846. Organizational Behavior and Human Resource Management

Spring. 3(3-0) R: Open only to students in the Advanced Management Program.

Management of human resources. Organizational culture, motivation, communications, employee perceptions, individual and organizational learning. Staffing, interviewing, training, development, appraisal, terminating, and legal issues.

Entrepreneurship: New Business Planning and Initiation

Fall. 3(3-0) R: Open only to students in the Graduate School of Management or with departmental permission.

Assessment of the viability of a business idea. Development of a market analysis, project strategy, and plan to initiate the business. Identification and analysis of factors critical to new business financing and success.

853. Entrepreneurship: Managing Business Growth and Development

Spring. 3(3-0) R: Open only to students in the Graduate School of Management or with depart $mental\ permission.$

Evolution of a firm from an entrepreneurial business to a mature organization. Topics include entrepreneurial leadership, family ownership, management succession, and managing growth.

Labor and Management Relations

Spring. 2(2-0) Interdepartmental with Labor and Industrial Relations. R: Open only to students in the Advanced Management Program.

Industrial relations in American union and management collective bargaining. Compensation issues. Grievance concepts and arbitration. Dispute resolution.

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.

Seminar in Organizational 907. 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.

Seminar in Organizational Theory Fall of odd years. 3(3-0) P: 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. analysis, personnel selection, training, and incentive systems.

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.

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.

MARKETING AND SUPPLY CHAIN MANAGEMENT

Department of Marketing and Supply Chain Management

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

101. Introduction to Business

Fall, Spring. 3(3-0) R: Not open to juniors or seniors in the College of Business.

Role of business in society. Activities and functions of business organizations. Major issues and challenges facing business: globalization, social responsibility, diversity. Contemporary management practices.

SA: ML 101

300. Managerial Marketing

Fall, Spring, Summer. 3(3-0) R: Open only to juniors or seniors.

Analysis of 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.

SA: ML 300, MTA 300

Consumer and Organizational 302. **Buver Behavior**

Fall, Spring, Summer. 3(3-0) P: (MSC 300) R: Open only to juniors or seniors.

Application of consumer behavior principles to customer satisfaction, market planning, and marketing mix decisions. Ethical, diversity, and international issues.

SA: ML 302, MTA 302

303. Introduction to Supply Chain Management

Fall, Spring, Summer. 3(3-0) R: Open only to iuniors or seniors

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, flexibilty, leadtime, and cost.

SA: MGT 303, ML 303, MTA 303

Supply Chain Management

Fall, Spring, Summer. 4(4-0) P: (MSC 303) R: Open only to juniors or seniors.

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 iuniors or seniors.

International and cross-cultural study of business decisions, enterprises, markets, and institutions. Globalization of industries and firm competitiveness. International business transactions and entry strategies.

SA: ML 310, MTA 310

Personal Selling and Buying 313. Processes

Fall, Spring. 3(3-0)

The nature of channel relationships. Buying behavior and sales processes. Applications to differing industries and kinds of channel relationships.

SA: ML 313

MSC

317. Quantitative Business Research

Fall, Spring, Summer. 3(3-1) Interdepartmental with Statistics and Probability. P: (STT 315) R: Open only to juniors or seniors.

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.

SA: ML 317, MTA 317

Marketing Research

Fall, Spring. 3(3-0) P: (MSC 300 and MSC 317 or concurrently) R: Open only to juniors or seniors. Research methods designed to obtain information for marketing decisions. Research design, data collection, and interpretation of information to provide a customer orientation.

SA: ML 319, MTA 319

Food Marketing Management 335.

Spring. 3(3-0) Interdepartmental with Food Systems Economics and Management. P: (FSM 200 or MSC 300) R: Open only to juniors or seniors. Management decision-making in food industry organizations (processors, wholesalers, retailers). Marketing and sales in response to customer and consumer needs. Distribution and merchandising systems in domestic and international contexts. SA: ML 335, MTA 335

Descriptions—Marketing and Supply Chain Management

Courses

Retail Management 351.

Fall, Spring, Summer. 3(3-0) P: (MSC 300) R: Open only to juniors or seniors.

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.

SA: ML 351, MTA 351

401. **Procurement and Supply** Management

Fall, Spring, Summer. 3(3-0) P: (MSC 305) and MSC 317) R: Open only to juniors or seniors. 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. SA: MGT 401, ML 401, MTA 401

402. Manufacturing Planning and Control

Fall, Spring, Summer. 3(3-0) P: (MSC 305 and MSC 317) R: Open only to juniors or seniors. Production planning, demand management, master scheduling, materials requirements, and capacity planning. Shop floor control, computerintegrated manufacturing, and just-in-time sys-

SA: MGT 402, ML 402, MTA 402

410. **Product Innovation and** Management

Fall. 3(3-0) R: Open only to juniors or seniors. Analytic, decision-making, and planning concepts and tools available to product managers. New product policy and development, organizational issues, and product modification and deletion. SA: ML 410

413 Sales Management

Fall, Spring. 3(3-0) P: (MSC 300 and MSC 317 or concurrently) R: Open only to juniors or seniors.. 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. SA: ML 413, MTA 413

415. **International Marketing** Management

Fall, Spring. 3(3-0) P: (MSC 300) and (MSC 310 or EC 340) R: Open only to juniors or seniors. 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.

SA: ML 415, MTA 415

420. New Product Design and Development

Spring. 3(3-0) R: Open only to seniors. Practical training and experiences in design and testing of new products.

439. Food Business Analysis and Strategic Planning

Fall, 3(3-0) Interdepartmental with Food Systems Economics and Management. P: (MSC 335 or FSM 335) and (STT 201 or STT 200 or STT 315) R: Open only to juniors or seniors.

Principles and techniques of business analysis and strategic planning applied to food firms. Food trend forecasts, market potential, competition and cost analyses, business and strategic plan-

SA: ML 439, MTA 439

Logistics and Transportation 442. Management

Fall, Spring, Summer. 3(3-0) P: (MSC 305 and MSC 317) R: Open only to juniors or seniors. Microanalyis of logistics and transportation services. Customer service, distribution operations, purchasing, order processing, facility design and operations, carrier selection, transportation costing and negotiation. SA: ML 442, MTA 442

460. Marketing Strategy (W)

Fall, Spring, Summer. 3(3-0) P: (MSC 302 and MSC 317 and MSC 319) and completion of Tier I writing requirement. R: Open only to seniors in the College of Business.

Identification and analysis of managerial marketing issues. Integration of marketing concepts and theories through case analysis. Ethical and international applications.

SA: ML 460, MTA 460

Supply Chain Application and 470. Policy (W)

Fall, Spring. 2(2-0) P: (MSC 305) and completion of Tier I writing requirement. R: Open only to seniors in the College of Business.

Analysis and problem solving of supply chain management cases. Purchasing, manufacturing, logistics, and transportation as an integrated supply chain.

SA: ML 470, MTA 470

471. Topics in Purchasing and Sourcing Management

Spring. 2(2-0) P: (MSC 401) R: Open only to juniors or seniors in the Supply Chain Management

Current topics in sourcing and negotiation strategy such as price and cost analysis, and purchasing research techniques.

SA: ML 403, MSC 403, MTA 403

472. **Topics in Operations Management**

Spring of odd years. 3(3-0) P: (MSC 402) R: Open only to juniors or seniors in the Supply Chain Management major.

Managerial aspects of current issues such as total quality, computer integrated manufacturing and simultaneous engineering.

SA: ML 404, MSC 404, MTA 404, MGT 404

473. Topics in Logistics and Transportation Management

Spring. 3(3-0) P: (MSC 442) R: Open only to juniors or seniors in the Supply Chain Management major.

Current topics in logistics and transportation planning, information technology, response based strategies, third party logistics and relationship management.

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.

Supervised program of independent library or field research designed to supplement classroom study.

SA: ML 490. MTA 490

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.

Supervised program of independent library or field research designed to supplement classroom

SA: ML 490H, MTA 490H

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: (MSC 300 or MSC 303) R: Open only to juniors

Current issues in specialized marketing, logistics knowledge of marketing, and environmental analysis. Strategy development for control. SA: ML 491, MTA 491

800. Materials and Logistics Management

Spring. 3(3-0)

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.

SA: ML 800, MTA 800, MGT 800

801. Materials Management: Tactical and Strategic Perspectives

Fall. 3(3-0) P: MSC 800.

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.

SA: ML 801, MTA 801, MGT 801

802. **Procurement and Sourcing** Strategies

Fall, Spring. 3(3-0) P: MSC 800. R: Open only to MBA students.

Sourcing strategies and applications. Negotiation planning and execution.

SA: ML 802, MTA 802, MGT 802

803. **Operations Management Strategy**

Spring. 3(3-0) P: MSC 801.

Operations management issues including quality, technology, group technology, computer integrated manufacturing, and just-in-time manufac-

SA: ML 803, MTA 803, MGT 803

Marketing Management

Spring. 3(3-0)

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.

SA: ML 805, MTA 805

Marketing Analysis

Fall. 3(3-0) P: MBA 820 or MSC 805

Marketing research projects, data collection and analysis, syndicated data, marketing decision support systems, sales forecasting, and scanner data analysis systems.

SA: ML 806, MTA 806

Customer-Driven Strategies

Spring. 3(3-0) P: MBA 820 or MSC 805.

Customer satisfaction, customer loyalty, and related topics from the fields of consumer behavior and customer service.

SA: ML 807, MTA 807

808. **Entrepreneurial Marketing**

Fall. 3(3-0) P: MBA 820 or MSC 805

Entrepreneurial processes of creating markets. Creative approaches for designing competitororiented strategies in mature markets. SA: ML 808, MTA 808

Product Innovation and Management

Spring. 3(3-0) P: MBA 820 or MSC 805.

Cross-functional integrative decision-making in the development of new products. Process of generating new product ideas, screening, concept development, and testing.

SA: ML 810, MTA 810

Marketing Communication 811.

Fall. 3(3-0) P: MBA 820 or MSC 805.

Communication with target markets using advertising, sales promotion, public relations, sales management approaches, and brand name development.

SA: ML 811, MTA 811

Marketing Research Methods

Spring. 3(3-0) P: MBA 820 or MSC 805.

Collection, analysis, and interpretation of primary data from problem definition to report writing.

SA: ML 813, MTA 813

Strategic Planning 818.

Spring. 2(2-0) R: Open only to students in the Advanced Management Program.

Models and methods of business planning. Relationship of strategic intent, business missions and planning hierarchies. Linking marketing, financial, and human resource strategic plans.

SA: ML 818, MTA 818

Value Chain Management

Spring. 5(5-0) R: Open only to students in the Advanced Management Program.

Integration of marketing, procurement, operations management, and logistics processes. Strategies of creating value across the supply chain given customer needs, wants, motivations, and behaviors within global competitive environments.

Practical Supply Chain Analysis

Spring. 1(1-0) P: MBA 820 or concurrently. R: Open only to MBA students in the Supply Chain Management major.

Practical considerations and issues required to perform supply chain management analysis and operations. Supply chain management terminology and concepts.

824. **Channel and Logistics** Management

Spring. 3(3-0) P: MBA 820 or MSC 805.

Interfirm relationships in domestic and international settings. Interorganizational behavior, channel management, channel leadership and negotiations, relationship management, and strategic alliances.

SA: ML 824, MTA 824

828. **Marketing Programming**

Spring. 3(3-0) P: MBA 820 or MSC 805.

Use of computer-based cases, simulations, and exercises to solve marketing problems and to develop marketing strategies and tactics. Hightech approaches to marketing programs.

Food Marketing Management 831.

Spring. 3(3-0) Interdepartmental with Agricultural Economics. P: MBA 820 or MSC 805

Marketing management decisions in food firms. Consumer orientation, computer technologies, food system cost reduction, global opportunities, environmental and social issues. SA: ML 831, MTA 831

832. New Technology and Products Management

Fall. 2(2-0) R: Open only to students in the Advanced Management Program.

Strategic management of new product development processes. Planning, analytical, and decision-making concepts and tools available to market and brand managers. Global new product management best practices, product strategy and policy, introductions, product portfolio management, and organizational implications.

833. **Decision Support Models**

Fall. 3(3-0)

Analytical models to support decision making. Topics include multiple regression, linear optimization, decisions under uncertainty, and forecast-

834. Optimization Models I

Fall of odd years. 3(3-0)

Linear optimization models and algorithms. Theory of linear programming. Simplex algorithm and variations. Duality theory and sensitivity analysis. Linear programs with special structure

SA: MGT 834

836. Management in the Global Marketplace

Summer. 4(1-6) R: Open only to students in the Advanced Management Program.

Global, comparative, and cross-cultural aspects of business. Drivers of global markets and consequences for management. International travel required

SA: MGT 836

837. **Introduction to Computer** Simulation

Fall of even years. 3(3-0) P: STT 442.

Discrete computer simulation and its use in research and planning. Simulation approaches and computer simulation languages. Design and interpretation of simulation experiments. Internal mechanics of simulation programs. SA: MGT 837

838. Design and Analysis of Statistical Experiments

Spring of odd years. 3(3-0) P: STT 442.

Basic experimental design. Non-parametric and multivariate methods. Elementary sampling theory. Response surface methodology. Data analysis using statistical packages such as BMD and SPSS.

SA: MGT 838

842. **Total Quality Management**

Fall. 3(3-0) P: 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) P: MSC 801, MSC 833. C: MIC 810 concurrently

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 responsiblility as linked to product and process design.

844. **Supply Chain Process**

Fall. 5(5-0) P: MBA 820 or MSC 800.

Processes central to supply chain management. Managing and measuring integrated purchasing, manufacturing operations, and logistics.

Supply Chain Activities 845.

Spring. 6(6-0) P: MSC 844.

Activities central to supply chain management. Tools, procedures, and metrics for purchasing, manufacturing operations, and logistics.

Seminar in Supply Chain 846. Management

Spring. 1(1-0) P: MSC 844.

Use of case studies to develop strategic and operational insight into integrated supply chain management.

847. **Managerial Decision Support** Models

Fall. 3(3-0) R: Open only to students in the Advanced Management Program.

Development and application of analytical models to support decision making. Topics include data analysis and multiple regression, linear optimization, decisions under uncertainty, forecasting, risk and decision analysis.

SA: MGT 847

Descriptions—Marketing and Supply Chain Management of

Courses

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 entreprenuerial 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)

Management of the firm in the multinational environment. Assessment of international modes of operations, markets, financial strategies, services, and resources. Competitive strategy. SA: ML 860, MTA 860

862. Developing Global Markets

Spring. 3(3-0) P: MBA 820 or MSC 805. Development of 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. SA: ML 862, MTA 862

865. Emerging Topics in Business

Spring. 3(3-0) P: MBA 820 or MSC 805. Perspectives on new and emerging issues of business administration. Topics vary. SA: ML 865, MTA 865

888. Capstone Project in Manufacturing

Spring. 3 credits. Interdepartmental with Engineering. Administered by Engineering. R: Open only to juniors or 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. Faculty-supervised independent study. SA: ML 890, MTA 890

905. Theory Development and Research Design in Marketing

Fall. 3(3-0) R: Open only to Ph.D. students
Research concepts and scientific methods for the
study of marketing. Formulation of hypotheses,
concepts of measurement, and quantitative methods.

SA: ML 905, MTA 905

906. Quantitative Methods in Marketing

Spring. 3(3-0) P: MSC 905 or approval of department. R: Open only to Ph.D. students.

Concepts and methods in the scientific investigation of marketing phenomena. Focus on the use of multivariate analytic tools.

SA: ML 906, MTA 906

907. Causal Modeling in Marketing

Fall. 3(3-0) P: MSC 906. R: Open only to Ph.D. students.

Statistical methods in marketing, emphasis on causal modeling.

SA: ML 907, MTA 907

908. Marketing Decision Models

Fall. 3(3-0) P: MSC 906. R: Open only to Ph.D. students.

Applications of marketing decision models in new product development, pricing, distribution, advertising, and sales promotion. SA: ML 908, MTA 908

910. History of Marketing Thought

Fall. 3(3-0) R: Open only to Ph.D. students. Evolution of marketing institutions, techniques, theories, and critiques. Influence of changing environmental and technological factors. SA: ML 920, MSC 920, MTA 920

911. Theories of Competition in Marketing

Spring. 3(3-0) R: Open only to Ph.D. students Relationships among competition, marketing, and corporate and economic growth. Competition phenomena studied through a variety of disciplines, including marketing, economics, political science, sociology and social psychology. SA: ML 921, MSC 921, MTA 921

912. Seminar in Social Sciences in Marketing

Spring. 3(3-0) R: Open only to Ph.D. students. Social science perspectives on marketing. SA: ML 922, MSC 922, MTA 922

913. Seminar in Spatial and Temporal Marketing

Spring. 3(3-0) R: Open only to Ph.D. students. Theory concerning marketing strategies and programs in logistics, channels, and pricing. Field research needs.

SA: ML 923, MSC 923, MTA 923

918. Procurement and Sourcing Theory

Fall of even years. 3(3-0) R: Open only to Ph.D. students

Theoretical models explaining procurement and sourcing strategy. Frameworks to guide research. $SA:MGT\,918$

919. Procurement and Sourcing Management Strategy

Spring of odd years. 3(3-0) P: MSC 918. R: Open only to Ph.D. students.

Management issues affecting the contribution of procurement and sourcing strategies to the competitiveness of the firm. SA: MGT 919

920. Seminar in Manufacturing Strategy

Fall of even years. 3(3-0) P: MSC 803. R: Open only to Ph.D. students.

Research in manufacturing strategy. Quality, technology, flexibility, innovation. Theory building.

SA: ML 920, MTA 920, MGT 920

921. Seminar in Inventory Management

Fall of odd years. 3(3-0) P: MSC 803 R: Open only to Ph.D. students

Classical, just-in-time, and multi-echelon inventory control models. Forecasting. SA: ML 921, MTA 921, MGT 921

923. Topics in Operations Management

Spring of odd years. 3(3-0) P: MSC 803 R: Open only to Ph.D. students

Current research in the field. Topics vary. SA: ML 923, MTA 923, MGT 923

930. Theory of Transportation-Distribution Systems

Fall of odd years. 3(3-0) P: MSC 805. R: Open only to Ph.D. students.

Transportation-distribution research on systems integration. Elements of networks, systems, and economic theory in the design, evaluation, and control of logistics systems. Topics include strategic logistics, forecasting, and system integration models.

SA: ML 930, MTA 930

931. Transportation and Distribution Research Methods

Spring of odd years. 3(3-0) P: MSC 930. R: Open only to Ph.D. students.

Techniques and methodology of system design, customer service and policy formulation. SA: ML 931, MTA 931

932. Transportation and Distribution Development Policy

Fall of even years. 3(3-0) P: MSC 805. R: Open only to Ph.D. students.

The interaction of government, carrier, and user logistics and distribution strategies, particularly at the macro-corporate and national policy levels. SA: ML 932, MTA 932

940. International Business Theory

Fall of even years. 3(3-0) P: MSC 860 or MSC 862. R: Open only to Ph.D. students.

Theories explaining international business phenomena. Varying perspectives on international business activities, concepts, and frameworks. SA: ML 940, MTA 940

941. International Business Research Issues

Spring of odd years. 3(3-0) P: MSC 940. R: Open only to Ph.D. students.

Scientific methods of research on international business. Topics include cultural bias and organizing multi-country studies.

SA: ML 941, MTA 941

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.

Intensive reading and research on a marketing topic of mutual interest to a faculty member and a Ph.D. student.

SA: ML 924, MTA 924

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.

Production of research paper under the direction of a senior faculty member.

SA: ML 995, MTA 995

Doctoral Dissertation Research 999.

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

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. 3(3-0) R: Open only to MBA students.

Organizational goals, design, and control of the global business enterprise. Strategies for implementing new organizational forms. Defining the value chain, competitive positioning, and sustainable competitive advantage.

Accounting and Financial Strategies

Fall, Spring. 5(5-0) R: Open only to MBA students.

Financial accounting model, valuation, and reporting concepts and uses. Time value of money, interest rates, valuing securities, financial statement analysis, and cash flows. Budgeting, decision analyses, cost estimation and accumulation, capital budgeting, and international financial concepts.

Applied Data Analysis for Managers

Fall, Spring. 2(2-0) P: STT 315. R: Open only to MBA students. Not open to students with credit in

Analysis of business and economic data to support managerial decision-making. Building, interpreting, and applying regression models. Time series and forecasting. Offered half of se-

806. **Business Ethics and Critical** Thinking Concepts

Fall, Spring. 1(1-0) R: Open only to MBA students

Creating a critical thinking approach to business problem solving. Developing a framework for identifying, analyzing, and resolving ethical dilemmas in business. Offered half of semester.

814. Applied Economics

Fall, Spring. 2(2-0) R: Open only to MBA stu-

The 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 half of semester.

816. **Business Presentations**

Fall, Spring. 1(1-1) R: Open only to MBA students.

Development of effective interpersonal communications skills. Emphasis is on oral communications in business settings.

Managing the Firm's Value Chain Spring, Summer. 5(5-0) P: MBA 800. R: Open only to MBA students.

Integration of product innovations, marketing strategies, supply chain strategies, and regulatory environment. Global marketing strategies and consumer behaviors. Coordination of purchasing, manufacturing, operations, and logistics to enhance competitiveness.

Financial Management

Spring, Summer. 2(2-0) P: MBA 802. 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. Offered half of semester.

824. Managing the Workforce

Spring, Summer. 3(3-0) R: Open only to MBA students.

Role of workforce management in carrying out the goals and mission of the organization. Theories and applications of management principles to acquiring, motivating, and rewarding employees and structuring their work. Legal, domestic, and internationalissues in the workplace.

826. International, Comparative, and **Cross-Cultural Business**

Spring, Summer. 2(2-0) R: Open only to MBA students

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

840. Applied Business Experience

Fall, Summer. 3(0-9) R: Open only to MBA students.

Student teams work on projects in organizations identified by a company sponsor and approved by a faculty adviser.

850. Integrative Case Experience and Future Global Strategies

Fall, Spring. 2(2-0) R: Open only to MBA students

Future trends in management. Strategic positioning of organizations for success. An integrative case experience focusing on a specific corporate situation. Use of library and computer network sources. Case presentation to faculty and business managers.

MBA Internship Experience

Fall, Spring, Summer. 1 credit. A student may earn a maximum of 2 credits in all enrollments for this course. P: Completion of at least one semester in the MBA program. R: Open to 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 MECHANICS **MSM**

Department of Materials Science and Mechanics College of Engineering

Engineering Communications Fall, Spring. 3(2-3) P: (MTH 116 or concurrently) or (LBS 117 or concurrently) or (MTH 132) or

(MTH 103 and MTH 104) Computer-aided design and drafting. Freehand sketching. Two and three dimensional visualization. Preparation of spread sheets and technical

Statics

reports.

Fall, Spring. 3(3-0) P: (MTH 132 or LBS 118) Vector description of forces and moments. Two and three dimensional equilibrium of particles and rigid bodies. Analysis of trusses, frames and machines. Coulomb friction.

Mechanics of Deformable Solids Fall, Spring. 3(3-2) P: (MSM 205) and (MTH 133

or concurrently or LBS 119 or concurrently) Tension compression and shear stresses. Axially loaded bars. Torsion of circular shafts. Beam theory. Combined stresses. Mohr's circles. Columns.

250. Materials Science and Engineering

Fall, Spring. 3(3-2) P: (CEM 141 or CEM 151 or LBS 165)

Structure of metals, ceramics and polymers. Phase diagrams, thermomechanical treatments, physical and mechanical properties, diffusion, microstructure studies, environmental effects.

306 **Dynamics**

Fall, Spring. 3(3-0) P: (MSM 205) and (MTH 235 or LBS 220) R: Open only to students in the College of Engineering.

Kinematics of particles, rigid bodies, and mass moments of inertia. Kinetics of particles and rigid bodies. Energy and momentum principles.