

MANAGEMENT INFORMATION SYSTEMS, MINOR

Program Description

(for Business and Nonbusiness Majors)

This minor is designed for students who are interested in supplementing their major with applied computer knowledge. A minimum of 12 hours must be taken at Texas A&M University-Corpus Christi. For additional information contact the academic advisor in the College of Business.

Program Requirements

Code	Title	Hours
Required Courses		
MISY 2305	Computer Applications in Business	3
MISY 3310	Management Information Systems Concepts	3
MISY 3320	Business Data Communication and Networking I	3
MISY 3330	Database Management	3
MISY 3340	Systems Analysis and Design	3
Approved MISY or COSC elective		3
Total Hours		18

Courses

MISY 2305 Computer Applications in Business

3 Semester Credit Hours (3 Lecture Hours)

Survey of modern business computer hardware, software, and applications. Opportunities to create programs and use existing application software to solve various management information technology-oriented problems. Emphasizes the end-user's perspective, and interactions with management information technology.

TCCNS: BCIS 1305

MISY 3310 Management Information Systems Concepts

3 Semester Credit Hours (3 Lecture Hours)

Provides an understanding of the importance of computer-based information in the success of the firm. Illustrates ways in which companies utilize computer systems to strategically compete within certain industries. Emphasis is on the role of information systems within each of the functional areas of business. Major concepts include data management, decision support, and management information systems.

Prerequisite: BUSI 0011 and MISY 2305.

MISY 3320 Business Data Communication and Networking I

3 Semester Credit Hours (3 Lecture Hours)

Characteristics of contemporary business data communication components, their configurations, and their impact on management information systems design. Topics include designing, managing, securing, and implementing business data communication networks, and their integration into management information systems. Exercises and assignments use various data communication facilities.

MISY 3330 Database Management

3 Semester Credit Hours (3 Lecture Hours)

Concepts and methodology of data base planning, design, development, and management of the computerized data base of a management information system. The emphasis is on logical data base design and a study of hierarchical, network, and relational implementations. Normalization exercises are completed relative to the logical design of relational data bases. Exercises and assignments use a relational DBMS package.

MISY 3340 Systems Analysis and Design

3 Semester Credit Hours (3 Lecture Hours)

Develops ability to analyze an existing information system within an organization, to identify information requirements, and to specify the functions of a new information system. Includes cost/benefit analysis of proposed information systems. Exercises and assignments use a Computer Aided Software Engineering (CASE) tool.

MISY 3350 Business Applications Development

3 Semester Credit Hours (3 Lecture Hours)

This course introduces students to the fundamental techniques used in the development and programming of software applications. This course is designed for students who have little or no previous computer programming experience. This course will use a scripting and/or visual development programming language.

MISY 4310 Business Data Communications and Networking II

3 Semester Credit Hours (3 Lecture Hours)

Design, implementation, and operation of client-server network systems for organizational Intranets and Internet presence. Exercises and assignments use selected data communications facilities.

Prerequisite: MISY 3320.

MISY 4325 Business Decision Support Systems and Expert Systems

3 Semester Credit Hours (3 Lecture Hours)

A survey of decision support systems and expert systems used in business. Topics include artificial intelligence (AI), knowledge engineering, knowledge acquisition, expert system shells, modeling, simulation, and selection of appropriate computer package support. Exercises and assignments use various computer packages such as neural network systems and expert system shells.

MISY 4330 Website Development for Business

3 Semester Credit Hours (3 Lecture Hours)

This course provides an understanding of the principles and techniques for client-side web development using HTML and CSS. Text editors and the website development software will be used to create and maintain websites. This course includes designing to meet web standards, including accessibility, usability, and workflow for web design.

MISY 4340 Electronic Commerce Management

3 Semester Credit Hours (3 Lecture Hours)

A broad overview of electronic commerce topics as they relate to various users. General coverage includes electronic commerce history, opportunities, limitations, and risks. Technical discussions include the internet, intranets, extranets, firewalls, security, protocols, servers, and browsers.

MISY 4341 Management of Healthcare Information Systems
3 Semester Credit Hours (3 Lecture Hours)

This course provides an overview of the knowledge and skills required to manage information for organizations related to healthcare. The course specifically focuses on the practice of acquiring, analyzing and protecting digital and traditional medical information vital to providing quality patient care. Some of the topics that are covered include: evolution of health care information systems (HCIS), components and basic HCIS functions, technology infrastructure for healthcare organizations, basic concepts such as electronic health records (HER), health information exchange (HIE), computerized physician order entry (CPOE), clinical decision support systems (CDSS), hospital incident command systems (HICS) and standards such as HIPPA, HL7, and digital imaging and communications in medicine (DICOM). Other topics include strategic information systems planning for healthcare organizations, systems analysis and project management, information security and privacy issues, and the roles of HCIS professionals in health organizations.

Prerequisite: (MISY 3310).

MISY 4345 Information Security and Privacy in Healthcare
3 Semester Credit Hours (3 Lecture Hours)

This course provides an overview of the knowledge and skills required to manage information privacy and security for organizations related to healthcare. It focuses on best practices for healthcare information security and privacy with detailed coverage of essential topics such as information governance, roles and occupations, risk assessment and management, incident response, patient rights, healthcare responsibilities, cyberattacks and cybersecurity. Topics also include relevant laws and regulations and other aspects of information security and privacy, with emphasis on real-life scenarios in clinical practices and business operations in healthcare. Course

Prerequisite: (MISY 3310).

MISY 4350 Business Intelligence and Analytics
3 Semester Credit Hours (3 Lecture Hours)

Overview of important concepts of business intelligence, and the use of analytics, technologies, applications and processes used by organizations to gain data-driven insights. These insights and predictions can be used to aid decision-making and performance management across functional areas, including marketing, operations, and finance. Students will learn to extract and manipulate data, and create reports, scorecards and dashboards, including mobile apps. ONLY Juniors or Post-Baccalaureate or Seniors for MISY 4350

MISY 4365 Data Warehousing and Data Mining for Business Intelligence

3 Semester Credit Hours (3 Lecture Hours)

In the information age, organizations can and do collect massive amounts of data. Yet organizations are often "data rich" but "information and knowledge poor". This course is designed to prepare business professionals who, by using analytical methods and data mining and data visualization tools will be able to harness the potential of data by extracting business intelligence that can be used to improve decisions and operations at various points in the value chain.

Prerequisite: MISY 2305, 3330 and ORMS 3310.

MISY 4366 Data Analytics for Healthcare Management
3 Semester Credit Hours (3 Lecture Hours)

The goal of this course is to prepare business professionals to extract business intelligence to improve decisions and operations in organizations, especially in the healthcare industry, at various points in the value chain. Data mining methods covered include multiple linear regression, k-nearest neighbor, classification and regression trees, logistic regression, discriminant analysis, artificial neural networks, association rules, cluster analysis and text mining. Areas in healthcare include healthcare market basket analysis, churn analysis for hospitals and insurance companies, health insurance fraud detection, readmission assessment, personalization of treatment regimen, patient risk management and performance-based payment analysis. Students should have a background in database and statistics. The focus will be less on statistical mathematics and more on the application of data mining methods using software tools.

Prerequisite: (MISY 2305, 3330, ORMS 3310 and MISY 4341).

MISY 4375 IT Project Management
3 Semester Credit Hours (3 Lecture Hours)

This course covers issues related to managing projects in organizations. The course focuses on the management of projects and working as a team. Students are expected to draw on materials from other management information system courses, especially the System Analysis and Design, and Database Management courses.

Prerequisite: MISY 3330.

MISY 4390 Current Topics in Management Information Systems
1-3 Semester Credit Hours (1-3 Lecture Hours)

Selected topics for special study related to management information systems.

MISY 4396 Directed Individual Study
1-3 Semester Credit Hours

Individual supervised study and a final report.

MISY 4398 Internship in Management Information Systems
1-3 Semester Credit Hours

Supervised practical experience in business computer systems.