

Supply Chain Management

Gatton College of Business & Economics

The Gatton College of Business and Economics offers a Master of Science degree with a Non-thesis Plan B option in Supply Chain Management.

Application Requirements

1. Current curriculum vita
2. GRE or GMAT scores
 - o GRE/GMAT waiver is offered to the following applicants:
 - Applicants who earned a bachelor's degree from the University of Kentucky with an undergraduate GPA of 3.3 or above.
 - Applicants who are already in possession of a terminal degree such as a JD, Ph.D., MD, PharmD, or equivalent
 - Applicants who are presently enrolled in a terminal degree program such as a JD, Ph.D., MD, PharmD, with good academic standing
 - Applicants with extensive relevant professional experience, especially those in leadership positions
3. One letter of recommendation (up to two will be accepted)
4. Application Deadlines
 - Fall: July 23

Degree Requirements

FULL-TIME STUDENTS

Fall

- MKT 630: Supply Chain Fundamentals & Strategies
- MKT 631: Production & Operations Management
- MKT 632: Supply Chain Modeling & Analysis
- MKT 633: Applied Data Analytics

Spring

- MKT 634: Quality Management & Lean Operations
- MKT 635: Logistics Management
- MKT 636: Sourcing, Purchasing & Contract Management
- MKT 637: Negotiation in Supply Chain

One elective course. Choose from the following:

- MFS 613: Sustainability, Ethics & Leadership in Manufacturing Organization (Fall/Spring)
- SCE 614: Sustainable Systems and Supply Chain (new course in progress at UK's College of Engineering)
- MFS 606: Global Issues in Manufacturing (Fall)
- MKT 430: Service Marketing Management (Fall/Spring)
- MGT 610: Global Management (Fall/Spring)
- MGT 697: Leadership, Communications & Ethics (Summer)
- CPH 600: Health Services and Systems Organizations (Summer)
- PA 602: Strategic Planning and Organizational Change in the Public and Nonprofit Sectors (Fall)
- HMT 588: Strategic Management in the Hospitality & Food Service Industry (Spring)

Capstone Course

- MKT 740: Industry Project (10 weeks in summer)

PART-TIME STUDENTS

Fall, 1st year

- MKT 630: Supply Chain Fundamentals & Strategies;
- MKT 633: Applied Data Analytics

Spring, 1st year

- MKT 634: Quality Management & Lean Operations;
- MKT 637: Negotiation in Supply Chain

Fall, 2nd year

- MKT 631: Production & Operations Management;
- MKT 632: Supply Chain Modeling & Analysis;

Spring, 2nd year

- MKT 635: Logistics Management;
- MKT 636: Sourcing, Purchasing & Contract Management;

Summer, second year

- MKT 740: Industry Project

One elective course. Choose from the following:

- MFS 613: Sustainability, Ethics & Leadership in Manufacturing Organization (Fall/Spring)
- SCE 614: Sustainable Systems and Supply Chain (new course being proposed at CoE)
- MFS 606: Global Issues in Manufacturing (Fall)

- MKT 430: Service Marketing Management (Fall/Spring)
- MGT 610: Global Management (Fall/Spring)
- MGT 697: Leadership, Communications & Ethics (Summer)
- CPH 600: Health Services and Systems Organizations (Summer)
- PA 602: Strategic Planning and Organizational Change in the Public and Nonprofit Sectors (Fall)
- HMT 588: Strategic Management in the Hospitality & Food Service Industry (Spring)

Course Descriptions

CPH 600 HEALTH SERVICES AND SYSTEMS ORGANIZATION. (3) An introduction to the health care delivery system in the United States, including its composition, functioning, the interrelationships of organizations and professional groups within the system in various settings, health care terminology, and major problems and issues in the delivery of health services. Prereq: College of Public Health graduate program enrollment or permission of instructor.

HMT 588 STRATEGIC MANAGEMENT IN THE HOSPITALITY AND FOOD SERVICE INDUSTRY. (3) A course requiring students to use integrative skills to evaluate theories and applications regarding decision making, strategic planning and management concepts specific to hospitality and food service organizations. Prereq: Graduate student status or HMT 120, HMT 210, HMT 270, HMT 308, MGT 301 and MKT 300.

MFS 606 GLOBAL ISSUES IN MANUFACTURING. (3) The need to increase quality, productivity, efficiency and sustainability in manufacturing operations spanning the product, process and systems (manufacturing systems as well as supply chain) domains is essential for companies to be successful. The increased globalization of markets and manufacturing operations, declining natural resources and negative consequences of some manufacturing practices as well as increased legislation in many regions has led to many new challenges that companies must overcome to be successful in competitive markets. This seminar course will introduce students to a variety of global issues in manufacturing through presentations by leading national and international experts in these domains. The seminars will cover a broad range of manufacturing related topics relevant to many disciplines including manufacturing, mechanical and electrical engineering. The course can also help graduate students identify topical issues that need further investigation and could become potential research topics. (Same as EE/ME 606.)

MFS 613 SUSTAINABILITY, ETHICS, AND LEADERSHIP IN MANUFACTURING ORGANIZATIONS. (3) This course is intended to provide future manufacturing managers and leaders a basic understanding of important theories and practices necessary to successfully manage and lead teams to achieve manufacturing organizational objectives. The course is organized into several modules. The first module will focus on developing an understanding and capability to approach ethical and sustainability concerns confronted by manufacturing organizations. This will include coverage of tools to help identify and address societal and environmental obligations of manufacturing organizations and issues

confronting them that span multiple cultures and nations. Because people are one of the most important resources in any organization, the second and third modules will address organizational behavior (OB) and individual effectiveness. OB theories and practices that can be used to increase the capability to observe, understand and manage people's behavior will be covered. The last module considers safety and ergonomics as they relate to manufacturing organizations. Coverage will include tools and techniques that can be used to analyze the manufacturing workplaces and ensure its ergonomic design as well as an overview of the current state of occupational safety and health regulations. Prereq: Graduate standing.

MGT 610 GLOBAL MANAGEMENT. (3) This course examines the problems of managing a business enterprise which spans international boundaries. Students will develop an understanding of the political, social, economic, and technological factors driving globalization and will consider the impact of these forces on competition, markets, industry structure, and organization.

MGT 697 LEADERSHIP, COMMUNICATIONS AND ETHICS. (3) Political, historical, and philosophical perspectives on the meaning and processes of top management leadership. Applications of leadership perspective to the development of organizational culture, ethics and values, stakeholder relations, business-government relations, and competitiveness.

MKT 430 SERVICES MARKETING MANAGEMENT. (3) This course addresses marketing and management issues and problems faced by service organizations. Marketing and management concepts are broadened and applied to the service organizations. Topics related to service quality, the marketing mix, and service delivery are covered. Prereq: MKT 300, MGT 301. (Same as MGT 430.)

MKT 630 SUPPLY CHAIN FUNDAMENTALS AND STRATEGY. (3) Supply chain management concerns the integration of key business processes that enable the fulfillment of end-customers' real needs. Central to supply chain management philosophy is integration – the socio-technical linkages that facilitate the efficient flows of information, ideas, knowledge, goods, services, and cash through the supply chain. This course will introduce students to the terminology, concepts, and skills related to supply chain management, with a focus on strategic, relational, and operations issues. Through this course, students will develop an understanding of important supply chain terminology, processes, systems, and improvement methodologies that enable effective management and strategy deployment. Prereq: Only students enrolled in either the MS Supply Chain Management or the MS Supply Chain Engineering program are eligible to take this course. (Same as SCE 630.)

MKT 631 PRODUCTION AND OPERATIONS MANAGEMENT. (3) This course will introduce students to concepts, tools, and techniques necessary for planning and control of production and other operations of an organization. Organizational processes from sourcing and inventory management to production planning and scheduling as well as quality control will be covered. Students will learn how to model and analyze operations, and to evaluate impact of various strategies on the processes and on products/service quality, productivity, efficiency, and cost effectiveness, especially when there are uncertainties. Prereq: STA 381, MA 320 or similar (with instructor permission). (Same as SCE 631.)

MKT 632 SUPPLY CHAIN MODELING & ANALYSIS. (3) This course teaches students how to make business decisions based on the data and quantitative models. It introduces students to the optimization methods used in business – primarily linear and integer programming. The concepts are studied mainly in the context of applications to the operations and supply chain management field. Examples from other business disciplines such as finance and human resource management are included too. In this course, students learn to model the business problems on Excel spreadsheets, analyze and solve the models, and then interpret the solutions obtained to make recommendations to managers. Prereq: Only students enrolled in either the MS Supply Chain Management or the MS Supply Chain Engineering program are eligible to take this course.

MKT 633 APPLIED DATA ANALYTICS. (3) In today's business settings, knowledge workers increasingly rely on data-driven decision-making strategies. This course provides the necessary data analytics background for subsequent coursework dealing with topics such as quality control, inventory management, sourcing, and logistics management. It introduces students to the Normal distribution, Decision Tree Analysis, Demand Forecasting, and Interactive Data Visualization, all of which rely on data as the grist to help generate useful managerial information and insights. Prereq: Only students enrolled in either the MS Supply Chain Management or the MS Supply Chain Engineering program are eligible to take this course.

MKT 634 QUALITY MANAGEMENT & LEAN OPERATIONS. (3) This course focuses on the principles, and practices of total quality management (TQM) and lean operations. Topics that are covered include: process focus; continuous improvement; service quality; customer satisfaction; process control and capability; Six-Sigma methodology and tools; economics of quality; and organizational learning. Prereq: Only students enrolled in either the MS Supply Chain Management or the MS Supply Chain Engineering program are eligible to take this course.

MKT 635 LOGISTICS MANAGEMENT. (3) This course focuses on the physical distribution, movement, and delivery of goods and services throughout the supply chain so that the right amount of materials and/or products arrive at the right place at the right time. It requires the co-ordination, organization, and management of an organization's distribution network to perform such function as facility location, transportation, storage, material handling, packaging, inventory control, order fulfillment, and reverse logistics. Prereq: Only students enrolled in either the MS Supply Chain Management or the MS Supply Chain Engineering program are eligible to take this course. (Same as SCE 635.)

MKT 636 SOURCING, PURCHASING & CONTRACT MANAGEMENT. (3) This is an advanced course that aims to educate students about strategic considerations and complex decision-making processes in sourcing, purchasing and contract management. The course broadens and enhances students' knowledge and skills to manage related issues through a mixture of lectures and case analyses and discussions. Students will learn how to systematically and effectively approach complicated supply chain management problems on strategic sourcing, supplier selection, and contract design by integrating and applying the knowledge, analytics skills, and ways of thinking that they acquired in prior SCM coursework. Prereq: Student must complete MKT 630 and MKT 631.

MKT 637 NEGOTIATION IN THE SUPPLY CHAIN. (3) This course focuses on developing your negotiating skills and making you a more confident negotiator. By the conclusion of this course, you will have improved your ability to diagnose negotiation situations, strategize and plan upcoming negotiations, and engage in more fruitful negotiations, even in situations where you are dealing with difficult negotiation partners. Prereq: Only students enrolled in the MS Supply Chain Management program are eligible to take this course.

MKT 740 INDUSTRY PROJECT. (3) This is a team-based industry project course where collaborative teams of Supply Chain Engineering and Supply Chain Management students are paired with a company or organization. Each company or organization provides the team with a supply chain related problem of importance. Student teams are co-advised by Engineering and Business faculty who have direct contact with the company. The faculty co-advisers will mentor and guide each team to work together collaboratively to propose solutions for a real-world supply chain problem with an industry partner. Prereq: Only students enrolled in the MS Supply Chain Management are eligible to take this course. Student must complete all eight core courses and maintain a good standing.

PA 602 STRATEGIC PLANNING AND ORGANIZATIONAL CHANGE IN THE PUBLIC AND NONPROFIT SECTORS. (3) This course focuses on the potential for change and future directions for public and nonprofit organizations. It covers the basics of strategic planning for organizations providing public value and operating in a political context. It addresses such topics as environmental assessments, stakeholder analysis, identification of strategic issues, strategy formulation and implementation, performance measurement and evaluation, and key features of organizational change processes. Prereq: PA 621 and PA 651, Admission to Martin School Program or consent of instructor.

SCE 614 SUSTAINABLE PRODUCTION SYSTEMS AND SUPPLY CHAINS. (3) This course aims to provide students with an understanding of the sustainability opportunities and challenges facing manufacturing systems and supply chains. Students will be introduced to the 6R-based approach to sustainable manufacturing and the importance of product-process-system (manufacturing system, and supply chain) integration for improving sustainability performance. Students will also learn tools and techniques that can be used to model, measure and evaluate manufacturing systems and supply chains to improve economic and environmental performance while meeting the needs of consumers, employees, and other stakeholders will be covered.