

# MANAGEMENT INFORMATION SYSTEMS (MIS)

## MIS 1. Word Processing. 1 Unit

The course teaches Microsoft Office Word that establishes a student's fundamental computer skills required to perform business related tasks. Topics include developing and refining a document; identifying and correcting errors; formatting, modifying and printing documents; working with pictures, graphics, tables and charts; creating reports, forms, references and mailings; securing content and sharing documents, exploring advanced document features and macros, etc.  
Credit/No Credit

## MIS 2. Spreadsheets. 1 Unit

**Prerequisite(s):** MIS 1, instructor permission, or a passing score on the MIS 1 competency examination.

Introduction to spreadsheets using the spreadsheet standard adopted by the College of Business Administration.

**Note:** Not open to students receiving credit for CSC 6B.

Credit/No Credit

## MIS 3. Presentation Graphics. 1 Unit

The course teaches Microsoft Power Point that establishes a student's fundamental computer skills required to perform business related tasks.

Topics include creating, refining and delivering presentations; working with graphics, tables and charts; inserting and enhancing pictures, shapes, sound and video; using templates, slide masters and text boxes, printing, securing and sharing presentations, etc.

Credit/No Credit

## MIS 15. Introduction to Business Programming. 3 Units

Introduction to object oriented programming language. Topics include use of simple data structures and data types, arrays, strings, input-output functions, file processing, and flow control.

## MIS 101. Computer Information Systems for Management. 3 Units

Explores the application of computers to the organizational environment with a management perspective. Topics may include transaction processing systems, management reporting, decision support systems, strategic planning, security, controls and acquisition of hardware, software and services. The interface between the information systems professional and the manager will be defined. Case studies and use of appropriate software packages may be included.

## MIS 120. Advanced Object-Oriented Business Programming. 3 Units

**Prerequisite(s):** MIS 15.

Advanced course in programming principles using an Object Oriented (OO) programming language. Topics will focus on object-oriented (OO) programming including the design and development of OO applications, object classes, inheritance, polymorphism and encapsulation, and graphical user interface (GUI) application development including contrasting event-driven and procedural programming. Assignments will focus on problem-solving in a business context.

## MIS 122. Object-Oriented Programming for Business in Java. 3 Units

**Prerequisite(s):** MIS 15 or CSC 15.

Advanced course in programming principles using an Object Oriented (OO) programming language. Topics will focus on object-oriented (OO) programming including the design and development of OO applications, object classes, inheritance, polymorphism and encapsulation, and graphical user interface (GUI) application development including contrasting event-driven and procedural programming.

## MIS 124. Web Programming for Business Applications in Visual Basic. 3 Units

**Prerequisite(s):** MIS 120.

A Web programming course for business applications using Visual Basic. Topics include Web form, database access, data markup language, Web services, and other current Web application issues. Topics are accompanied by design principles, tools, and techniques for Web application development.

## MIS 131. Business Statistics II. 3 Units

## MIS 132. Management Science Techniques. 3 Units

**Prerequisite(s):** DS 101.

Introduction to management science techniques for the solution and analysis of management problems. Topics include mathematical programming, decision theory, analysis of waiting lines, simulation, and Markov processes.

## MIS 140. Business Telecommunications. 3 Units

Examinations of issues involved in establishing telecommunications systems in a business organization. Introduction to basic terminology and hardware/software components of networks, including components of voice systems, local area networks, and client-server technology. Emphasis is on feasibility analysis of different telecommunications alternatives in typical business settings. Student will prepare reports on actual business telecommunications configurations.

## MIS 150. Database Systems for Business. 3 Units

Involves the study of generalized database management systems. The study will include logical data base models and physical base models based primarily on the relational and object-relational models. The student will create and manipulate a database utilizing an established database management system. The importance of data administration and other database related topics such as independence, integrity, privacy, query, backup, and recovery will be covered.

## MIS 151. End-User Database Application Development for Business. 3 Units

**Prerequisite(s):** MIS 1, MIS 2, MIS 3 or approved equivalent.

Introduction to end-user database application development in the business environment. Topics will focus on issues in the development of business database applications and include database concepts, organization, storage and retrieval of data, query and analysis with interactive software tools, informative and performance management reporting.

**Note:** Not open to MIS students.

## MIS 160. Systems Development Life Cycle I. 3 Units

**Prerequisite(s):** MIS 101 and MGMT 102

Business information system of moderate complexity will be analyzed and designed by student teams. Various analysis and design techniques will be studied and used in this project. Both oral and written reports are required. CASE methodology will be used.

**Note:** The project will be continued in MIS 161; therefore, taking MIS 160 and MIS 161 in consecutive semesters is highly recommended.

## MIS 161. Systems Development Life Cycle Part II. 3 Units

**Prerequisite(s):** MIS 120, MIS 140, MIS 150, MIS 160.

Student project teams will continue their project started in MIS 160 to include the construction, testing, implementation and customer acceptance phases.

**MIS 163. Business Process Engineering and ERP Configuration. 3 Units**

This course focuses on identifying and understanding business requirements, modeling business processes that incorporate the business requirements, and configuring the processes for their implementation in an enterprise resource planning (ERP) system. Students will gain insights to implementation issues and propose alternative solutions to overcome them. A project team environment further develops individual student's communication and team skills.

**MIS 170. IT Auditing, Security and Architecture. 3 Units**

**Prerequisite(s):** MIS 140 and MIS 150

IT auditing processes, tools, standards, security concepts, and asset protection measures in an information system enterprise environment. Emphasis on how to apply IT auditing, security, and architecture to achieve operational, managerial, and strategic goals of organizations.

**MIS 171. Enterprise Resource Planning Systems. 3 Units**

**Prerequisite(s):** MIS 101

Foundation, business functions, processes, data requirements, development, and management of ERP systems for sales, marketing, accounting, finance, production, supply chain and customer relationship management. Emphasis on re-engineering, integration, standardization, and methodologies of ERP systems.

**MIS 173. Microcomputers for Managers. 3 Units**

For students who want to have more than the minimum required personal computer literacy knowledge. The topics covered are: hardware, system software, utility software, spreadsheet modeling, the Internet, and presentation graphics.

**Note:** Not open to MIS students.

**MIS 181. Machine Learning Applications in Business. 3 Units**

**Prerequisite(s):** DS 101 and MIS 150

Applies modern machine learning applications in business to data analysis and problem solving. Topics are presented in the context of decision support and may include knowledge representation, neural networks, genetic algorithms, rule induction, fuzzy logic, case-based reasoning and intelligent agents.

**MIS 182. Topics In MIS. 3 Units**

**Prerequisite(s):** MIS 150, MIS 160.

Current topics will be presented regarding the technical, managerial, and organization considerations affecting computer-based information systems. Topics may include programming languages and techniques, emerging technologies, and MIS development and implementation issues. Readings, topical research, case presentations, and/or projects will be required.

**MIS 183. Business Intelligence Applications. 3 Units**

**Prerequisite(s):** MIS 150

Advanced information technologies that extract non-trivial, actionable, and novel knowledge from data to achieve strategic goals of organizations. Emphasis on multidimensional data modeling, online analytic processing, data warehouse, and data mining.

**MIS 191. Culminating Experience. 1 Unit**

**Prerequisite(s):** Completion of all coursework in minor.

Students demonstrate their knowledge and apply their skill sets from the minor to a working project, and conduct an executive-level, management-oriented presentation.

**Note:** Students must be in their final semester of the minor's program.

Credit/No Credit

**MIS 194. Cooperative Education Experience in Management Information Systems. 6 - 12 Units**

**Prerequisite(s):** MIS 160, minimum Sacramento State overall GPA of 2.75.

In-depth supervised work experience in management information systems for the purpose of exposing the student to comprehensive MIS experience in business, governmental, or service agencies. Open to all upper division students, subject to permission of the MIS Area. Petitions can be obtained from the Student Affairs Office, Tahoe 2065.

Credit/No Credit

**MIS 195. Internship in Management Information Systems. 3 - 6 Units**

**Prerequisite(s):** MIS 160, minimum Sacramento State overall GPA of 2.75.

Supervised work experience in management information systems for the purpose of increasing student understanding of the nature and scope of the operations of business, governmental, or service agencies. Supervision is provided by the faculty and the cooperating agencies.

Open to upper division students, subject to permission of the MIS Area.

Petitions can be obtained from the Student Affairs Office, Tahoe 2065.

**Note:** Open to declared business administration majors only.

Credit/No Credit

**MIS 199. Special Problems in Management Information Systems. 1 - 3 Units**

Individual projects or directed reading for students qualified to carry on independent work.

**Note:** Admission requires approval of the instructor and the Associate Dean. Petitions may be obtained from the Undergraduate Business

Advising Center, Tahoe 1030.

Credit/No Credit

**MIS 210. Information Systems I. 3 Units**

Introduction to business information systems planning and systems development methodologies. Various methodologies are explored and information systems development project planning is emphasized.

**MIS 211. Information Systems II. 3 Units**

Introduction to basic and object-oriented programming concepts, data structures for information representation, and database management systems.

**MIS 232. Management Science. 3 Units**

Introduction to deterministic and stochastic models in operations research. Topics that may be included are: mathematical programming, inventory theory, analysis of waiting lines, Markov processes, game theory, decision theory and simulation. Various computer programs such as LINDO are used to assist in solution and analysis of management problems.

**Note:** Not open to students with credit for MIS 132.

**MIS 240. Communications Technologies for Business. 3 Units**

**Prerequisite(s):** Graduate MIS status or instructor permission.

Focuses on the concepts, technology, applications, and management of data and voice communication with an emphasis on building, supporting, securing, and administering the requirements of network infrastructure and architecture to support businesses.

**Note:** May be taken twice for credit.

- MIS 250. Data Management. 3 Units**  
**Prerequisite(s):** Graduate MIS status or instructor permission, and MIS 15 or equivalent.  
 Focuses on database concepts, design and implementation in business. Topics include database design techniques, such as extended entity-relationship and unified modeling language, logical and physical data models for objection-relational database, object oriented database and relational databases, database implementation and administration issues, and the discussion of distributed database, web database, and database security .  
**Note:** May be taken twice for credit.
- MIS 251. Strategic Applications of Information Resources. 3 Units**  
**Prerequisite(s):** MSBA/MIS students: MIS 210 and 211, or their equivalents. MBA students: MBA 260 and instructor permission.  
 Discussion of the techniques and methodologies to utilize information resource to improve an organization's strategic performance measures. Topics include data warehouse, data mining, online analytical transaction processing, and multidimensional database.
- MIS 260. Systems Design. 3 Units**  
**Prerequisite(s):** Graduate MIS status or instructor permission.  
 Involves the study of various methods used to analyze and design a computer-based information systems and emphasizes object-oriented systems development (OOSD) techniques.  
**Note:** May be taken twice for credit.
- MIS 261. Information Technology Integration for the Enterprise. 3 Units**  
**Prerequisite(s):** MSBA/MIS students: MIS 260 or MIS 270; MBA students: MBA 260 or permission of instructor.  
 IT presents many new opportunities at the enterprise level for the design and implementation of integrated organizational structures and business processes that better align the business to meeting its market demands and allow it to pursue new strategic relationships with other organizations. Enterprise IT primarily involves enterprise resource planning (ERP), supply chain management (SCM), knowledge management (KM), and customer relationship management (CRM) to support and coordinate business activities.  
**Note:** May be taken twice for credit.
- MIS 262. Business Project Management. 3 Units**  
**Prerequisite(s):** MSBA/MIS students: MIS 260; MBA students: MBA 260 or instructor permission.  
 Examines various aspects of IT project management, including project selection involving feasibility, complexity, scalability and impact comparisons, project portfolio to direct the right resources to the right projects to sure their timely completion, risk assessment, key performance measures, and others.  
**Note:** May be taken twice for credit.
- MIS 270. Information Technology Operations. 3 Units**  
**Prerequisite(s):** Graduate MIS status or instructor permission.  
 Examines the management of information technology as a vital resource to an organization. IT can enable businesses to seize opportunities, gain competitive advantages and establish close relationships with other businesses and their customers. Thus, the business must effectively and efficiently manage and secure its IT resources.  
**Note:** May be taken twice for credit.
- MIS 272. Strategic Information Technology Planning. 3 Units**  
**Prerequisite(s):** MSBA/MIS students: MIS 270; MBA students: MBA 260 or instructor permission.  
 Strategic IT planning defines the direction a business chooses for its IT resources. It encompasses a vision, mission, strategy, and objectives that closely align to the business' vision, mission, strategy, and objectives. Planning involves examining how IT will support the achievement of the business' goals and objectives, and how IT can open new opportunities to create new business goals.  
**Note:** May be taken twice for credit.
- MIS 279. Information Technology Leadership. 3 Units**  
**Prerequisite(s):** MSBA/MIS students: MIS 261 or MIS 262, MIS 272; MBA students: MBA 260 and instructor permission.  
 Leadership plays an important role in determining a business' success with IT. It requires recognizing and leveraging the business' competencies and core values, and championing initiatives and projects that work in the best interest of the business and create value. Because IT opens opportunities and enables the organization, IT leadership extends to both market (external) and organizational (internal) environments.  
**Note:** May be taken twice for credit.
- MIS 280. Decision and Knowledge-Based Systems. 3 Units**  
**Prerequisite(s):** MIS 211 or equivalent.  
 Organizational use of information generated from transaction processing systems, management information systems, and decision support systems. The uses of information by managers for planning, control, and decision-making purposes will be discussed. The types of information systems implemented in various kinds of organizations will be covered.
- MIS 281. Topics in the Management of Information Systems. 3 Units**  
**Prerequisite(s):** Open to non-MSBA/MIS majors with credit in MBA 260 or equivalent; and to those who have completed MSBA/MIS Program Prerequisites.  
 Current topics will be presented regarding the managerial, behavioral, and organizational considerations affecting computer-based information systems. Includes topics such as project selection and justification techniques, system controls, security and privacy issues, strategic planning, and use/data processing department relations. Readings, topical research, and case presentations will be required.
- MIS 295. Internship in Management Information Systems. 3 Units**  
**Prerequisite(s):** Completion of two of the following: MIS 240, MIS 250, MIS 260, or MIS 270; minimum Sacramento State GPA of 3.0.  
 Supervised work experience in management information systems for the purpose of increasing and enhancing student understanding of the nature and scope of the organization's operations of business, governmental, or service agencies. Supervision is provided by the faculty and the cooperating agencies.  
**Note:** Open to second year MBA and MSBA/MIS students. Petitions to be obtained from Tahoe Hall 1037.  
 Credit/No Credit
- MIS 299. Special Problems in Management Information Systems. 1 - 3 Units**  
**Prerequisite(s):** Classified graduate status.  
 Individual projects or directed reading for students qualified to carry on independent work.  
**Note:** Admission requires approval of faculty member under whom the individual work is to be conducted in addition to the approval of the Graduate Programs Office. Petitions to be obtained from Tahoe Hall 1035.  
 Credit/No Credit

**MIS 500A. Thesis. 1 - 3 Units**

**Prerequisite(s):** Advanced to candidacy. Completion of MBA 244.  
Completion of a thesis approved for the Master's degree.

**MIS 500B. Project. 1 - 3 Units**

**Prerequisite(s):** Advanced to candidacy. Completion of MBA 244.  
Completion of a project approved for the Master's degree.

**MIS 500C. Comprehensive Examination. 1 - 3 Units**

**Prerequisite(s):** Advanced to candidacy; for comprehensive examination for MBA only (MGMT 500C, 1 unit), completion of program requirements (ACCY 240, MBA 230, MBA 240, MBA 241, MBA 270, MBA 280; for comprehensive examination for MSBA/MIS Degree, student must be in final semester of program.  
For MSBA/MIS.