

Overview

Information and data analytics technologies are transforming all aspects of business. Students who concentrate in Information Systems and Business Analytics (ISBA) can acquire the knowledge and skills needed to take a leading role in these innovative fields. The curriculum of the ISBA concentration covers the topics in business analytics and its information systems foundation.

Career Paths

Courses in the ISBA program are designed to offer students options in the following career paths:

- 1) Business Analytics
- 2) Information Systems

The **Business Analytics** path prepares students for careers that address the best use of data in contemporary business environments. Students in this career path will gain the ability to understand data management, data storage, data processing, data visualization, and predictive analytics. Some of the positions people in this career path have taken include data analytics or data science specialists working with software to process data and generate reports, data analytics designer who design data warehouses and business intelligence systems, and business analysts or managers using analytical insights to solve problems for management decisions. People in this career path are expected to be in high demand as organizations increasingly understand the value of data and analytics and turn to data-driven decision-making.

The **Information Systems** path prepares students for highly demanding careers in today's digitalized business environment that are typically positioned as bridges among business managers, end-users/customers, and IT departments/vendors. Students in this career path will gain the ability to understand what business managers and end-users/customers need and how to design and manage information systems to address those needs utilizing emerging digital technologies. Information systems professionals often work with a diverse team of IT developers, business managers, end-users, and software vendors to develop plans for designing, building, and integrating information systems solutions. Students choosing this path will also learn how to manage software development processes and how to manage and protect IT and data assets in business contexts. Various IT professional careers are accessible after taking this Information Systems path, including database administrator, IT help desk technician, IT project manager, network and security specialist, business/system analyst, etc.

For more information contact:

Peng Xu, Chair
Management Science and Information
Systems Department
617.287.7882 peng.xu@umb.edu

Concentration Requirements

Six Courses Required (18 credits)

Take all four of these required courses:

IT 370	Business Intelligence Applications
IT 471	Data Warehousing for Business Intelligence
MSIS 230L	Relational Databases
MSIS 310	Introduction to Coding for Business

Take any two of the elective courses listed below.

Elective courses are organized by career path, however these are just suggestions – any two electives will satisfy this requirement.

Business Analytics Career Path

IT 456	Information Storage and Management
IT 472	Data Mining for Management Applications
MSIS 411	Advanced Database Systems
MSIS 415	Advanced Coding for Analytics
MSIS 454L	Supply Chain Management
MSIS 455	Decision Analysis
SCSM 450	Service Operations Management

Business and System Analysis Career Path

IT 360	Enterprise Software
MSIS 414	Computer Networks for Management
MSIS 425L	Project Management
MSIS 428L	Information System Security
MSIS 461L	Systems Analysis and Design

Additional Courses

(not related to a specific Career Path)

MSIS 478*	Special Topics in MSIS
MSIS 480*	Internship
MGT 499*	Honors Thesis

**Only one of MSIS 478, MGT 480, and MSIS 499 can count towards the concentration.*

Note: Students are allowed to pursue more than one concentration. However, no more than two courses from the first concentration can be used towards the second.

Advising Notes

The prerequisites for these courses are strictly enforced, so ISBA concentrators should plan their schedules carefully and early.

Concentration courses are not guaranteed to be offered every semester. Students should meet with their academic advisor to plan out a specific path for graduation.