# MANAGEMENT INFO SYSTEMS (MIS)

### MIS 3301  Introduction to Business Programming Logic  (3)
Pre-requisite(s): Credit or concurrent enrollment in MIS 3305; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Introduction to programming in the Python programming language with an emphasis on business applications. Topics include programming logic, string and mathematical operations, decision and repetition structures, data structures, functions, and file processing.

### MIS 3305  Management Information Systems  (3)
Pre-requisite(s): A minimum grade of C in QBA 2302
Open only to BBA students. Examines the use of information and communication technologies (ICT) in organizational settings and gives a balanced perspective of MIS from the standpoint of the non-technical manager. Topics include acquisition, management, use and control of information systems and their impact on individuals, organizations and society. Emphasis is on the business manager's role in developing and managing information systems and the uses of ICT to create competitive advantage.

### MIS 3320  Systems Analysis and Design  (3)
Pre-requisite(s): Credit or concurrent enrollment in MIS 3301 and 3305; Only open to BBA students; BBA students must be admitted to the Business School in order to take this course
A study of the Systems Development Life Cycle with focus on the planning, analysis, and design phases. Explores the various tools and techniques used by systems analysts for process and data modeling as well as user interface design.

### MIS 4319  Mobile Application Development  (3)
Pre-requisite(s): Upper-level standing; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Study of applications development in a cross-platform mobile computing environment

### MIS 4320  Java Development  (3)
Pre-requisite(s): MIS 3301; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Introduction to client-side application development using the Java programming language. Topics include object-oriented design, essential language syntax, and developing user, file, and Internet interfaces for business systems to support e-commerce initiatives.

### MIS 4321  Business Systems Development  (3)
Pre-requisite(s): MIS 3301; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Concentrates on business application development using traditional object-oriented development tools. Topics include essential language syntax, class modeling, and developing user, file, and database interfaces for business systems.

### MIS 4322  Advanced Python  (3)
Pre-requisite(s): MIS 3301; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Study of advanced topics in the Python programming language. Focus is on data analytics and data science using large data sets in an advanced IDE environment. Code source control taught using Git and Github.

### MIS 4330  Project Management  (3)
Cross-listed as MGT 4330
Pre-requisite(s): MGT 3325; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
This course covers concepts and issues important in effective project management including project planning, budgeting, scheduling, auditing, project termination, and the role of the project manager. Methodologies for monitoring and controlling projects, risk analysis, and resource allocation are also presented. The student will learn how to apply Microsoft Project software to real life projects and learn how to manage projects effectively in both single and multi-project environments. This course is also designed to help the student prepare for certification as a Project Management Professional (PMP).

### MIS 4331  Advanced Project Management  (3)
Cross-listed as MGT 4332
Pre-requisite(s): MGT/MIS 4330 or MGT/MIS 5331 or 3 years of project management experience
Complex project management requires high performance project managers capable of dealing with the chaos of today's organizational environment. This seminar focuses on the advanced project management skills, systems thinking, and process modelling needed to implement complex organizational programs, and manage projects for business process improvement.

### MIS 4340  Foundations of Database System Development  (3)
Pre-requisite(s): Only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Concentrates on implementing systems and databases including physical database systems, data access, and database applications. Topics include: design issues; SQL; database administration; database integrity; security; selection; and implementation.

### MIS 4342  Fundamentals of Information Security  (3)
Pre-requisite(s): MIS 3301 and 3320; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
This course provides students with a common body of knowledge in key information security knowledge domains. Topics include access controls; networks and telecommunications basics; cryptography; malicious attacks, threats, and vulnerabilities; monitoring and analysis; risk, response, and recovery; and security operations and administration. The course prepares entry-level professionals in both technical and non-technical disciplines with the key skills and concepts needed to contribute to the information security posture of their organization.

### MIS 4344  Business Intelligence  (3)
Pre-requisite(s): A minimum grade of C in QBA 3305; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Business Intelligence (BI) is the discovery of patterns and relationships hidden in large volumes of data. This hands-on course is designed to provide practical analytic skills that may be applied in almost any workplace. The course explores the analytical techniques for making intelligent business decisions in data-rich organizations. A key component of the course is the use of BI software tools with techniques such as correlation analysis, data visualization, linear regression, classification, and clustering to address common problems in marketing, customer relationship management, risk management, finance, and operations.

**MIS 4347  Cloud Computing  (3)**
Pre-requisite(s): MIS 4340; only open to BBA students
This foundational course offers a deep dive into cloud computing, where participants will learn to define cloud computing, understand the pricing philosophy for such services, and identify necessary cloud infrastructure. Through hands-on exercises, students will gain practical skills in creating virtual clouds, managing security, and employing related software for different use cases. The course also addresses the selection of appropriate storage and database services and introduces architectural principles, load balancing, monitoring, and scaling within a cloud ecosystem.

**MIS 4350  Cybersecurity Technology Factors  (3)**
Pre-requisite(s): MIS 4342 or its equivalent; only open to BBA students
This course provides a roadmap of the paths available to organizations for deploying various security devices and tools. The course goes beyond the narrow technical view and offers a full context for the deployment of security technologies. Six key areas of network security will be covered, with each section covering a tool that will play a part in a company's overall information assurance program.

**MIS 4355  Data Analysis Using Excel Power Tools  (3)**
Pre-requisite(s): MIS 3305 or consent of instructor; only open to BBA students
This advanced Excel course focuses on harnessing the power of built-in 'Power Tools' like Power Query, Power Pivot and Power BI to efficiently manipulate, analyze, and visualize large datasets, enabling users to transform raw data into actionable insights through data cleaning, complex calculations, and dynamic reporting.

**MIS 4360  Fund of Data Visualization  (3)**
Pre-requisite(s): QBA 3305; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
Covers basic theories of cognition and data visualization, including understanding how data types influence the decision to use a particular representation, when to use various chart types, how to structure data visualizations, and visualization evaluation. Emphasis on ethical use of visualizations.

**MIS 4395  Internship in Information Systems  (3)**
Systems

**MIS 4V98  Special Studies in Information Systems  (1-6)**
Pre-requisite(s): Consent of instructor; not open to pre-business students
This course may be taken for one to six semester hours of credit.

**MIS 4V9R  Undergraduate Research in Management Information Systems  (3)**
Pre-requisite(s): Consent of the instructor
Undergraduate research undertaken with the supervision of a faculty member. May be taken in multiple semesters for a maximum of 6 hours.