# MANAGEMENT INFORMATION SYSTEMS (MIS)

## Courses

MIS 5507 Business Analytics and Statistics Credits: 3
Business Analytics is about the science and the art of using data for making well-informed business decisions. The course covers the techniques used for acquiring and preparing data, as well as various statistical methods and procedures for mining the data to identify and infer patterns, relationships, and trends. It discusses how these methods can be used by managers for descriptive, predictive, and prescriptive purposes. Upon the successful completion of this course, the student will have the knowledge and the hands-on skills to apply business analytics techniques to various business contexts.
**Prerequisites:** Bloch School graduate program student.

MIS 5540 Information Technology as a Strategic Tool Credits: 2
This course examines the critical linkage between an organization's business, cultural, and information technology (IT) strategies. In organizations today, information technology has become a key component in accomplishing strategic and operational goals. The course provides concepts and a framework for understanding and enhancing the role IT can play in innovation, change, and continuous organizational learning.
**Prerequisites:** Admission to the Executive MBA program.

MIS 5552 Data Base Management Credits: 3
Data administration, including theory of relational databases and projects using relational data management packages. The course looks at data modeling and information engineering, entity-relationship modeling, database design, normalization, data dictionaries, distributed databases, database servers, data quality assurance, data integrity, SQL, and may include a number of computer-oriented assignments.
**Prerequisites:** MIS 5507.

MIS 5557 Intermediate Business Analytics Credits: 3
This course focuses on the life cycle for mining and extracting actionable business insights from data. It covers data preparation, manipulation, and exploration, with particular attention to applying machine learning methods for predicting new cases based on existing data. Additionally, it discusses metrics for assessing the performance of machine learning models. These concepts are taught through practical examples from various business functions.
**Prerequisites:** MIS 5507, or DSOM 5509, or PUB-ADM 5510, or ACCTNG 5568, or RL-EST 5573, or FIN 5560. Restricted to students admitted to a Bloch School graduate program.

MIS 5559 Data Wrangling Credits: 3
Students will learn the fundamental skills required to acquire, munge, transform, manipulate, and visualize data in a computing environment that fosters reproducibility. This course provides an intensive, hands-on introduction to specialized programming languages, such as R. This course is analytically rigorous, but no previous programming experience is required.
**Prerequisites:** Restricted to students admitted to a Bloch School graduate program

MIS 5581 Human Resources Analytics Credits: 3
This course equips students to drive critical human resource decisions through the strategic use of data and analytics. Students will work through the full analytics process, from formulating business questions and acquiring data to applying descriptive and predictive analytics, visualization, and statistical testing, as well as designing and implementing employee surveys to gain actionable insights and inform critical HR decisions. Key HR areas explored include recruiting, staffing, compensation, performance management, employee engagement, retention, and data privacy. Students will use tools such as Excel, Tableau, SQL, and AI-based platforms to analyze both qualitative and quantitative data.
**Prerequisites:** MIS 5507 and MGT 5512.

MIS 5585 Business Analytics Capstone Credits: 3
Business analytics is a critical tool for transforming organizations and achieving strategic and operational objectives. In this course, students will learn how to implement and lead critical data and analytic topics including data analytic resources, partner relationships, data strategy, data products, data governance, data-driven decision making / culture, data literacy, and AI applications and risk mitigation. Students will engage with leaders of data and analytics organizations and work through real-world challenges.
**Prerequisites:** MIS 5507, MIS 5557 and MIS 5559.

MIS 5587 Special Topics Credits: 3
Special topics in management information systems.

MIS 5597 Independent Study Credits: 1-6
Independent study and research in areas of special interest under individual faculty direction.
**Prerequisites:** Departmental consent required.

MIS 5899 Required Graduate Enrollment Credit: 1