

BUSINESS ANALYTICS AND RISK MANAGEMENT, MASTER OF SCIENCE

The STEM-designated Master of Science in Business Analytics and Risk Management (BARM) full-time program equips students to improve decision-making processes based on a rigorous treatment of data and information. Students gain knowledge on different types of analytics methodologies and tools used to acquire and analyze data, derive insights from the data, and effectively communicate the results for better decision-making in a volatile business environment. This program is designed to teach ways to: quantify multiple dimensions of hard business problems; analyze the structure and data related to those problems; and create rigorous approaches based on that analysis to guide business decisions. Coursework provides exposure to business analytics, risk management principles, and necessary tools that enable students to make better decisions for themselves and their organizations.

An MS in Business Analytics and Risk Management provides graduates with the tools and knowledge to:

- Convert raw data into useful information
- Present that information in compelling ways
- Use information to understand complex decision settings
- Create rigorous approaches to problem-solving
- Construct persuasive arguments based on careful analysis
- Use information to diagnose problems
- Use analysis to prescribe approaches to improve performance
- Develop ways to predict future performance
- Improve decision-making at all levels
- Add value to any organization in need of more analytical expertise
- Develop a thorough understanding of risk
- Protect shareholder value by managing the downside of risk

Program Requirements

The program requires 36 credits. Full-time MS students must complete the program in 3 semesters: fall, spring, and summer. Course waivers are not granted in this program.

Curriculum

The MS in Business Analytics and Risk Management (BARM) program curriculum includes the following courses: The course sequence and availability of specific electives may vary. Students must consult with their academic advisor to ensure they take courses in the approved sequence. All courses are 2 credits.

Code	Title	Credits
Business Foundations		
BU.120.601	Business Communication	2
BU.131.601	Business Leadership and Human Values	2
BU.510.601	Statistical Analysis	2
Functional Core		
BU.520.601	Business Analytics	2
BU.510.650	Data Analytics	2
BU.520.650	Data Visualization	2

BU.680.620	Operations Management	2
STEM Courses		
BU.520.620	Advanced Business Analytics	2
BU.520.690	Analytics Consulting Project	2
BU.520.775	Practical Machine Learning	2
BU.510.615	Python for Data Analysis	2
Elective Courses		
Students must complete 7 elective courses. At least 4 of these courses must be from the Quantitative Electives section.		
<i>Quantitative Electives</i>		8
Select at least four of the following:		
BU.520.710	AI Essentials for Business	
BU.232.650	Continuous Time Finance	
BU.450.760	Customer Analytics	
BU.330.780	Data Science and Business Intelligence	
BU.330.760	Generative AI	
BU.232.701	Investments	
BU.610.615	Simulation for Business Applications	
BU.610.630	Pricing and Insuring Risk	
BU.450.740	Retail Analytics	
BU.610.710	Sustainable Supply Chains	
BU.610.760	Supply Chain Analytics	
BU.330.770	Database Management	
BU.330.740	Large Scale Computing on the Cloud	
<i>General Electives</i>		6
BU.231.720	Corporate Governance	
BU.610.705	Crisis Management	
BU.330.730	Cybersecurity	
BU.520.701	Enterprise Risk Management Frameworks	
BU.230.750	Financial Crises and Contagion	
BU.300.620	Managing Complex Projects	
BU.230.730	Managing Financial Risk	
Carey Elective - Students may fulfill ONE general elective with a Carey course for which they meet the prerequisites and enrollment criteria.		
Total Credits		36