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 MSC SUPPLY CHAIN MANAGEMENT

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.

164
310 International and Comparative Dimensions of Business
Fall, Spring. 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

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. 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 319, MTA 317
Applied 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 317
Research methodology 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. 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. 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. 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. 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. 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, 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 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 personnel selling and service 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. 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) R: Open only to seniors in the Marketing major. SA: ML 474, MTA 474
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) R: Open only to seniors in the Logistics and Transportation Management major. SA: ML 476, MTA 476
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) R: Open only to seniors in the Supply Chain Management major. SA: ML 479, MTA 479
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.
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-chain procurement, process assessment, quality, manufacturing planning and control, and technology.

802 Procurement and Sourcing Strategies
Fall. Spring. 3(3-0) RB: (MSC 800) 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
Fall. 3(3-0) P:M. (MSC 805 or MBA 820) SA: ML 810, MTA 810

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 826 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 framework. 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 depart-
ment. Developing and implementing operations strategy. Matching of competitive priorities with operational investments and decisions. Manufacturing process choice, capability development, technology manage-
ment, process simulation, linking supply chain with product type and inventory management deci-
sions. 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 depart-
ment. Logistics systems and operations that achieve syn-
chronized demand and supply. Transportation, inventory analysis, warehousing, materials handling, and logistics network design. Integrated perform-
ance 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 Manage-
ment concentration in the MBA program. Integration of logistics, procurement and operations strategy in the supply chain. Problem solving ap-
proaches, 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 con-
sulting, 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 depart-
ment. 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 manage-
ment for troubled small businesses.

859 Management of Technology and Innovation
Spring. 3(3-0) RB: Business or Engineering Integration of marketing assessment with techno-
logical feasibility studies in the development of innovative products and processes. Inter-
faces marketing students, engineering students, and faculty researchers on managing the research, design, and development processes leading to the commerciali-
zation of new technologies.

860 International Business
Fall. Spring. 3(3-1) SA: ML 860, MTA 860 Management of the firm in the multinational envi-
ronment. 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 depart-
ment. SA: ML 862, MTA 862 Marketing strategies for international expansion. Evolution of global markets, market selection, tim-
ning, entry sequence, modes of entry, and the corpo-
rate 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 busi-
ness 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 Logis-
tics and the Master of Science in Manufac-
turing and Innovation. Quantitative and statistical methods for decision making. Hypothesis testing, regression and correla-
tion analysis, forecasting, linear programming, deci-
sion analysis and project management.

872 Distribution Fulfillment
Summer. 3(3-0) P:M: (MSC 870) RB: Intro-
ductory coursework in finance, accounting, marketing, and economics. R: Open only to students in the Master of Science in Lo-
gistics. 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 de-
mand 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 man-
agement. Purchasing role in fulfilling the firm's op-
erations 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 com-
petitive 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 In-
novation. Planning and control functions required to match supply and demand in a manufacturing firm. Tools and methods for planning production and the re-
source/capacity needed to support production. The role of information and information systems in plan-
ning and control. Coordination of plans across or-
ganizations 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 ser-
vices including customer service and order fulfill-
ment, distribution operations, purchasing or opera-
tion 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 sup-
ply chain management, planning and operations. Requirements, capabilities, and considerations for using information technology applications in logis-
tics.

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 interna-
tional and domestic operations.

882 Logistics Field Study
Fall. 6 credits. P:M: (MSC 879) RB: Com-
pilation 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 develop-
ment for high technology firms. Creating new prod-
uct ideas, designing high technology products, managing cross-functional teams, developing and implementing marketing plans, interpreting market-
ing 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 mar-
keting programs. Development of strategies and tactics. Segmentation, marketing mix, market re-
source 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. Teamwork 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.

895 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) 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: Approval of department. SA: ML 990, MTA 990 Faculty-supervised independent study.

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.
Doctoral dissertation research.

The Eli Broad College of Business

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.

812 Managerial Accounting

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 communications 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.

MSE—Materials Science and Engineering

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, political, and cultural 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. 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.

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

MATERIALS SCIENCE AND ENGINEERING

Department of Chemical 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. 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.