Procurement and Supply Management

Spect to quality, flexibility, lead-time, and cost. The role 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.

Introduction to Supply Chain Management

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.

Survey of Supply Chain Management

Objective, 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.

Procurement and Supply Management

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.

Logistics and Transportation Management

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.

Introduction to International Business

Introduction to the context of international business delivered on-site in foreign settings. Fundamental concepts and principles of globalization such as multinational corporations, foreign markets and economies, international law, cultural influences, and multinational business strategies.

Procurement Contracting

Workshop in procurement contracting including terms and conditions, legal terms and conditions, and contract negotiation

Customs, Compliance and Security

Workshop in customs including the role of customs and border protection, supply security programs, export programs and tariffs, brokers, and trusted traders.

End-to-End Supply Chain Management Simulation

Simulation exercise and competition in the design and operation of global supply chains.

Supply Chain Enterprise Resource Planning Applications

Workshop with hands-on experience in enterprise resource planning applications.

Supply Chain Application and Policy (W)

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

Advanced Supply Chain Project Management

Project management concepts related to planning, execution, and control of projects in supply chain environments.

Supply Chain Industry Applications

Integrated analysis and problem solving of supply chain management applications in collaboration with Engineering, Purchasing, Manufacturing, logistics, and transportation as an integrated supply chain.

Negotiations

Strategic negotiation, negotiation preparation, buyer-supplier relationship assessment, international negotiations, and negotiation simulation.

Supply Chain Decision Modeling

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.

Transportation Management

Current issues and strategies in transportation management and policy. Carrier management problems and opportunities, and economic characteristics of the various modes of transportation.
Perspectives on new and emerging issues in logistics management. Topics vary.

825 Strategic Sourcing
Spring. 1.5(1.5-0) P: MBA 831 R: Open to MBA students in the Eli Broad College of Business. Topics include multiple sourcing, demand and supplier management, process simulation, linking supply chain with technology. Strategic sourcing process. Opportunity assessment, spend and requirements analysis, supply market analysis, category sourcing strategy development and implementation. Supplier evaluation and selection.

826 Manufacturing Design and Analysis
Spring. 1.5(1.5-0) P: MBA 831 R: Open to MBA students in the Eli Broad College of Business and the Eli Broad Graduate School of Management or approval of department. Topics include multiple sourcing, demand and supplier management, process simulation, linking supply chain with technology. Strategic sourcing process. Opportunity assessment, spend and requirements analysis, supply market analysis, category sourcing strategy development and implementation. Supplier evaluation and selection.

827 Competing Through Supply Chain Logistics
Spring. 1.5(1.5-0) P: MBA 831 R: Open to MBA students in the Eli Broad College of Business and the Eli Broad Graduate School of Management or approval of department. Topics include multiple sourcing, demand and supplier management, process simulation, linking supply chain with technology. Strategic sourcing process. Opportunity assessment, spend and requirements analysis, supply market analysis, category sourcing strategy development and implementation. Supplier evaluation and selection.

833 Decision Support Models
Spring. 1 to 3 credits. P: SCM 800 or MBA 831 SA: MGT 833, MSC 833 Analytical models to support decision making with specific supply chain focus. Topics include multiple regression, linear optimization, decisions under uncertainty, and forecasting.

834 Supply Chain Simulation
Spring. 1 to 3 credits. P: SCM 800 or MBA 831 Simulation concepts, programming, design methods, and results interpretation.

842 Total Quality Management
Fall. 1 to 3 credits. P: MBA 831 or SCM 800 Total quality management principles and practices, tools and techniques, implementation of continuous quality improvement programs, links to manufacturing and competitive strategies. Six Sigma and statistical quality control.
856 Supply Chain Management Technology and Applications II
Spring. 1.5(1.5-0) P: SCM 855 R: Open to MBA students in the Eli Broad College of Business and The Eli Broad Graduate School of Management or approval of department. 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.

863 Negotiations
Fall, Spring, Summer. 1 to 2 credits. Interdepartmental with Management. Administered by Management. R: Open to master's students in the Department of Management or in the Department of Supply Chain Management.
Strategic negotiations, negotiation preparation, buyer-supplier relationship assessment, international negotiations, and negotiation simulation.

864 Supply Chain Innovation Project Management
Fall. 1 to 3 credits. P: MBA 831 or SCM 800
Role of product and process innovation in firm competitiveness. Innovation projects in various parts of supply chain, including radical, incremental and continuous process improvement projects. Project management techniques addressing the definition, planning, and execution of innovation related projects.

869 Service Supply Chains
Spring. 1 to 3 credits. P: MBA 831 or SCM 800

870 Introduction to Supply Chain Management
Fall, Spring, Summer. 3(3-0) R: Open to master's students in the Supply Chain Management Major. Approval of department. SA: MSC 870
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 customer.

871 Applied Data Analysis
Fall, Spring, Summer. 3(3-0) R: Open to master's students in the Supply Chain Management Major. SA: MSC 871
Quantitative and statistical methods for decision making. Hypothesis testing, regression and correlation analysis, forecasting, linear programming, decision analysis, and project management.

872 Distribution Fulfillment
Fall, Spring, Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. SA: MSC 872
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 Supply Chain Management Sourcing, Operations and Distribution
Fall, Spring, Summer. 1 to 3 credits. P: SCM 870 R: Open to master's students in the Eli Broad College of Business and The Eli Broad Graduate School of Management or approval of department.
Management of the firm's value creation processes with particular emphasis on strategic sourcing, procurement, operations strategy, capacity strategy, capacity location, channel development and management, and coordination of plans across supply chain partners.

874 Total Quality Management and Lean Enterprise
Fall, Spring, Summer. 3(3-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. SA: MSC 874
Total quality management and lean enterprise principles, practices, and techniques. Implementation of quality and lean enterprise improvement programs. Relationship to manufacturing and competitive strategies.

875 Manufacturing Planning and Control
Fall, Spring, Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. SA: MSC 875
Planning and control functions required to match supply and demand in a manufacturing firm. Tools and methods for planning production and the resources and capacity needed to support production. Role of information and information systems in planning and control. Coordination of plans across organizations supply chain.

876 Logistics Operations Methods and Systems
Fall, Spring, Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. SA: MSC 876
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 Supply Chain Management Information Technology
Summer. 2(2-0) P: SCM 872 and SCM 875 and SCM 886 R: Open to master's students in the Supply Chain Management major. SA: MSC 877
Role of information technology in supply chain management, planning, and operations. Requirements, capabilities, and considerations for using information technology applications in supply chain management.

878 Logistics Systems Analysis
Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. SA: MSC 878
Process of solving logistics problems. Applications of analysis tools and techniques to identify benefits and costs of logistics change.

879 Supply Chain Management-Strategy and Applications
Fall, Spring, Summer. 3(3-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. Approval of department. SA: MSC 879
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 Supply Chain Management
Fall, Spring, Summer. 3(3-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. Approval of department. SA: MSC 881
Requirements for global operations and strategy development. Similarities and differences of international and domestic supply chain operations.

882 Supply Chain Management Field Study
Fall, Spring, Summer. 5 credits. P: SCM 870 R: Completion of 24 credits of Master of Science in Supply Chain Management pro-gram. R: Open to master's students in the Supply Chain Management Major. SA: MSC 882
Practical application of course material to a problem or situation in the student's organization.

883 Technology and Product Innovation Management
Fall, Spring, Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. SA: MSC 883
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.

886 Strategic Sourcing
Fall, Spring, Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. SA: MSC 886
Fundamentals of strategic sourcing and supply chain management. Integration and coordination of product innovation, sourcing, manufacturing, distribution, and logistics for global competitiveness.

887 Packaging Design/Engineering Optimization in Supply Chain
Fall, Spring, Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. Approval of department. Overview of engineering and packaging functions that directly affect supply chain efficiency and functionality. Familiarize students with tools to solve supply chain based engineering and packaging applications.
Supply Chain Management—SCM

888 Product Protection and Safety for Supply Chain Managers
Fall, Spring, Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management Major. Approval of department. Introduction to general issues related to product safety and protection and how these problems affect supply chain management. Foundational discussion of brand protection, anti-counterfeiting, and food safety requirements and challenges.

889 Brand Protection for Supply Chain Managers
Fall, Spring, Summer. 1.5 to 3 credits. P: SCM 870 R: Open to master's students in the Supply Chain Management Major. Introduction to general issues related to product counterfeiting and how the problem affects supply chain professionals. Foundational principles of brand protection activities as carried out through the supply chain functions of brand owners.

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: MSC 890 Faculty-supervised independent study.

893 Operations Strategy
Summer. 2(2-0) P: SCM 870 R: Open to master's students in the Supply Chain Management major. SA: MSC 893 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.

898 Supply Chain Consulting and Auditing
Spring. 3(3-0) P: SCM 835 R: Open to master's students in the Supply Chain Management major. SA: MSC 898 C: SCM 897 concurrently. Development of supply chain consulting skills. Consultative processes. Role of consulting and consultative selling.

916 Supply Chain Statistical Research Methods
Fall. 3(3-0) R: Open to doctoral students in the Eli Broad College of Business and The Eli Broad Graduate School of Management. Statistical research methods and techniques to support supply chain management empirical research. Applications of statistical methods drawn from current literature in procurement, operations management, and logistics.

917 Supply Chain Applied Decision Models
Spring. 3(3-0) R: Open to doctoral students in the Eli Broad College of Business and The Eli Broad Graduate School of Management. Linear and non-linear optimization models. Linear programming, integer programming, goal programming, multi-criteria models, and non-linear programming (constrained and unconstrained optimization). Problem formulation and solution procedures.

918 Procurement and Sourcing Theory
Spring of odd years. 3(3-0) R: Open to doctoral students. Theoretical models explaining procurement and sourcing strategy. Frameworks to guide research.

920 Seminar in Manufacturing Strategy
Fall of even years. 3(3-0) R: Open to doctoral students. Research in manufacturing strategy. Quality, technology, flexibility, innovation. Theory building.

921 Seminar in Inventory Management
Spring of even years. 3(3-0) R: Open to doctoral students. Classical, just-in-time, and multi-echelon inventory control models. Forecasting.

923 Topics in Operations Management
Spring of odd years. 3(3-0) R: Open to doctoral students. Current research in the field. Topics vary.

930 Theory of Logistics Systems
Spring. 3(3-0) R: Open to doctoral students. SA: MSC 930 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 Business Research
Spring of odd years. 3(3-0) P: MGT 906 or SCM 916 or approval of department R: Open to doctoral students. SA: MSC 931 Techniques and methodology for system design 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: SCM 930 R: Open to doctoral students. SA: MSC 932 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.

990 Independent Study
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to doctoral students in the Department of Supply Chain Management or approval of department. SA: MSC 990 Intensive reading and research on a supply chain topic of mutual interest to a faculty member and a doctoral student.

995 Directed Research Paper
Fall, Spring, Summer. 1(1-0) R: Open to doctoral students in the Department of Supply Chain Management. Production of research paper under the direction of a senior faculty member.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open to doctoral students in the Department of Supply Chain Management or approval of department. SA: MSC 999 Doctoral dissertation research.