

Supply Chain and Operations

Overview

Supply Chain and Operations (SCO) involve the design and management of seamless, value-added processes to meet the needs of end customers. This encompasses decisions related to strategic planning, sourcing, making, delivering, and returning products and services. These decisions cut across national boundaries and effect broad organizational issues like corporate and social responsibility.

A specialization in SCO provides skills in managing the flow of raw materials, finished goods, information and services to deliver maximum value to the consumer. Rather than focusing on any single facet of delivering a product or service to the customer, SCO covers the entire network from suppliers to customers. This specialization is designed to be flexible, with a wide range of course offerings to reflect the diversity of career opportunities.

An SCO position may include any or all of the following, depending on the size and complexity of the organization:

- selecting and developing suppliers
- designing and implementing systems and processes for improving the customer interface
- reducing transaction costs, and improving service levels
- sourcing materials, components, technologies, and services
- designing and managing the development of new products
- monitoring and managing inventory at all steps of the supply chain
- managing logistics, warehouses, distribution inventories, and service parts
- managing internal operations or service functions
- managing quality, six sigma, and lean projects throughout the supply chain
- strategically analyzing the supply chain to increase revenues, improve service, reduce cost, and create competitive advantage

Successful candidates can lead, analyze, manage, and improve end to end business processes using strategic thinking and analytical skills. The ability to understand global management issues is also important since supply chain management activities traverse national boundaries. Most employers seek students that possess strong leadership skills and the ability to work effectively in teams.

Companies from a variety of industries come to the Carlson School seeking graduates with expertise in supply chain and operations. Consulting, manufacturing, retail, service and transportation companies make up the majority of recruiters. Some recruiters/organizations seek students with information systems knowledge in addition to supply chain. Others seek a strong finance, marketing, operations or strategic management combination together with supply chain knowledge.

Supply Chain and Operations: Recommended Courses

Because the field of SCO is broad, the emphasis includes a wide range of courses that can be combined to best fit an individual student's career aspirations and interests. The total credits required for an emphasis is 12, or 10 credits for students engaged in a related Enterprise experience. Courses are grouped into two categories: foundational and electives. The foundational courses serve as an entry point into different aspects of SCO. Electives provide deeper coverage of special topics.

Foundational Courses (choose at least 4 credits):

- SCO 6045:** Strategic Sourcing (2 credits)
- SCO 6048:** Logistics & Transportation (2 credits)
- SCO 6072:** Managing Technologies in the Supply Chain (2 credits)
- SCO 6091:** Process Improvement Methods (2 credits)

SCO Electives:

- SCO 6041:** Project Management (2 credits)
- SCO 6051:** Service Management (2 credits)
- SCO 6081:** Global Operations Strategy (4 credits)
- SCO 6090:** Sales, Inventory & Operations Planning (2 credits)
- SCO 6092:** Supply Chain Risk and Security (2 credits)
- SCO 6094:** Responsible Supply Chain Management (2 credits)
- SCO 6095:** Supply Chain Management in the Food & Agribusiness Sector (2 credits)
- SCO 6096:** Supply Chain Management in the Healthcare & Medical Devices Sector (2 credits)
- SCO 6097:** Supply Chain Management in the Retail Sector (2 credits)
- SCO 6098:** Operations Excellence via Lean Thinking (2 credits)
- SCO 6191:** Big Data Analytics in Supply Chains (2 credits)
- SCO 6192:** Supply Chain Finance (2 credits)
- SCO 6850:** Topics in Operations Management and Management Science (credits vary)

In addition to SCO courses, one might consider other complementary disciplines such as marketing, operations, information systems, finance or strategy and organization for further course work. The following courses have particular relevance for students emphasizing in supply chain and operations.

- IDSc 6423** Enterprise Systems (2 credits)
- IDSc 6442** E-Sourcing and E-Auctions (2 credits)
- IDSc 6465** Global Sourcing of IT and IT Enabled Services (4 credits)

Supply Chain & Operations Specialization

MKTG 6060 Distribution and Supply Chain Systems (4 credits)
MKTG 6075 Pricing Strategy (4 credits)
MGMT 6004 Negotiation Strategies (2 credits)
MGMT 6031 Industry Analysis and Competitive Strategy (4 credits)
MGMT 6032 Strategic Alliances (2 credits)
MGMT 6084 Management of Groups (2 credits)
FINA 6242 Advanced Corporate Finance Analysis and Decisions (4 credits)

Please note, not all courses listed above are offered every semester. Use the [One Stop Class Schedule](#) to verify each semester's course offerings and the assigned professor.

Additional Course Resources: access elective course descriptions ([executive summaries](#)) and [schedules](#) of when courses are traditionally offered.