

COMPUTER INFORMATION SYSTEMS 310 COURSE GUIDE

Principles of Information Systems

Primary Learning Objective:

Students will gain an understanding of the terminology, concepts, issues, and components of Information Systems for business.

Specific Learning Standards emphasized in this class include:

- Communication Skills* - Reads with comprehension. Communicates effectively in oral and written forms.
- Critical Thinking* – Apply knowledge learned to solve specific problems through logical reasoning and analysis.
- Technological Proficiency* - Demonstrates knowledge of hardware, software, Internet technologies, information systems development life cycle, and information assurance.
- Research Skills* – Conduct research and generate a business report for new information technology that requires investigating published articles in journals, popular press and on the web.
- Ethics* – Demonstrates knowledge of ethical concepts.

Course Specifics: Course prerequisite in CIS 110 (or equivalent computer literacy course).

- Minimum of 3 regular exams per term
- Assignments using Microsoft Office to solve various business problems
- Required group project including class presentation
- Coverage of ethical and international topics in course content
- Real-world cases and examples presented in class

Topic Area	Learning Objectives
Foundations of Information Systems in Business	<p>Understand the concept of a system and how it relates to information systems.</p> <p>Explain why knowledge of information systems is important for business professionals, and identify five areas of information systems knowledge they need.</p> <p>Give examples to illustrate how the business applications of information systems can support a firm’s business processes, managerial decision making, and strategies for competitive advantage.</p> <p>Become familiar with the myriad of career opportunities in information systems.</p>
Computer Hardware	<p>Understand the history and evolution of computer hardware.</p> <p>Identify the major types and uses of microcomputer, midrange, and mainframe computer systems.</p> <p>Outline the major technologies and uses of computer peripherals for input, output, and storage.</p> <p>Identify and give examples of the components and functions of a computer system.</p>

Computer Software	<p>Give examples of several major types of application and system software.</p> <p>Explain the purpose of several popular software packages for end user productivity and collaborative computing.</p> <p>Define and describe the functions of an operating system.</p> <p>Describe the main uses of computer programming software, tools, and languages.</p>
Data Resource Management	<p>Grasp the business value of implementing data resource management processes and technologies in an organization.</p> <p>Identify the advantages of a database management approach to managing the data resources of a business, compared to a file processing approach.</p> <p>Understand how database management software helps business professionals and supports the operations and management of a business.</p> <p>Recognize examples to illustrate each of the following concepts:</p> <ol style="list-style-type: none"> a. Major types of databases. b. Data warehouses and data mining. c. Logical data elements. d. Fundamental database structures. e. Database development.
Telecommunications and Networks	<p>Identify several history and trends in the industries, technologies, and business applications of telecommunications and Internet technologies.</p> <p>Identify the basic components, functions, and types of telecommunications networks used in business.</p> <p>Identify the various transmission media and topologies used in telecommunications networks.</p> <p>Understand the fundamentals of wireless network technologies.</p> <p>Explain the concepts behind TCP/IP.</p>
Electronic Business Systems	<p>Identify the following cross-functional enterprise systems, and give examples of how they can provide significant business value to a company:</p> <ol style="list-style-type: none"> a. Enterprise resource planning b. Customer relationship management c. Supply chain management d. Enterprise application integration e. Transaction processing systems f. Enterprise collaboration systems <p>Understand how Internet and other information technologies support business processes within the business functions of accounting, finance, human resource management, marketing, and production and operations management.</p> <p>Understand the need for enterprise application integration to improve support of business interactions across multiple e-business applications.</p>

<p>Electronic Commerce Systems</p>	<p>Identify the major categories and trends of e-commerce applications.</p> <p>Identify the essential processes of an e-commerce system, and give examples of how they are implemented in e-commerce applications.</p> <p>Identify and give examples of several key factors and Web store requirements needed to succeed in e-commerce.</p> <p>Identify and explain the business value of several types of e-commerce marketplaces.</p> <p>Discuss the benefits and trade-offs of several e-commerce clicks and bricks alternatives</p>
<p>Decision Support Systems</p>	<p>Identify the changes taking place in the form and use of decision support in business.</p> <p>Identify the role and reporting alternatives of management information systems.</p> <p>Describe how online analytical processing can meet key information needs of managers.</p> <p>Explain the decision support system concept and how it differs from traditional management information systems.</p> <p>Explain how the following information systems can support the information needs of executives, managers, and business professionals:</p> <ol style="list-style-type: none"> a. Executive information systems b. Enterprise information portals c. Knowledge management systems <p>Identify how neural networks, fuzzy logic, genetic algorithms, virtual reality, and intelligent agents can be used in business.</p> <p>Give examples of several ways expert systems can be used in business decision-making situations.</p>
<p>Developing Business/IT Solutions</p>	<p>Use the systems development process outlined in this chapter and the model of IS components from Chapter 1 as problem-solving frameworks to help you propose information systems solutions to simple business problems.</p> <p>Describe and give examples to illustrate how you might use each of the steps of the information systems development cycle to develop and implement a business information system.</p> <p>Explain how prototyping can be used as an effective technique to improve the process of systems development for end users and IS specialists.</p> <p>Understand the basics of project management and their importance to a successful system development effort.</p> <p>Identify the activities involved in the implementation of new information systems.</p> <p>Compare and contrast the four basic system conversion strategies.</p> <p>Describe several evaluation factors that should be considered in evaluating the acquisition of hardware, software, and IS services.</p> <p>Identify several change management solutions for end user resistance to the implementation of new information systems.</p>

<p>Security and Ethical Challenges</p>	<p>Identify several ethical issues in how the use of information technologies in business affects employment, individuality, working conditions, privacy, crime, health, and solutions to societal problems.</p> <p>Identify several types of security management strategies and defenses, and explain how they can be used to ensure the security of business applications of information technology.</p> <p>Propose several ways that business managers and professionals can help to lessen the harmful effects and increase the beneficial effects of the use of information technology</p>
<p>Enterprise and Global Management of Information Technology</p>	<p>Identify each of the three components of information technology management, and use examples to illustrate how they might be implemented in a business.</p> <p>Explain how failures in IT management can be reduced by the involvement of business managers in IT planning and management.</p> <p>Identify several cultural, political, and geoeconomic challenges that confront managers in the management of global information technologies.</p> <p>Explain the effect on global business/IT strategy of the trend toward a transnational business strategy by international business organizations.</p> <p>Identify several considerations that affect the choice of IT applications, IT platforms, data access policies, and systems development methods by a global business enterprise.</p> <p>Understand the fundamental concepts of outsourcing and offshoring as well as the primary reasons for selecting such an approach to IS/IT management.</p>