MASTER SYLLABUS

COURSE NO., HOURS, AND TITLE: IST 301-3 INFORMATION SYSTEMS AND TECHNOLOGIES

COURSE DESCRIPTION:

The course provides an overview of information systems and technologies. It focuses on the use of computer technology and business information systems used to meet the goals of an organization and achieve a competitive advantage. Topics of discussion include characteristics of organizational systems, hardware devices and software programs, database design and development, telecommunications and networking technologies, and analysis, design, and implementation of systems. A grade of C or better is required.

PREREQUISITE TO: 412, 414, 416 and WED 412

COURSE OBJECTIVES:

Upon successful completion of the course, the student should be able to:

1. Describe a system and define various types of systems and their components such as information systems, computer-based information systems, transaction processing systems, and artificial intelligence systems.

2. Describe factors affecting organizational systems and trends in business and industry related to strategic management and development of a competitive advantage.

3. Understand the information technology trends affecting enterprise computing systems and how they align with business platforms and organizational restructuring.

4. Describe and compare hardware devices based on their major function—input, processing, and output.

5. Compare and analyze systems and application software including the various types of each.

6. Describe processes involved in data and information management.

7. Describe different types and characteristics of networks and compare various telecommunications applications.

8. Explain how system concepts apply to the investigation, analysis, design, implementation, and maintenance of information systems.

TOPICAL OUTLINE:

	Topics	Percentages
I.	Introduction to Information Systems	25%
	A. Components of an Information System	
	B. Computer-Based Information Systems	
	C. Organizations and Information Systems	
	D. Strategic Management and Competitive Advantage	
	E. Business Information Systems	
	1. Transaction Processing Systems	
	2. Artificial Intelligence Systems	
II.	Information Technology Concepts	25%
	A. Hardware Components	
	B. Characteristics of Microprocessors	
	C. Input, Processing, and Output Devices	
	D. Software – Systems and Application	
	E. Programming Languages	
III.	Information Management and Electronic Communications	25%
	A. Data and Information Management	
	B. Telecommunications – LANs and WANs	
	C. Communication Protocols	
	D. The Internet, Intranets, and Extranets	
IV.	Systems Development	25%
	A. Systems Investigation and Analysis	
	B. Systems Design, Implementation, Maintenance and Review	
	C. Security, Privacy, and Ethical Issues in Information Systems	

TEXTBOOK:

Stair, R. M., & Reynolds, G. W. (2003). *Principles of information systems: A managerial approach*. Cambridge, MA: Course Technology an International Thomson Publishing Company.