BUSINESS ANALYTICS AND INTELLIGENCE, MBUSAI

Degree: Master of Business Analytics and Intelligence (MBusAI)

Program Overview

Weatherhead School of Management's Master of Business Analytics and Intelligence program is a 16-month, full-time curriculum designed to prepare students for data science and analyst roles in business. With a focus on evidence-based decision-making, the program offers a 36-credit-hour curriculum organized into three core areas: Business Foundations, Analytics Skills, and Business Applications.

Students work with real-world data from industry partners to gain cutting-edge analytics expertise and learn how to extract valuable insights for solving business challenges. The program emphasizes applications in Marketing and Operations; however, the skills acquired are applicable across various business functions and industries.

Through internships, one-on-one mentorships, and professional networking events throughout the year, students interact with industry partners to develop business connections needed to build networks for professional development and growth.

Learning Outcomes

- Students gain proficiency in analytical tools and models.
- Students excel at extracting data-driven insights for business problem-solving and decision-making.
- Students are effective in communicating analytics-based evidence and insights, driving meaningful change in organizations.

Program Requirements

The Master of Business Analytics and Intelligence degree program is 36 credit hours and includes three interlocking modules:

- Business core (10.5 credit hours),
- Analytics core (13.5 credit hours)
- Applied Business analytics (12 credit hours)

The Business Core provides students with a foundational grasp of the fundamental business context essential for success in any industry. The Analytics Core equips students with essential analytical skills including data handling and visualization, predictive modeling, and machine learning algorithms. The Applied Business Analytics courses build on the Business and Analytics cores to train students for leading evidence-based decision-making by extracting meaningful insights for applied problem-solving.

The overlapping cores emphasize our program's goals:

- Learning the language of business
- Building analytical skills
- Applying appropriate analytical tools to today's business data

The program is delivered through a range of open-source and commercial statistical software (e.g., R, Python, SPSS, SAS), preparing students with the necessary user expertise to excel in analyst positions across industries.

Prerequisites

Students are required to have taken two calculus courses at the college level and one course in linear algebra. Students who do not satisfy linear algebra prerequisites will be required to take a 1 credit hour preparatory course. A course in statistics is strongly preferred.

Sample Plan of Study

First Year		
Fall		**Hours**
BUAI 406A	Operations Management I	1.5
BUAI 406B	Operations Management II	1.5
BUAI 433	Foundations of Probability and Statistics	3
BUAI 434	Data Mining & Visualization	3
BUAI 444	Predictive Modeling	3
BUAI 492	Foundations of Python Programming	1.5
	Hours	**13.5**
Spring		
BUAI 407A	Managerial Marketing I	1.5
BUAI 407B	Managerial Marketing II	1.5
BUAI 410	Accounting and Financial Management	3
BUAI 432	Operations Analytics: Stochastic	3
BUAI 445	Advanced Marketing Analytics	3
BUAI 485B	Team Development	1.5
	Hours	**13.5**
Second Year		
Fall		
BUAI 411	Operations Analytics: Deterministic	3
BUAI 435	Marketing Models and Digital Analytics	3
BUAI 446	Machine Learning and Artificial Intelligence in Business Analytics	3
	Hours	**9**
	Total Hours	**36**