

SUPPLY CHAIN MANAGEMENT

Supply chain management is an integrated program of study concerned with the efficient flow of information, materials, and products within and among organizations. Supply chain management involves the integration of business processes across organizations, from material sources and suppliers through manufacturing, and processing to the final customer. The program's balanced approach includes courses in the three core areas of supply chain management: procurement, operations, and logistics. Students will develop knowledge related to a wide variety of supply chain activities, including demand planning, purchasing, transportation management, warehouse management, inventory control, material handling, product and service support, information technology, and strategic supply chain management.

Undergraduate Major in Supply Chain Management

For undergraduate curriculum in business, major in supply chain management.

The Department of Supply Chain Management offers a major in supply chain management. Students will complete the general education requirements (including business foundation courses), business core requirements for the Bachelor of Science (B.S.) degree, and 18 additional credits in the major.

The instructional objective of the supply chain management major is to prepare students for professional careers in logistics analysis, plant management, procurement, warehouse management, sustainable supply chain management, and consulting. The curriculum provides the required theoretical and conceptual base and analytical methods for making sound operational and strategic business decisions related to all activities in a supply chain.

For more information on the undergraduate major in Supply Chain Management, please visit: <https://www.ivybusiness.iastate.edu/academics/undergraduate-programs/supply-chain-management/>. (<https://www.ivybusiness.iastate.edu/academics/undergraduate-programs/supply-chain-management/>)

Student Learning Outcomes

Upon graduation, undergraduate students majoring in Supply Chain Management will:

1. Be effective communicators.
2. Be effective collaborators.
3. Be problem solvers.
4. Understand business concepts.
5. Recognize ethical and legal responsibilities to organizations.

Curriculum:

In addition to the basic business degree requirements (<https://catalog.iastate.edu/collegeofbusiness/#curriculuminbusiness>), Supply Chain Management majors must also complete:

Required Courses (15 credits):

SCM 4240	Process Management, Analysis, and Improvement	3
SCM 4530	Supply Chain Planning and Control	3
SCM 4600	Decision Tools for Logistics and Operations Management	3
SCM 4610	Principles of Transportation	3
SCM 4860	Principles of Purchasing and Supply Management	3

Elective Courses (3 credits):

Select one elective from the following list:

SCM 3400	Project Management	3
SCM 4280	Special Topics in Operations Management *	3
SCM 4300	Supply Chain Analytics	3
SCM 4340X	Implementing Process Improvement	3
SCM 4400	Supply Chain Information Systems	3
SCM 4500	Enterprise Resource Planning Systems in Supply Chain	3
SCM 4620	Transportation Carrier Management	3
SCM 4660	Global Trade Management	3
SCM 4710	Sustainable Supply Chain Management *	3
SCM 4730	War and Peace and Supply Chains	3
SCM 4910	International Live Case and Study Tour	3
SCM 4950	Executive Analysis and Presentations #	3

* Courses not offered on a regular basis. Students should consult with their academic advisor about terms of offering.

Only 3 credits of SCM 4950 may count as a Supply Chain Management major choice elective.

The X designation after a course number indicates this is an experimental course offered by the Department. Although in an experimental phase, these courses are open for registration just the same as permanent courses listed in the course catalog and count as elective choices in the major.

Students are limited to three business majors/degrees/minors within the Ivy College of Business. This limit is on business majors/degrees/minors only and does not apply to multiple majors/degrees/minors taken outside the Ivy College of Business.

Supply Chain Management, B.S.

Sample 4-Year Plan (Your plan may differ)

Freshman

Fall	Credits Spring	Credits
BUSAD 1020 or 1030	1 ECON 1020	3
ECON 1010	3 STAT 2260	3
COMS 1130	3 US Diversity [#]	3
ENGL 1500	3 ACCT 2840	3
MATH 1500	3 SPCM 3120	3
LIB 1600	1 BUSAD 2030	1
	14	16

Sophomore

Fall	Credits Spring	Credits
ACCT 2850	3 SCM 4610	3
SCM 3010	3 Core Business Course	3
MATH 1510	3 ACCT 2150	3
ENGL 2500	3 PHIL 2300	3
Natural Science	3 HUM/SOC SCI	3
	15	15

Junior

Fall	Credits Spring	Credits
SCM 4860	3 SCM 4240	3
Core Business Courses	6 SCM 4600	3
Global/International Perspective [@]	3 Core Business Course	3
HUM/SOC SCI	3 Global/International Perspective [@]	3
	General Elective	3
	15	15

Senior

Fall	Credits Spring	Credits
SCM 4530	3 SCM Elective	3
Core Business Courses	6 HUM/SOC SCI	3
ENGL 3020	3 MGMT 4780 [*]	3
General Elective	5 General Electives	6
	17	15

Total Credits: 122[@] Courses in these requirements may also be used as Global Perspective.[#] US Diversity courses may be used to satisfy HUM/SOC SCI.^{*} Must have credit or enrollment in all core courses listed above, except for MGMT 3720, plus senior standing, in order to enroll in MGMT 4780.

Graduation Requirements:

1. Grade of "C" or higher in at least 30 credits of Core and Major courses.
2. 42 credits of 3000+ level courses from a four-year institution.
3. 50% of required Business courses must be earned at ISU.
4. At least 32 credits and the LAST 32 credits must be earned at ISU (exceptions for study abroad and internship may be requested).
5. 122 Credits minimum and a Cumulative GPA of at least 2.00 with no quality point deficiencies.
6. A grade of C or better in ENGL 2500 required, and also in one other required ENGL course.
7. All 3000-level and higher business credits must be earned at a four-year college.
8. Multiple business **majors** must have at least 15 distinct credits in each of the major requirements; when applicable, one course can be shared between business majors; see your advisor regarding multiple business **degree requirements**.

Undergraduate Minor in Supply Chain Management

The Department of Supply Chain Management also offers a minor for non-Supply Chain Management majors in the Ivy College of Business. The minor requires 15 credits from an approved list of courses, including at least 6 credits in courses numbered 3000 or above taken at Iowa State University with a grade of C or higher. The minor must include at least 9 credits that are not used to meet any other department, college, or university requirement. Students with declared majors have priority over students with declared minors in courses with space constraints.

Required Courses (6 credits):

SCM 3010	Supply Chain Management	3
SCM 4860	Principles of Purchasing and Supply Management	3

Elective Courses (9 credits):

Select one elective course from:

SCM 4240	Process Management, Analysis, and Improvement
SCM 4500	Enterprise Resource Planning Systems in Supply Chain
SCM 4530	Supply Chain Planning and Control

Select one elective course from:

SCM 4600	Decision Tools for Logistics and Operations Management
SCM 4610	Principles of Transportation
SCM 4620	Transportation Carrier Management

SCM 4660	Global Trade Management
SCM 4730	War and Peace and Supply Chains

Select one additional elective course from either section above.

Students are limited to three business majors/degrees/minors within the Ivy College of Business. This limit is on business majors/degrees/minors only and does not apply to multiple majors/degrees/minors taken outside the Ivy College of Business.

For more information on the undergraduate minor in Supply Chain Management, please visit: <https://www.ivybusiness.iastate.edu/academics/undergraduate-programs/minors-and-certificates/>. (<https://www.ivybusiness.iastate.edu/academics/undergraduate-programs/minors-and-certificates/>)

Graduate Programs

The Department of Supply Chain Management participates in the full-time and part-time Master of Business Administration (MBA) and in the Ph.D. in Business and Technology programs. The department also participates in the interdepartmental M.S. in Transportation program.

Master of Business Administration (MBA)

The MBA program is a 48-credit, non-thesis, non-creative component curriculum. Thirty of the 48 credits are core courses and the remaining 18 are graduate electives. Within the MBA program, students can obtain a specialization in Supply Chain Management or Healthcare Analytics and Operations.

Student Learning Outcomes

Upon graduation, MBA students will:

1. Demonstrate effective communication skills.
2. Effectively lead and work in diverse teams.
3. Critically solve business problems.
4. Integrate ethical and global perspectives in decision making.

For more information about the MBA program with a specialization in Supply Chain Management or Healthcare Management and Operations, please visit: <https://www.ivybusiness.iastate.edu/academics/graduate-programs/ivy-mba/>. (<https://www.ivybusiness.iastate.edu/academics/graduate-programs/ivy-mba/>)

Masters in Healthcare Analytics and Operations (MHAO)

Students graduating from the Masters in Healthcare Analytics and Operations program will apply data and appropriate models to analyze operations and supply chains to develop and present actionable insights leading to better outcomes in the healthcare industry. Healthcare analytics uses historical and current data to predict trends and optimize operations, bringing benefits to patients, medical professionals, and healthcare supply chain partners.

For more information about the Masters in Healthcare Analytics and Operations program, please visit: <https://www.ivybusiness.iastate.edu/academics/graduate-programs/master-of-healthcare-analytics-and-operations/>. (<https://www.ivybusiness.iastate.edu/academics/graduate-programs/master-of-healthcare-analytics-and-operations/>)

Double Graduate Degree

The Department of Supply Chain Management participates in one double degree program at the graduate level. Students can simultaneously pursue a double degree in Master of Business Administration (MBA) and Master of Healthcare Analytics and Operations (MHAO). The Double Degree plan allows students to share credits between the degrees. See the Director of Graduate Education for more details on sharing credits.

For more information on the double degree in Master of Business Administration (MBA) and Master of Healthcare Analytics and Operations (MHAO), please visit: <https://www.ivybusiness.iastate.edu/academics/graduate-programs/double-degree-options/>.

Ph.D. in Business and Technology

The PhD in Business and Technology is a 56-credit curriculum (minimum) that culminates in a dissertation. Students may select Supply Chain Management (SCM) as their major area of specialization. The primary objective of the SCM specialization is to prepare students for careers in research universities. The SCM domain is broad and includes the design, development and control of business processes for the conversion of inputs into outputs and distribution of those outputs. The traditional focus of SCM was on integration of processes across multiple functions within the firm—operations management, logistics, and purchasing primarily, with elements of marketing and information systems also included. However, in today's world, with competition across supply chain networks, SCM also involves integrating business processes across firms. Research in this area is therefore interdisciplinary in nature and addresses both intra- and inter-organizational issues.

Ph.D. core curriculum	6
Doctoral seminars and research practicum in the area of specialization	14
Minor area (9 cr.) plus electives (3 cr.)	12
Research methods courses	12
Dissertation	12
Total Credits	56

Student Learning Outcomes

Upon graduation, Ph.D. students will be able to:

1. Understand and advance knowledge.
2. Create knowledge through original research.
3. Teach effectively in an institution of higher education.

For more information about the PhD program with a specialization in Supply Chain Management, please visit: <https://www.ivybusiness.iastate.edu/academics/phd-program/supply-chain-management/>. (<https://www.ivybusiness.iastate.edu/academics/phd-program/supply-chain-management/>)

Graduate Certificate

The online graduate certificate in Supply Chain Management will provide foundational concepts and applied technical skills that supply chain professionals need to effectively manage a global supply chain.

The certificate is for working professionals as well as students enrolled in graduate programs who are employed or seeking a career as a business analyst, supply chain analyst, or who want to move into a supply chain position.

For more information about the graduate certificate in Supply Chain Management, please visit: <https://www.ivybusiness.iastate.edu/academics/graduate-programs/graduate-certificates/supply-chain-management/>. (<https://www.ivybusiness.iastate.edu/academics/graduate-programs/graduate-certificates/supply-chain-management/>)