

# IS-Information Systems Courses

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## Courses

### IS 103. Applied Information Technology. 3 Hours.

Use of microcomputers, business applications in office automation, analysis of business problems, and retrieval and presentation of information.

**Prerequisites:** MA 105 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C] or (A02 23 and HSCG 3.50) or (A02 24 and HSCG 3.00) or (A02 25 and HSCG 2.50) or (A02 26 or S02 540 and HSCG 3.50) or (S02 560 and HSCG 3.00) or (S02 580 and HSCG 2.50) or S02 600 or MAC1 17

### IS 204. Introduction to Business Programming. 3 Hours.

An introductory course addressing the concepts, structures, and use of an event-driven programming language to implement business solutions. Emphasis is placed on developing general problem-solving strategies and implementing solutions through algorithm development.

**Prerequisites:** MA 105 [Min Grade: C]

### IS 301. Introduction to Database Management Systems. 3 Hours.

An introduction to the intricacies of managing and querying structured information. This course provides a solid foundation for understanding the concepts and tools used in the field of database management. Learn data modeling using the ER approach (entity-relationship) and practice writing SQL queries for data retrieval and manipulation. Create data models that incorporate business rules and entities relevant to the organization's goals. Gain confidence in the design and construction of a relational and adaptable database and understand the use of databases in business analytics and web technologies.

**Prerequisites:** BUS 203 [Min Grade: C]

### IS 302. Business Data Communications. 3 Hours.

Delve into the movement of information (data) from one device to another using various transmission systems such as electrical, optical, radio, or satellite. This course provides a solid foundation for understanding the network architecture, concepts, terminology, and management issues related to modern networking and data communications in organizations. Learners will explore common communication protocols, network management, network security and best practices for solving business problems.

### IS 303. Information Systems. 3 Hours.

An examination of information systems technology topics such as network effects, social media, telecommunications, software, and security. Learners will understand how organizations use information technology as a change agent, and to support critical decision making. Includes planning, development and implementation of strategies that leverage information systems for competitive advantage.

### IS 321. Systems Analysis. 3 Hours.

Delve into the concepts, methods, and techniques essential for systems analysts. Learn how to assess user requirements using interviewing and testing techniques to update existing or design new information systems. Estimate system development costs and create systems that meet clients' needs.

### IS 413. Introduction to Information Security. 3 Hours.

Explore the fast-growing field of information security and learn how to protect valuable organizational assets. This introductory course provides students with a foundational understanding of cybersecurity principles. You will develop an understanding of how businesses safeguard sensitive data, navigate legal and ethical challenges, and prepare for emerging threats. Gain knowledge in security planning and risk management, learning how to mitigate risks using logical, physical, and administrative controls. This course is perfect for students looking to develop critical skills for a career in cybersecurity or any tech-driven field.

### IS 414. Information Security Planning and Management. 3 Hours.

Understand how technology and organizational policies are developed to best safeguard an organization's critical information resources. Advanced topics include how to manage in an environment of uncertainty, analyze risk and develop policies and procedures to make information systems secure, and audit and recovery processes following a security breach.

**Prerequisites:** IS 413 [Min Grade: C]

### IS 417. Introduction to Business Intelligence. 3 Hours.

Explore principles and techniques in business intelligence and analytics, including descriptive and predictive analytics. Learn the qualitative and graphical understanding of core concepts in business analytics from the perspective of business users. This course requires an emerging and powerful data visualization tool and the usage of data mining platform for assignments. Discover how useful information can be extracted from large volumes of structured data and represented as data mining models to improve business decision making.

### IS 418. Applied Data Science for Information Systems. 3 Hours.

Discover how useful information can be extracted from large volumes of unstructured data and represented as various text mining models to improve business decision making. This course delves into principles and techniques in data science, such as natural language processing, and text mining (e.g., topic modeling), deep learning and artificial intelligence. It emphasizes the qualitative and graphical understanding of the core concepts in data science from the perspective of business users.

### IS 464. IS Internship. 1-3 Hour.

Work experience enabling students to better integrate academic knowledge with practical applications by exposure to information systems and the business environment. 2.0 GPA in IS courses and permission of instructor required. Must be an Information Systems major. Sponsoring business may require additional courses.

**Prerequisites:** GPAO 2.00

### IS 491. Current Topics in Information Systems. 3 Hours.

A study of selected current developments in information systems emphasizing development and managerial implications. Permission of instructor required.

### IS 499. Directed Readings. 1-3 Hour.

Readings and independent study in selected areas.