

SUPPLY CHAIN ANALYTICS - MASTER OF SCIENCE (MS)

The supply chain management master's degree provides students with the expertise needed to manage business supply chains in the global economy. This ten-month program includes extensive coursework which prepares students for a range of job opportunities. In addition to the academic coursework, four enrichment seminars in topics ranging from teamwork and leadership to ethics and corporate social responsibility support our commitment to developing the "whole student" by incorporating professional development into the academic experience.

Based on an "action learning" model, the program is designed to provide hands-on supply chain project management experience, amplified by shared experiences with other students.

Graduates will be prepared for responsible and influential jobs in a variety of organizations, including large manufacturing, retail and distribution organizations; transportation companies; supply chain software companies; and supply chain consulting firms.

Distance Education Option via Online+

Students may enroll in the MS Business Analytics (BUAN) or MS Supply Chain Management degree program through distance education (online) and complete the degree requirements established for each MS program. Distance education offers regularly scheduled on-campus graduate courses to remote off-campus (distance) students using advanced virtual and video-conferencing technology. Distance students participate both synchronously (at a scheduled delivery time) and asynchronously (no scheduled delivery time). Instructors, courses, assignments, projects, exams and evaluations are identical for on-campus and off-campus students. Online+ courses are term-based (i.e., follows the regular academic schedule) and structured to maximize student engagement with faculty and other online+ students to support student success and degree completion.

Designed for working professionals, the online option allows students to enroll part-time and follows the same curriculum as the on-campus degree option. Please see degree requirements and plan(s) of study specific to business analytics or supply chain management. Based on circumstance and timeline to degree completion, students enroll in one or two courses each semester, completing the degree in two years. For more information, connect with the individual graduate program directly.

Requirements

Admission Requirements

Admissions guidelines and application details are outlined on the master's programs admissions (<https://www.colorado.edu/business/ms-programs/masters-programs-admissions/>) website. Admission to the program may recommend or require preparation or refresher courses in statistics, math and business.

Experiential Projects

The experiential project pairs students with clients in industry to work on important practical problems in supply chain management. Students work under the supervision of faculty and meet together weekly to discuss progress, jointly work on problems and to share experiences. This

hands-on project management experiences prepares graduates to make an immediate meaningful contribution in the workplace.

For additional information, please visit Leeds School Graduate Programs (<http://www.colorado.edu/business/ms-programs/>) or email leedsgrad@colorado.edu.

Course Requirements

Code	Title	Credit Hours
Required Courses		
MSBX 5405	Structured Data Modeling and Analysis	3
MSBC 5070	Survey of Business Analytics	3
MSBX 5410	Fundamentals of Data Analytics	3
MSBX 5435	Planning and Production	1.5
MSBX 5450	Transportation and Logistics	3
MSBC 5460	Supply Chain Strategy	3
MSBX 5470	Procurement and Contracting	1.5
MSBC 5480	SCMN Experiential Projects	3
MBAX 6843	Supply Chain and Operations Analytics	3
MSBC 5180	Machine Learning in Python	3
Electives ¹		6
MSBX 5415	Advanced Data Analytics	
MSBC 5680	Optimization Modeling ²	
MBAX 6330	Market Intelligence ²	
MSBC 5020	Financial Accounting ²	
MBAX 6560	Executive Leadership ²	
MBAX 6410	Process Analytics ³	
MBAX 6440	Project Management ³	
MBAX 6530	Negotiating and Conflict Management ³	
MSBX 5310	Customer Analytics ³	
MSBX 5420	Unstructured and Distributed Data Modeling and Analysis ³	
MBAX 6801	Global Perspectives Seminar ³	
MBAX 6350	Digital Marketing ³	
MBAX 6360	New Product Development ³	
MBAX 6450	International Operations Management	
MSBC 5190	Modern Artificial Intelligence: Introduction to AI for Business	
Total Credit Hours		33

¹ Elective coursework may be completed in either fall or spring semester; course availability will vary by term.

² Usually offered in fall.

³ Usually offered in spring.

Plan of Study

The sample one-year plan of study found below is restricted to students who are not working professionals. Students who are working professionals enrolled in the online+ degree will engage a two-year plan of study. For more information, contact the department.

Year One

Summer Review		Credit Hours
MSBX 5410	Fundamentals of Data Analytics	3
MSBC 5070	Survey of Business Analytics	3
Credit Hours		6
Fall Semester		
MSBX 5405	Structured Data Modeling and Analysis	3
MSBX 5450	Transportation and Logistics	3
MSBC 5460	Supply Chain Strategy	3
MSBC 5180	Machine Learning in Python	3
Elective (see Requirements tab)		3
Credit Hours		15
Spring Semester		
MSBX 5435	Planning and Production	1.5
MSBC 5480	SCMN Experiential Projects	3
MBAX 6843	Supply Chain and Operations Analytics	3
Elective (see Requirements tab)		3
MSBX 5470	Procurement and Contracting	1.5
Credit Hours		12
Total Credit Hours		33

Learning Outcomes

By the completion of the program, students will be able to:

- Manage, analyze and interpret supply chain risks, and create strategies to minimize costs while improving efficiency.
- Work as part of cross-functional global teams to address supply chain challenges involving suppliers, logistics and manufacturing.
- Assess tradeoffs between onshore and offshore suppliers, calculating the impact on inventory, costs and service levels.
- Assess the societal and environmental impacts of logistics, with a focus on ethical decision-making in supply chain operations.
- Interpret the role of forward/reverse logistics and recommend strategies to enhance sustainability and ethical outcomes in supply chains.
- Demonstrate effective oral and written communication skills by presenting data-driven insights and persuasive executive summaries to stakeholders.
- Interpret industry data and perform structured analysis to develop recommendations for outsourced manufacturing, network design, procurement and spend analysis.
- Recognize key terms and apply methods to solve supply chain problems related to logistics, demand forecasting, and inventory management.
- Develop models and analyze data to solve logistics problems and make informed decisions about inventory and demand forecasts.