and types of conflict. Conflict management and resolution.
- 840 Leadership and Team Management**  
Fall, Spring. 3(2-2) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.  
Development of leadership abilities through readings and laboratory application.
- 842 Change Management and Evaluation**  
Spring of even years. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.  
Analysis and management of the change process in organizations. Micro- and macro-organizational interventions.
- 852 Entrepreneurship: New Business Planning and Initiation**  
Fall. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.  
Assessment of the viability of a business idea. Development of market analysis, project strategy, and plan to initiate the business. Identification and analysis of factors critical to new business financing and success.
- 871 Business Processes and Strategies**  
Summer. 3(3-0) Summer: Exec Dev Center. RB: Undergraduate degree in accounting. R: Open only to Master of Science students in Accounting and Business Processes.  
Organizational goals, design, and control of the global business enterprise. Strategies for creating value and sustaining competitive advantage across the firm's value chain.
- 875 Change Management**  
Spring. 2(2-0) R: Open only to students in the Master of Science in Logistics and the Master of Science in Manufacturing and Innovation.  
Role and process of organizational change management. Types of change, identifying need for change, and change management process.

- 890 Independent Study**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Business. Approval of department.  
Faculty-supervised independent study.
- 906 Seminar in Organizational Research Methods**  
Spring. 3(3-0) R: Open only to Ph.D. students.  
Methods for scientific research in the areas of organizational behavior, personnel and organizational theory. Theory building, hypothesis formation and testing, reliability theory, construct validity, external validity, research design.
- 907 Seminar in Organizational Behavior**  
Fall of even years. 3(3-0) R: Open only to Ph.D. students.  
Directed readings on the behavior of individuals within organizations. Theory and empirical research on perception, decision-making, work motivation, work attitudes, leadership and group dynamics.
- 908 Seminar in Organizational Theory**  
Fall of odd years. 3(3-0) RB: (MGT 906) R: Open only to Ph.D. students.  
Formal organizations viewed as rational, natural and open systems. Survey of contemporary theory and empirical research.
- 909 Seminar in Human Resource Management**  
Spring of odd years. 3(3-0) R: Open only to Ph.D. students.  
Classic and current empirical research. Job analysis, personnel selection, training, and incentive systems.
- 910 Seminar in Strategic Management**  
Fall of even years. 3(3-0) R: Open only to Ph.D. students.  
Review of recent research literature. Topics include developments in strategic types, identification of strategic groups, strategy formulation, implementation, and decision making.
- 914 Applied Regression Models in Business Research**  
Spring. 3(3-0) Interdepartmental with Statistics and Probability. RB: (STT 430 or STT 441) or equivalent R: Open only to doctoral students in Business Administration.  
Seminar on design and analysis of regression-based statistical models. Modeling issues arising in business research.
- 999 Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to Ph.D. students in Management.  
Doctoral dissertation research.

## MARKETING AND SUPPLY CHAIN MANAGEMENT MSC

### Department of Marketing and Supply Chain Management The Eli Broad College of Business and The Eli Broad Graduate School of Management

- 293 Cooperative Education for Business Students**  
Fall, Spring. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. Interdepartmental with Accounting; Economics; Finance; Management; Hospitality Business. R: Approval of department.  
Integration of pre-professional educational employment experiences in industry and government with knowledge and processes taught in the student's academic program. Educational employment assignment approved by the Department of Marketing and Supply Chain Management.
- 300 Managerial Marketing**  
Fall, Spring, Summer. 3(3-0) R: Open only to juniors or seniors in the Eli Broad College of Business. Not open to students in The School of Hospitality Business. SA: ML 300, MTA 300 Not open to students with credit in MSC 327.  
Analysis and strategic integration of buyer behavior, segmentation, positioning, demand analysis, information, pricing, promotion, channels, product policies, and ethics in consumer, reseller, industrial, and service markets.
- 302 Consumer and Organizational Buyer Behavior**  
Fall, Spring, Summer. 3(3-0) P:M: (MSC 300) R: Open only to juniors or seniors in the Eli Broad College of Business or Food Industry Management major. SA: ML 302, MTA 302  
Application of consumer behavior principles to customer satisfaction, market planning, and marketing mix decisions. Ethical, diversity, and international issues.
- 303 Introduction to Supply Chain Management**  
Fall, Spring, Summer. 3(3-0) R: Open only to juniors or seniors in the Eli Broad College of Business and to students in programs for which MSC 303 is a catalog-listed requirement. Not open to students in The School of Hospitality Business. SA: MGT 303, ML 303, MTA 303  
Objectives, processes, and functions of supply chain management activities including procurement, manufacturing, and logistics. The role of supply chain processes in creating competitive advantage with respect to quality, flexibility, lead-time, and cost.
- 305 Supply Chain Management**  
Fall, Spring, Summer. 4(4-0) P:M: (MSC 303) R: Open only to juniors or seniors in The Eli Broad College of Business or the Business-Supply Chain Management cognate in the Applied Engineering Sciences major.  
Supply chain operating practices and principles. Strategies for customer service, quality, procurement, manufacturing, logistics, and integrated supply chain management.

- 310 International and Comparative Dimensions of Business**  
Fall, Spring, Summer. 3(3-0) R: Open only to juniors or seniors in The Eli Broad College of Business. Not open to students in The School of Hospitality Business. SA: ML 310, MTA 310  
International and cross-cultural study of business decisions, enterprises, markets, and institutions. Globalization of industries and firm competitiveness. International business transactions and entry strategies.
- 313 Personal Selling and Buying Processes**  
Fall, Spring. 3(3-0) SA: ML 313  
The nature of channel relationships. Buying behavior and sales processes. Applications to differing industries and kinds of channel relationships.
- 317 Quantitative Business Research Methods**  
Fall, Spring, Summer. 3(3-1) Interdepartmental with Statistics and Probability. P:M: (STT 315) R: Open only to juniors or seniors in The Eli Broad College of Business. Not open to students in The School of Hospitality Business. SA: ML 317, MTA 317  
Application of statistical techniques, including forecasting, to business decision making. Includes applications of linear regression and correlation, analysis of variance, selected non-parametric tests, time series, and index numbers.
- 319 Marketing Research**  
Fall, Spring. 3(3-0) P:M: (MSC 300 and MSC 317 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: ML 319, MTA 319  
Research methods designed to obtain information for marketing decisions. Research design, data collection, and interpretation of information to provide a customer orientation.
- 327 Introduction to Marketing**  
Fall, Spring, Summer. 3(3-0) R: Open only to juniors or seniors in programs for which MSC 327 is a catalog-listed requirement. Not open to students with credit in MSC 300.  
Survey of marketing topics - buyer behavior, segmentation, positioning, demand analysis, information, pricing, promotion, channels, product policies, and ethics in consumer, reseller, industrial, and service markets.
- 351 Retail Management**  
Fall, Spring, Summer. 3(3-0) Interdepartmental with Food Industry Management. P:M: (MSC 300 or MSC 327) R: Open only to juniors or seniors in The Eli Broad College of Business or the Food Industry Management or Merchandising Management major. SA: ML 351, MTA 351  
Domestic and international retailing structure, environment, and development. Managerial strategy. Locational, purchasing, organizational, personnel and promotional techniques. Retail budgeting and control. Social and ethical considerations.
- 371 Procurement and Supply Management**  
Fall, Spring, Summer. 3(3-0) P:M: (MSC 303 and MSC 317 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: MGT 401, ML 401, MTA 401, MSC, 401  
Strategic issues in procurement and supply management. Purchasing process, procurement cycle, purchasing research, relationships with suppliers, negotiation, and commodity planning. Cost, price, and value analysis.
- 372 Manufacturing Planning and Control**  
Fall, Spring, Summer. 3(3-0) P:M: (MSC 303 and MSC 317 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: MGT 402, ML 402, MTA 402, MSC, 402  
Production planning, demand management, master scheduling, materials requirements, and capacity planning. Shop floor control, computer-integrated manufacturing, and just-in-time systems.
- 373 Logistics and Transportation Management**  
Fall, Spring, Summer. 3(3-0) P:M: (MSC 303 and MSC 317 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: ML 442, MTA 442, MSC 442  
Microanalysis of logistics and transportation services. Customer service, distribution operations, purchasing, order processing, facility design and operations, carrier selection, transportation costing, and negotiation.
- 410 Product Innovation and Management**  
Fall. 3(3-0) P:M: (MSC 300 and MSC 317) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: ML 410  
Analytic, decision-making, and planning concepts and tools available to product managers. New product policy and development, organizational issues, and product modification and deletion.
- 412 Marketing Technology and E-Commerce**  
Fall, Spring. 3(3-0) Interdepartmental with Information Technology Management. P:M: (MSC 300 and MSC 317 and ITM 309) R: Open only to juniors or seniors in The Eli Broad College of Business, and to students in programs in which MSC 412 is a catalog-listed requirement.  
Enabler technologies and their role in creating marketing opportunities, efficiencies, and innovations. Tools, applications, platforms, and infrastructures. Determination of business configurations that foster value creation from enabler technologies.
- 413 Sales Management**  
Fall, Spring. 3(3-0) P:M: (MSC 300 and MSC 317) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: ML 413, MTA 413  
Planning, implementing, and controlling the firm's personal selling function. Analysis of sales territories. Management of recruitment, selection, training, and motivation of sales personnel. Evaluation of sales performance. Discussion of diversity and ethical issues.
- 415 International Marketing Management**  
Fall, Spring. 3(3-0) P:M: (MSC 300) and (MSC 310 or EC 340) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: ML 415, MTA 415  
Marketing decisions, strategies, and operations of the firm involved in international business. Researching global market opportunities and formulating market entry strategies. Developing and implementing the international marketing program.
- 420 New Product Design and Development**  
Spring. 3(3-0) P:M: (MSC 300 and MSC 317) R: Open only to seniors in The Eli Broad College of Business.  
Practical training and experiences in design and testing of new products.
- 439 Food Business Analysis and Strategic Planning (W)**  
Fall. 3(4-0) Interdepartmental with Food Industry Management. Administered by Department of Agricultural Economics. P:M: (FIM 220) and completion of Tier I writing requirement. R: Open only to juniors or seniors SA: ML 439, MTA 439  
Principles and techniques of business analysis and strategic planning applied to food firms. Food trend forecasts, market potential, competition and cost analyses, and business and strategic planning.
- 460 Marketing Strategy (W)**  
Fall, Spring, Summer. 3(3-0) P:M: (MSC 302 and MSC 317 and MSC 319) and completion of Tier I writing requirement. R: Open only to seniors in the Marketing major. SA: ML 460, MTA 460  
Identification and analysis of managerial marketing issues. Integration of marketing concepts and theories through case analysis. Ethical and international applications.
- 470 Supply Chain Application and Policy (W)**  
Fall, Spring. 2(2-0) P:M: (MSC 371 and MSC 372 and MSC 373) and completion of Tier I writing requirement. R: Open only to seniors in the Supply Chain Management major. SA: ML 470, MTA 470  
Analysis and problem solving of supply chain management cases. Purchasing, manufacturing, logistics, and transportation as an integrated supply chain.
- 472 Topics in Operations Management**  
Spring of odd years. 3(3-0) P:M: (MSC 402) R: Open only to juniors or seniors in the Supply Chain Management major. SA: ML 404, MSC 404, MTA 404, MGT 404  
Managerial aspects of current issues such as total quality, computer integrated manufacturing and simultaneous engineering.
- 474 Negotiations**  
Fall, Spring. 2(2-0) P:M: (MSC 371 or concurrently)  
Strategic negotiation, negotiation preparation, buyer-supplier relationship assessment, international negotiations, and negotiation simulation.
- 475 Decision Modeling in Supply Chain**  
Fall, Spring. 2(2-0) P:M: (MSC 372)  
Decision modeling in supply chains with emphasis on forecasting, aggregate planning, material requirement planning, inventory management, transportation, supply network design, quality management, and sourcing decisions. Use of traditional and advanced spreadsheet modeling tools.
- 476 Transportation Management**  
Fall, Spring. 2(2-0) P:M: (MSC 373 or concurrently)  
Current issues and strategies in transportation management and policy. Carrier management problems and opportunities, and economic characteristics of the various modes of transportation.
- 479 Advanced Topics in Supply Chain Management**  
Fall, Spring. 2(2-0) P:M: (MSC 371 or concurrently) and (MSC 372 or concurrently) and MSC 373 or concurrently  
Advanced aspects of supply continuity and supply risk, advanced project management, environmentally friendly manufacturing, total quality management, supply chain metrics, electronic markets, relationship management, interfaces with research and development, innovation, and markets. Topics vary.

## Marketing and Supply Chain Management—MSC

- 490 Independent Study**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to juniors or seniors. Approval of department. SA: ML 490, MTA 490  
Supervised program of independent library or field research designed to supplement classroom study.
- 490H Honors Independent Study**  
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to juniors or seniors in the Honors College. Approval of department. SA: ML 490H, MTA 490H  
Supervised program of independent library or field research designed to supplement classroom study.
- 491 Topics in Marketing and Supply Chain Management**  
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P:M: (MSC 300 or MSC 303) and (MSC 317) R: Open only to juniors or seniors in The Eli Broad College of Business. SA: ML 491, MTA 491  
Current issues in specialized marketing, logistics knowledge of marketing, and environmental analysis. Strategy development for control.
- 800 Supply Chain Management**  
Spring. 3(3-0) SA: ML 800, MTA 800  
Fundamentals of materials and logistics management. Strategic impact of the transformation process in a global economy. Quality, inventory management, logistics strategy, customer service, international procurement, management of technology.
- 801 Materials Management: Tactical and Strategic Perspectives**  
Fall. 3(3-0) RB: (MSC 800) SA: ML 801, MTA 801  
Integration of procurement and operations management for competitive advantage. Strategic and tactical approaches to customer requirements. Management of supply-chains procurement, process assessment, quality, manufacturing planning and control, and technology.
- 802 Procurement and Sourcing Strategies**  
Fall, Spring. 3(3-0) RB: (MSC 800) R: Open only to MBA students. SA: ML 802, MTA 802  
Sourcing strategies and applications. Negotiation planning and execution.
- 803 Operations Management Strategy**  
Spring. 3(3-0) RB: (MSC 801) SA: ML 803, MTA 803  
Operations management issues including quality, technology, group technology, computer integrated manufacturing, and just-in-time manufacturing.
- 805 Marketing Management**  
Spring. 2 to 3 credits. SA: ML 805, MTA 805  
Strategic and decision-making aspects of marketing functions. Analysis, coordination, execution of marketing programs. Development of strategies and tactics. Segmentation, marketing mix, market response modeling, and ethics in a global context.
- 806 Marketing Analysis**  
Spring. 3(3-0) P:M: (MBA 820) R: Open only to M.B.A. students or approval of department. SA: ML 806, MTA 806  
Analysis of data gathered for strategic and tactical marketing decisions from a variety of sources. Traditional and internet marketing research methods, statistical analysis software, sales forecasting, data mining techniques, scanner data and analysis, Web site traffic metrics and analysis.
- 807 Customer-Driven Strategies**  
Fall. 3(3-0) P:M: (MBA 820) R: Open only to M.B.A. students or approval of department. SA: ML 807, MTA 807  
Theories and models of consumer and business buyer behavior. Research tools that organizations use to listen to the voice of the customer. Use of information in formulating marketing strategies. Market orientation, segmentation, customer value based pricing, personal selling and sales management, branding, customer satisfaction measurement, and developing customer loyalty.
- 808 Market Development and Leadership**  
Spring. 3(3-0) P:M: (MBA 820 or MSC 805) R: Open only to M.B.A. students or approval of department. SA: ML 808, MTA 808  
Creative, outside-the-box, and theoretical concepts and processes for creating markets, growing markets, and establishing leadership positions in mature markets.
- 810 Technology and Product Innovation**  
Spring. 3(3-0) P:M: (MSC 805 or MBA 820) SA: ML 810, MTA 810  
New product and technology management for technology-intensive firms. Creating new product ideas. Managing cross-functional teams. Developing and implementing new product and technology strategies.
- 811 Brand Strategy**  
Fall. 3(3-0) P:M: (MBA 820) R: Open only to M.B.A. students or approval of department. SA: ML 811, MTA 811  
Competitive brand development strategy, marketing analysis, and marketing planning. Simulating marketing and product decisions in globally competitive market environments. Development and execution of marketing and branding strategy and plans for a high technology firm.
- 814 Decision Support Systems in Business**  
Fall. 3(3-0) Interdepartmental with Information Technology Management. Administered by The Eli Broad College of Business. P:M: (MBA 823 or ITM 309)  
Computer-based managerial decision support systems (DSS). Basic system architectures for DSS. Individual and group systems. Data-driven and intelligence (model) driven systems. Project analysis of a globally distributed system.
- 824 Channel and Logistics Management**  
Spring. 3(3-0) RB: (MBA 820 or MSC 805) SA: ML 824, MTA 824  
Interfirm relationships in domestic and international settings. Interorganizational behavior, channel management, channel leadership and negotiations, relationship management, and strategic alliances.
- 825 Supply Management Tools**  
Spring. 1(1-0) P:M: (MBA 821) R: Open only to M.B.A. students or approval of department. C: MSC 826 concurrently, MSC 827 concurrently.  
Analytical tools to support procurement strategy development and supplier management. Spend analysis, supplier cost and price analysis, "should cost" models, cost analysis for make-versus-buy decisions.
- 826 Manufacturing Design and Analysis**  
Spring. 1(1-0) P:M: (MBA 821) R: Open only to M.B.A. students or approval of department. C: MSC 825 concurrently, MSC 827 concurrently.  
Designing and analyzing operations processes. Capacity planning and management, process flow and mapping, value-mapping, quality tools and techniques, dependent demand inventory techniques. Recent developments and data.
- 827 Competing Through Supply Chain Logistics**  
Spring. 1(1-0) P:M: (MBA 821) R: Open only to M.B.A. students or approval of department. C: MSC 825 concurrently, MSC 826 concurrently.  
Logistics as a value-adding process that synchronizes demand and supply. Supply chain logistics strategy, information technology, segmental positioning, forecasting and collaborative planning, and customer accommodation.
- 831 Food Marketing Management**  
Spring. 3(3-0) Interdepartmental with Agricultural Economics. RB: (MBA 820 or MSC 805) SA: ML 831, MTA 831  
Marketing management decisions in food firms. Consumer orientation, computer technologies, food system cost reduction, global opportunities, environmental and social issues.
- 833 Decision Support Models**  
Fall. 3(3-0) SA: MGT 833  
Analytical models to support decision making. Topics include multiple regression, linear optimization, decisions under uncertainty, and forecasting.
- 842 Total Quality Management**  
Fall. 3(3-0) RB: (MSC 800)  
Total quality management principles and practices, tools and techniques, implementation of continuous quality improvement programs, links to manufacturing and competitive strategies.
- 843 Environmentally Conscious Manufacturing**  
Spring. 3(3-0) RB: (MSC 801 and MSC 833)  
Elements of the environmentally responsible enterprise, with an emphasis on legal and regulatory trends, assessment measures and audits, tools and procedures, supply chain management, and frameworks. Corporate environmental responsibility as linked to product and process design.
- 852 Procurement and Sourcing Strategy**  
Fall. 2(2-0) P:M: (MBA 821) RB: (MSC 825 and MSC 826 and MSC 827) R: Open only to M.B.A. students or approval of department.  
Developing and implementing procurement strategy. Commodity strategy, insourcing and outsourcing strategy. Supplier evaluation and selection, supplier relationship management and supplier development. Strategic cost management, global sourcing, negotiation, contract management, and purchasing ethics.

- 853 Operations Strategy**  
Fall. 2(2-0) P:M: (MBA 821) RB: (MSC 825 and MSC 826 and MSC 827) R: Open only to M.B.A. students or approval of department.  
Developing and implementing operations strategy. Matching of competitive priorities with operational investments and decisions. Manufacturing process choice, capability development, technology management, process simulation, linking supply chain with product type and inventory management decisions. Recent developments such as synchronized flow management, E-commerce, and advanced performance measurement and evaluation.
- 854 Integrated Logistics Systems**  
Fall. 2(2-0) P:M: (MBA 821) RB: (MSC 825 and MSC 826 and MSC 827) R: Open only to M.B.A. students or approval of department.  
Logistics systems and operations that achieve synchronized demand and supply. Transportation, inventory analysis, warehousing, materials handling, and logistics network design. Integrated performance measurement and organizational structure.
- 855 Supply Chain Management Technology and Applications**  
Spring. 3(3-0) P:M: (MBA 821) R: Open only to students in the Supply Chain Management concentration in the MBA program.  
Integration of logistics, procurement and operations strategy in the supply chain. Problem solving approaches, decision support tools and analytical methods. Applications through case studies and computer simulations of supply chain situations in consumer and industrial settings.
- 856 Consulting Practicum For Emerging Firms**  
Fall, Spring. 3(1-6)  
Classroom and field experience on business consulting, defining marketing intangibles, defining scope of work, engagement management, and preparing deliverables for entrepreneurial firms. Topics include small business market research tools, marketing planning, financial management and growth management.
- 858 Advanced Entrepreneurship**  
Fall, Spring. 3(1-6) R: Approval of department.  
Field case experience on advanced entrepreneurial problems. Topics of cases will include navigating future growth curves of small firms; new product launches within small firms; financing for a start-up venture; refinancing for long-term stability; marketing plans for small firms; organizational and strategic planning for growing firms; and turn-around management for troubled small businesses.
- 859 Management of Technology and Innovation**  
Spring. 3(3-0) RB: Business or Engineering  
Integration of marketing assessment with technological feasibility studies in the development of innovative products and processes. Interfaces marketing students, engineering students, and faculty researchers on managing the research, design, and development processes leading to the commercialization of new technologies.
- 860 International Business**  
Fall, Spring. 3(3-0) SA: ML 860, MTA 860  
Management of the firm in the multinational environment. Assessment of international modes of operations, markets, financial strategies, services, and resources. Competitive strategy.
- 862 Developing Global Markets**  
Fall. 3(3-0) P:M: (MBA 820 or MSC 805) R: Open only to M.B.A. students or approval of department. SA: ML 862, MTA 862  
Marketing strategies for international expansion. Evolution of global markets, market selection, timing, entry sequence, modes of entry, and the corporate infrastructure for global marketing expansion.
- 865 Emerging Topics in Business**  
Spring. 3(3-0) RB: (MBA 820 or MSC 805) SA: ML 865, MTA 865  
Perspectives on new and emerging issues of business administration. Topics vary.
- 870 Introduction to Logistics and Supply Chain Management**  
Summer. 3(3-0) R: Open only to students in the Master of Science in Logistics.  
Integrated view of procurement, operations, and logistics management. Management of the flow of products from raw material sourcing and acquisition through delivery to the final user.
- 871 Applied Data Analysis**  
Summer. 2 to 3 credits. R: Open only to students in the Master of Science in Logistics and the Master of Science in Manufacturing and Innovation.  
Quantitative and statistical methods for decision making. Hypothesis testing, regression and correlation analysis, forecasting, linear programming, decision analysis and project management.
- 872 Distribution Fulfillment**  
Summer. 3(3-0) P:M: (MSC 870) RB: Introductory coursework in finance, accounting, management, and economics. R: Open only to students in the Master of Science in Logistics.  
Management of the firm's value creation process from product development through order receipt and delivery to consumer. Alternative approaches to developing customer value and the role of the demand and supply chain in providing it.
- 873 Procurement and Manufacturing Management**  
Summer. 3(3-0) P:M: (MSC 870) R: Open only to students in the Master of Science in Logistics.  
Strategic issues in procurement and supply management. Purchasing role in fulfilling the firm's operations and competitive strategies. Theory and practice for planning and controlling manufacturing operations.
- 874 Total Quality Management**  
Summer. 2(2-0) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Total quality management principles, practices, and techniques. Implementation of quality improvement programs. Relationship to manufacturing and competitive strategies.
- 875 Manufacturing Planning and Control**  
Summer. 2(2-0) R: Open only to students in the Master of Science in Logistics and the Master of Science in Manufacturing and Innovation.  
Planning and control functions required to match supply and demand in a manufacturing firm. Tools and methods for planning production and the resources/capacity needed to support production. The role of information and information systems in planning and control. Coordination of plans across organizations in the supply chain.
- 876 Logistics Operations Methods and Systems**  
Summer. 3(3-0) P:M: (MSC 872) R: Open only to students in the Master of Science in Logistics.  
Micro-analysis of logistics and transportation services including customer service and order fulfillment, distribution operations, purchasing or operation of transportation services, third-party logistics providers, and network design.
- 877 Logistics Information Technology**  
Summer. 3(3-0) P:M: (MSC 872) R: Open only to students in the Master of Science in Logistics.  
Role of information technology in logistics and supply chain management, planning and operations. Requirements, capabilities, and considerations for using information technology applications in logistics.
- 878 Logistics Systems Analysis**  
Summer. 3(3-0) P:M: (MSC 876 and MSC 877) R: Open only to students in the Master of Science in Logistics.  
Process of solving logistics problems. Applications of analysis tools and techniques to identify benefits and costs of logistics change.
- 879 Supply Chain Logistics: Strategy and Applications**  
Summer. 3(3-0) P:M: (MSC 876 and MSC 877 and MSC 878 or concurrently) R: Open only to students in the Master of Science in Logistics.  
Analysis and solution of supply chain management cases and simulations. Teamwork, communication, and job skills. Situations involving purchasing, manufacturing, logistics and transportation as an integrated supply chain.
- 881 Global Logistics**  
Fall. 3(3-0) Fall: e-learning. P:M: (MSC 872 and MSC 876) R: Open only to students in the Master of Science in Logistics.  
Requirements for global operations and strategy development. Similarities and differences of international and domestic operations.
- 882 Logistics Field Study**  
Fall. 6 credits. P:M: (MSC 879) RB: Completion of 24 credits of Master of Science in Logistics program. R: Open only to students in the Master of Science in Logistics.  
Practical application of course material to a problem or situation in the student's organization.
- 883 Technology and Product Innovation Management**  
Fall. 2(2-0) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Management of technology and product development for high technology firms. Creating new product ideas, designing high technology products, managing cross-functional teams, developing and implementing marketing plans, interpreting marketing data, sales forecasting for new products, testing new products, assessing competitive dynamics, and coping with uncertain environmental forces.
- 884 Marketing Management**  
Summer. 2(2-0) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Strategic and decision-making aspects of marketing functions. Analysis, coordination, execution of marketing programs. Development of strategies and tactics. Segmentation, marketing mix, market response modeling and ethics in a global context.

## Marketing and Supply Chain Management—MSC

- 885 Manufacturing/Innovation Field Study/Research Project**  
Spring. 5(0-10) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Directed field study or research project in manufacturing and/or innovation related subjects. Practical application of knowledge gained in prior manufacturing/innovation coursework.
- 886 Strategic Sourcing and Supply Chain Management**  
Summer. 2(2-0) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Fundamentals of strategic sourcing and supply chain management. Integration and coordination of product innovation, sourcing, manufacturing, distribution, and logistics for global competitiveness.
- 887 Technology and Innovation Implementation**  
Summer. 3(3-0) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Marketing assessment and technological feasibility in the development of innovative products and processes by an individual developer. Functional interfaces. Value engineering in the design and procurement process. Focus on commercialization of an actual technological innovation.
- 888 Capstone Project in Manufacturing**  
Fall, Spring, Summer. 3(1-6) Interdepartmental with Engineering. R: Open only to seniors in the Manufacturing Engineering major or to students in the Business Management of Manufacturing major.  
Problem solving in manufacturing. Design of products and processes for manufacturing using a systems approach. Teaming and communication skills are emphasized.
- 890 Independent Study**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. SA: ML 890, MTA 890  
Faculty-supervised independent study.
- 892 Environmentally Conscious Manufacturing**  
Summer. 2(2-0) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Environmental issues in the manufacturing environment. Economic and strategic motivations for environmental consciousness. Tools, procedures, and recent developments.
- 893 Manufacturing Strategy**  
Summer. 3(3-0) R: Open only to students in the Master of Science in Manufacturing and Innovation.  
Manufacturing strategy as a competitive weapon. Link between manufacturing strategy and corporate strategy. Alignment of manufacturing strategy with corporate strategy, and structural and infrastructural decisions. Development and deployment of global manufacturing strategy. Adaptation of strategy to position the competitive capabilities of the firm appropriately.
- 905 Theory Development and Research Design in Marketing**  
Fall. 3(3-0) R: Open only to Ph.D. students  
SA: ML 905, MTA 905  
Research concepts and scientific methods for the study of marketing. Formulation of hypotheses, concepts of measurement, and quantitative methods.
- 907 Causal Modeling in Marketing**  
Fall. 3(3-0) RB: (MSC 906) R: Open only to Ph.D. students. SA: ML 907, MTA 907  
Statistical methods in marketing, emphasis on causal modeling.
- 908 Marketing Decision Models**  
Fall. 3(3-0) R: Open only to Ph.D. students. SA: ML 908, MTA 908  
Applications of marketing decision models in new product development, pricing, distribution, advertising, and sales promotion.
- 910 Seminar in Marketing Theory**  
Fall of even years. 3(3-0) R: Open only to Ph.D. students.  
Development, critical analysis, and integration of marketing theory. Theory grounding and professional standards of scholarship. Methods of meta analysis, historical analysis, and game theoretic analysis.
- 911 Proseminar in Marketing Literature and Research Criticism**  
Fall of odd years. 3(3-0) R: Open only to Ph.D. students.  
Classic and contemporary contributions in marketing. Fundamental trends shaping the evolution of markets, competition, and marketing institutions. Major theoretical explanations of marketing strategy and behavior such as the resource-based theory and knowledge-based view of the firm.
- 912 Seminar in Buyer Behavior**  
Spring of even years. 3(3-0) R: Open only to Ph.D. students.  
Organizational and consumer behavior and their relationship to marketing strategy. Attitudes, information processing, decision making, and attribution theory. Methodological tools appropriate for analyzing buyer behavior such as conjoint analysis.
- 913 Seminar in Marketing Channels and Marketing Relationships**  
Spring of odd years. 3(3-0) R: Open only to Ph.D. students.  
Interorganizational issues in marketing. Theoretical perspectives on marketing channels, supplier relations, strategic alliances, firm boundaries, firm capabilities, and logistics. Integration of existing theories. Research methods in marketing channels and marketing relationships.
- 918 Procurement and Sourcing Theory**  
Fall of even years. 3(3-0) R: Open only to Ph.D. students. SA: MGT 918  
Theoretical models explaining procurement and sourcing strategy. Frameworks to guide research.
- 920 Seminar in Manufacturing Strategy**  
Fall of even years. 3(3-0) RB: (MSC 803) R: Open only to Ph.D. students. SA: ML 920, MTA 920, MGT 920  
Research in manufacturing strategy. Quality, technology, flexibility, innovation. Theory building.
- 921 Seminar in Inventory Management**  
Fall of odd years. 3(3-0) RB: (MSC 803) R: Open only to Ph.D. students SA: ML 921, MTA 921, MGT 921  
Classical, just-in-time, and multi-echelon inventory control models. Forecasting.
- 923 Topics in Operations Management**  
Spring of odd years. 3(3-0) RB: (MSC 803) R: Open only to Ph.D. students SA: ML 923, MTA 923, MGT 923  
Current research in the field. Topics vary.
- 930 Theory of Logistics Systems**  
Fall of odd years. 3(3-0) R: Open only to Ph.D. students.  
Development and management of firm logistics systems within the context of an integrated supply chain strategy. Elements of network, economic, behavioral, and systems theory in the design, management, and control of logistics systems.
- 931 Simulation Methods for Marketing and Logistics**  
Spring of odd years. 3(3-0) R: Open only to Ph.D. students.  
Techniques and methodology for marketing and supply chain system design, customer service, and policy formulation. Methodological focus on simulation and analytical techniques to develop empirical results documenting current and anticipated system performance.
- 932 Logistics and Public Policy**  
Fall of even years. 3(3-0) RB: (MSC 930) R: Open only to Ph.D. students.  
History and rationale of government in the development, maintenance, and control of transportation and supply chain infrastructure. Interaction of users, carriers, government, and public to create, interpret, and refine national economic and environmental policies.
- 940 International Business Theory**  
Fall of even years. 3(3-0) RB: (MSC 860 or MSC 862) R: Open only to Ph.D. students. SA: ML 940, MTA 940  
Theories explaining international business phenomena. Varying perspectives on international business activities, concepts, and frameworks.
- 941 International Business Research Issues**  
Spring of odd years. 3(3-0) RB: (MSC 940) R: Open only to Ph.D. students. SA: ML 941, MTA 941  
Scientific methods of research on international business. Topics include cultural bias and organizing multi-country studies.
- 990 Independent Study**  
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Ph.D. students. SA: ML 924, MTA 924  
Intensive reading and research on a marketing topic of mutual interest to a faculty member and a Ph.D. student.
- 995 Directed Research Paper**  
Fall, Spring, Summer. 1(1-0) R: Open only to Ph.D. students in the Department of Marketing and Supply Chain Management. SA: ML 995, MTA 995  
Production of research paper under the direction of a senior faculty member.

**999 Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to Ph.D. students in the Department of Marketing and Supply Chain Management. Approval of department. SA: ML 999, MTA 999

Doctoral dissertation research.

## MASTER OF BUSINESS ADMINISTRATION MBA

### The Eli Broad College of Business and The Eli Broad Graduate School of Management

**800 The Global Organization and the Firm's Strategic Position**  
Fall, Spring. 2(2-0) R: Open only to MBA students.

Organizational goals, design, and control of the global business enterprise. Maximization of shareholder value, competitive forces, configuring the value-added chain. Strategies for implementing new organizational forms. Designing and managing strategic change.

**802 Financial Accounting**  
Fall. 2(2-0) R: Open only to MBA students.  
Financial accounting model underlying financial statements of firms. Information in financial statements and role of these statements in capital markets. Information intermediaries, regulators, and role of independent auditor. Standard setting and the impact of changing standards. Globalization of standards. Offered first half of semester.

**804 Applied Data Analysis for Managers**  
Fall. 2(2-0) RB: (STT 315) R: Open only to MBA students. Not open to students with credit in MSC 833.  
Analysis of business and economic data to support managerial decision-making. Building, interpreting, and applying regression models. Time series and forecasting. Offered second half of semester.

**806 Business Ethics and the Legal Environment**  
Spring. 2(2-0) R: Open only to MBA students.  
Framework for identifying, analyzing, and resolving ethical dilemmas in business. Key legal topics in business using critical thinking analysis.

**808 Leadership and Teamwork**  
Fall. 1(1-0) R: Open only to MBA students.  
Understanding team management and leadership through experiential and skill-based learning. Effective communication, including the use of electronic communication technologies for team development and maintenance. Active practice of teamwork, communication, and leadership skills. Offered first half of semester.

**812 Managerial Accounting**  
Spring. 2(2-0) R: Open only to MBA students.

Performance measurement and incentive system design. Organization structure, budgeting, and transfer pricing. Target costing. Relevant costs and management decision models. Activity-based costing. Aligning management accounting and firm strategy. Accounting for quality. International perspective on management accounting issues. Offered second half of semester.

**814 Applied Economics**  
Spring. 2(2-0) R: Open only to MBA students.

Economic view of the firm. Modeling market mechanics in supply and demand, marginal concepts, elasticity, market characteristics, pricing with market power, and strategic behavior. Applications to business problems and situations. Principal-agent relationships and wealth maximization. Offered first half of semester.

**816 Business Presentations**  
Fall. 1(1-1) R: Open only to MBA students.  
Development of effective interpersonal communication skills. Oral communications in business settings.

**820 Marketing Management**  
Fall. 3(3-0) R: Open only to MBA students.  
Leadership principles. Decision-making. Fundamental marketing concepts such as segmentation, target marketing, positioning, growth strategies, revenue management, product management, and communication strategies. Problem-solving and marketing planning.

**821 Supply Chain Management**  
Fall. 3(3-0) R: Open only to MBA students.  
Integrative approach to product design, development, and delivery. Flow of products from concept development through delivery to the final user, including product and process development, managing information and product flows, total quality management, and resource and capacity management.

**822 Financial Management**  
Fall. 3(3-0) R: Open only to MBA students.  
Investment decisions by firms. Value creation, risk and return, pricing models, and financial markets. Financing alternatives, market efficiency, capital budgeting, and leverage and risk relationships. Optimizing firm value. Agency problems and effects on investment and financing decisions.

**823 Information Technology Management**  
Spring. 2(2-0) R: Open only to MBA students.  
Role of information technology in operations, decision making, and learning in organizations. Competitive and economic benefits from managing information technology resources. Competitive advantage, efficient operations, and improved decision quality. Offered second half of semester.

**824 Managing the Workforce**  
Spring. 2(2-0) R: Open only to MBA students.  
Role of workforce management in fulfilling the goals and mission of the organization. Theories and applications of management principles to acquiring, motivating, and rewarding employees and structuring their work. Domestic and international issues in the workplace. Offered first half of semester.

**826 International, Comparative, and Cross-Cultural Business**  
Spring, Summer. 2(2-0) R: Open only to MBA students.

International businesses' approaches to global markets, economic trade issues, methods of entry, and organizational alternatives. Cross-cultural differences and their impacts on business practices. Trade agreements, strategic alliances, negotiations, and cultural consequences. Offered half of semester.

**841 Studies in the Global Marketplace**  
Summer. 3(1-4) Summer: International trip. R: Open only to MBA students.

Commercial, economic, cultural, and political aspects of global environments. Exposure to leading executives and government representatives in world markets. Comparative framework for competitive strategy in a multi-country context. International field trip required.

**850 Strategic Management**  
Fall. 2(2-0) R: Open only to MBA students.  
Concepts and methods that integrate previous training in functional areas of management. Total firm perspective and ways top managers create and sustain competitive advantage in today's challenging global marketplace.

**891 Special Topics in Business Management**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to MBA students.  
Current and emerging issues in management. New and changing developments affecting managers.

**893 MBA Internship Experience**  
Fall, Spring, Summer. 1 credit. A student may earn a maximum of 2 credits in all enrollments for this course. RB: Completion of at least one semester in the MBA program. R: Open to MBA students except students in the Advanced Management Program or Program in Integrative Management.  
Internship in business organizations; application of business knowledge and management techniques in a work environment.

## MATERIALS SCIENCE AND ENGINEERING MSE

### Department of Chemical Engineering and Materials Science College of Engineering

**101 Materials and Society**  
Fall. 2(2-0) RB: High school physics, chemistry, mathematics.  
Material capabilities, limitations, and their utilization in the service and advancement of society.

**250 Materials Science and Engineering**  
Fall, Spring, Summer. 3(2-2) P:M: (CEM 141 or CEM 151 or LBS 171) SA: MSM 250  
Structure of metals, ceramics and polymers. Phase diagrams, thermomechanical treatments, physical and mechanical properties, diffusion, microstructure studies, environmental effects.