

# Supply Chain Management (SCM)

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Course information contained within the Bulletin is accurate at the time of publication in June 2025 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

## **SCM 3505. Lean Six Sigma in Supply Chain Management. 3 Credit Hours.**

This course develops students' knowledge and application of different methodologies, systems and tools, to address the managers' drive for efficiency, effectiveness, and quality. By identifying, examining, and improving these gaps through root-cause analysis and continuous improvement methodologies, the supply chain - or any other process - can correct current issues and position itself for future successes. This course introduces students to these critical skills and tools and demonstrates appropriate application to real-world challenges. This course is ideal for any FOX undergraduate student (but especially HRM, Risk, Health Care, Marketing, SCM) and non-Fox students (prerequisite is a 2000-level statistics class) as it applies basic management decision tools to a variety of challenges.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (any 2000-level STAT course or 'Y' in CRST07)

## **SCM 3506. Project Management. 3 Credit Hours.**

This course delivers a strategic overview of Project Management tools, approaches and concepts. It covers both the top-down and detailed practitioner points-of-view by following the life-cycle approach to managing projects. The course progresses through the Phases of Initiation, Planning, Execution, Monitoring and Control, and Closure. (I-P-E-M&C-C). Each phase will be examined to understand its purpose, deliverables, and relevant tools to ensure successful project progression. The focus is to gain an understanding of project management basics, challenges, and solutions for both project and business leaders. A group research project is required.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (MSOM 3101 (may be taken concurrently) or MSOM 3901 (may be taken concurrently))

## **SCM 3507. Data Management and Analytics for Business Strategies. 3 Credit Hours.**

With significant advances in technology, most organizations collect enormous amounts of data, ranging from markets to customers. Managing data on this scale and converting it into knowledge to facilitate decision making presents exciting new challenges. The underlying principles of data management are often similar, whether used in data analytics and business intelligence, enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM), and other aspects of business. This course provides a practical introduction to the fundamental principles of data management in the context of business strategy. The course focuses first on how to store, extract, and manipulate data in order to answer questions and gain insights from it. Then, in part two, the emphasis shifts to practical, applied, forecasting techniques that begin with realistic types of data, beginning with ETL (extract, transform, load) and move on to produce accurate forecasts from the data that have been obtained.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (MSOM 3101 (may be taken concurrently) or MSOM 3901 (may be taken concurrently))

## **SCM 3515. Principles of Supply Chain Management. 3 Credit Hours.**

Operations and Supply Chain Management is the art and science of integrating the flow of products, information and money through the pipeline from the sources to the end customers. The goal of the course is to provide an understanding of the fundamental principles and activities occurring in the supply chain and to prepare students with a basic knowledge of activities within the supply chain.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (MSOM 3101 (may be taken concurrently), MSOM 3901 (may be taken concurrently), 'Y' in CRMO01, or 'Y' in CRMO02)

## **SCM 3516. Transportation and Logistics Management. 3 Credit Hours.**

Transportation, distribution, logistics, or supply chain management all refer to the process by which companies move material, parts, and products to their customers. Proper planning and scheduling are crucial to efficient operations and customer satisfaction. Transportation management encompasses planning goods movements across its different modes – truck, rail, water, air and pipeline. This course provides students with a basic familiarity to the important issues, concepts and models for analyzing different transportation functions. The focus will be on presenting information about, and providing access to, available tools and techniques that ensure a smooth flow and distribution of goods in the industry today. The course uses both quantitative and spatial techniques for proper decision making – specifying how, when and where to transport goods; selection of appropriate location of warehouses and distribution points; selection of route and carriers; and understanding of logistics and distribution costs.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (MSOM 3101, MSOM 3901, 'Y' in CRMO01, or 'Y' in CRMO02)

**SCM 3517. Inventory and Warehouse Management. 3 Credit Hours.**

A key decision in manufacturing, retail and some service industry businesses is how much inventory to keep on hand satisfying the customer needs. Inventory is often a business's largest asset and not having enough inventories means losing sales, while holding too much inventory is expensive; therefore an efficient inventory control system is very important in any business. This course develops students' skills for quantitative and analytical thinking in the general areas of Operations, Logistics, Supply Chain Management, and Managing Global and Service Operations by developing analytical skills and an ability to make "data-driven" decisions. This course is a required course for the SCM Major and SCM Minor.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (MSOM 3101, MSOM 3901, 'Y' in CRMO01, or 'Y' in CRMO02)

**SCM 3518. Sourcing and Procurement. 3 Credit Hours.**

This course introduces students to the fundamental concepts, tools and techniques in purchasing that will make them aware of the demands placed on supply chain managers, understand the strategic nature of purchasing, understand the impact of purchasing on the competitive success and profitability of modern organizations and finally, secure better job prospects and superior on-the-job performance. This course develops students' skills for quantitative and analytical thinking and ability to make "data-driven" decisions. This course is the capstone course for the SCM Major and is required as part of the SCM Minor.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Supply Chain Management.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (SCM 3515 or 'Y' in CRSC01) and (SCM 3516 or 'Y' in CRSC02)

**SCM 3580. Special Topics in Supply Chain Management. 3 Credit Hours.**

Course addresses current topics in the field of supply chain management.

**Course Attributes:** SI

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in (MSOM 3101 or MSOM 3901)

**SCM 3581. SCM Internship/Co-Operative Experience. 3 Credit Hours.**

This internship or co-operative experience is reserved for Supply Chain Management (SCM) majors, having at least a Junior Level Status (completion of core), with 3.0 GPA or better. The course counts as a SCM elective; therefore, a supply-chain focus (as evidenced in the final deliverable) is required. At a minimum, students should have taken SCM 3515 and SCM 3516.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Supply Chain Management.

**Class Restrictions:** Must be enrolled in one of the following Classes: Junior 60 to 89 Credits, Senior 90 to 119 Credits, Senior/Fifth Year 120+ Credits.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in SCM 3515 and SCM 3516.

**SCM 3582. SCM Independent Study. 1 to 6 Credit Hour.**

Independent studies allow students the opportunity to work with an individual professor to take on advanced study in the Supply Chain Management major. Typically, students take independent study(ies) as juniors or seniors after they have completed the majority of the requirements for the major; students should demonstrate a drive for academic excellence (evidenced in a GPA above 3.0). Students need to find a professor who is willing to work with them on the independent study.

**Pre-requisites:** Minimum grade of C in SCM 3515 and SCM 3516.

**SCM 3596. Sourcing and Procurement. 3 Credit Hours.**

Globalization and increased competition with fluctuating price and availability of raw materials have increased the need for better supplier management. A company's supply chain consists of various entities, including suppliers, manufacturers, distributors, logistics providers, and retailers to fulfill a customer's demand. Sourcing is identifying potential suppliers or manufacturers for a specific product or service, while procurement involves validating, negotiating, finalizing, and purchasing from the source. Both sourcing and procurement are important activities for any organization as it helps in significantly reducing the overall costs, improving the product quality, and shortening the product time to market.

**Course Attributes:** SI, WI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in SCM 3515 and SCM 3516.

**SCM 5101. Supply Chain Analytics. 3 Credit Hours.**

Supply chain analytics is unique and, to some degree, represents a paradox because it is concerned with one of the oldest and also the most newly discovered activities of business. This course will assist you in understanding the importance of data in the supply chain and how organizations can gain competitive advantage using the analytics tools at various stages in the supply chain. This course includes applications of the tools learned in earlier courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**SCM 5102. Supply Chain Logistics and Distribution. 3 Credit Hours.**

This course will cover the three important building blocks of an effective supply chain - transportation, inventory, and warehousing management. Have you ever wondered how Amazon pulls off that last-minute birthday gift or home article at your doorstep when you need it? Answer - it is made possible due to a well-developed network of transport systems, smart technologies and dedicated personnel. This course will begin with an overview of the freight logistics. It will enable you a broader understanding of the five primary modes of freight transportation and how freight moves at the domestic and international level. You will get acquainted with different transportation market structures, cost structures, and pricing strategies. You will learn about the new and innovative sustainability efforts currently underway in transportation, and lastly, study some of the quantitative tools and techniques required for designing transport networks to achieve cost minimization while meeting the customer demand. After learning about the freight transportation systems, the course will delve into some inventory management philosophies, and their quantitative and qualitative aspects. When thinking of Amazon, you may imagine that there are a number of factors that go into serving up the right product to the right customer! While transportation is one of them, inventory management is a large part of their business. In this part of the course, you will learn the mathematical models used for inventory ordering and replenishment decisions. You will critically approach inventory management decisions when faced with uncertainties. You will also acquaint yourselves with good warehousing practices that leads to new market opportunities while meeting customer demands and expectations. Understanding the different material, information, people management tools, and examining the costs and benefits associated with different warehousing designs and processes will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**SCM 5103. Strategic Sourcing and Procurement. 3 Credit Hours.**

Many forces, such as globalization, new technologies, new materials, government policy and regulations, political and economic unrest, environmental change and better informed consumers, all must be considered for their impact on the procurement and steady supply of the materials and services a firm needs to operate. A company's supply chain consists of various entities, including suppliers, manufacturers, distributors, logistics providers, and retailers to fulfill customer demand. Aside from the acquisition of materials, strategic procurement is also responsible for securing and maintaining the various relationships among and across this chain, such as third-party logistics providers and contract manufacturers. Sourcing is identifying potential suppliers, while procurement involves purchasing from those sources, with a goal of corporate strategy congruence. The proposed sourcing and procurement course will: Provide an understanding and hands-on practice of how firms organize for strategic procurement, pass through the sourcing process (from development of a procurement strategy, through understanding the environments surrounding material and service needs, through source identification, selection, and monitoring), ending with supplier development; Address what firms must do to achieve a competitive advantage from their procurement and sourcing processes, with a focus on the impact of procurement and related supply chain decisions on supply chain finance; Show how firms build enduring supply chain relationships across the entire supply chain; Expand beyond traditional boundaries of for-profit to for-profit procurement to explore non-profit and government procurement; Focus on areas such as but not limited to sustainability, risk management and supplier diversity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**SCM 5182. Independent Study. 1 to 3 Credit Hour.**

Study in particular aspects of supply chain management under the direct supervision of a graduate faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.