BUSINESS ANALYTICS - MASTER OF SCIENCE (MS)

The MS degree in business analytics focuses on the exciting and fast-growing field of "big data." Merging developments in marketing and customer analytics with operations research, business analytics, aspects of computer science and statistical methods, the specialization offers a technical, quantitative and statistically intensive program designed to train specialists in turning "big data" into business decisions. Analytics may be used as input for human decisions or may drive fully automated decisions about why some data pattern is observed, what will happen next and how a firm can adapt to optimize that outcome. Students have an option to customize their curriculum by specializing in marketing, decision science or security analytics.

This 10-month program includes extensive coursework and an application of materials, preparing 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.

Distance Education Option

Students can take individual courses toward a master's degree or graduate certificate through distance education (online). For more information, connect with the individual graduate program directly.

Requirements

Tracks

The MS in Business Analytics offers three tracks to develop analytic skills in specific disciplines: marketing analytics, decision science and security analytics. Learn more on the Plan(s) of Study tab.

Experiential Projects

The experiential project pairs students with clients in industry to work on important practical problems in business analytics. 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 analytics project management experience 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 us at leedsgrad@colorado.edu.

Code	Title	Credit Hours
Core Courses		
MSBC 5070	Survey of Business Analytics	3
MSBC 5080	(Machine Learning in Python)	3
MSBX 5410	Fundamentals of Data Analytics	3
MSBC 5030	Quantitative Methods	3
MSBX 5405	Structured Data Modeling and Analysis	3
MSBX 5415	Advanced Data Analytics	3
MSBX 5420	Unstructured and Distributed Data Modeling and Analysis	3
MSBC 5490	BUAN Experiential Projects	3
Electives		
Students will enroll in three of the following track-specific electives		9
Marketing Analytics		
MBAX 6330	Market Intelligence	
APRD 6342	Digital Advertising	
MSBX 5310	Customer Analytics	
APRD 6343	Applications of Advanced Statistical Techniques in Advertising	
Decision Sciences		
MSBC 5680	Optimization Modeling	
APPM 5720	Open Topics in Applied Mathematics (Numerical Linear Algebra)	
STAT 5540	Introduction to Time Series	
MBAX 6410	Process Analytics	
Security Analytics		
MSBX 5480	Information Security Management	
CYBR 5010	Fundamentals of Data Communication	
MSBX 5500	Security Analytics with Python and Machine Learning	
CYBR 5320	Cybersecurity Network Analytics	
Total Credit Hours		33

Plans 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 may choose from two-, three- and four-year plans of study. For more information, contact the department.

Course	Title	Credit Hours
Year One		
Summer Review		
(Summer B)		
MSBC 5070	Survey of Business Analytics	3
MSBX 5410	Fundamentals of Data Analytics	3
	Credit Hours	6
Fall Semester		
MSBC 5030	Quantitative Methods	3
MSBX 5405	Structured Data Modeling and Analysis	3
MSBC 5080	Machine Learning in Python	3
One track-specific elective [1]		3
	Credit Hours	12
Spring Semester		
MSBX 5415	Advanced Data Analytics	3
MSBX 5420	Unstructured and Distributed Data Modeling and Analysis	3
MSBC 5490	BUAN Experiential Projects	3
Two track-specific electives [1]		6
	Credit Hours	15
	Total Credit Hours	33

[1] See the Requirements tab for track-specific elective options.