

Supply Chain Management (SCM)

Course information contained within the Bulletin is accurate at the time of publication in July 2024 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

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.