IST 2040: INFORMATION SYSTEMS AND APPLICATIONS

Program Learning Outcomes (PLO)

1. Demonstrates proficiency in using IT in business organizations

- Aligned to the following university mission outcomes:
- Higher order thinking
- Literacy
- Preparedness for career

- Aligned to the following school mission outcomes:
- Multidiscipline
- Experiential
- Initiative and problem solving
- Team player
- Effective communication

2. Recognize and demonstrate an understanding of the role of IT in Organizational strategy;

- Aligned to the following university mission outcomes:
- Higher order thinking
- Global understanding and multicultural perspective
- Preparedness for career
- Community service

- Aligned to the following school mission outcomes:
- Multidiscipline
- Change oriented
- Experiential
- Team player
- Effective communication

Course Learning Outcomes

CLO Aligned to PLO 1: At the end of the course, students should be able to:
- customize office automation software applications (e.g., word processors and spreadsheets)
- to know how to design and develop simple databases

CLO Aligned to PLO 2: At the end of the course, students should be able to:
- to understand components and functions of information systems in organizations
- to understand the relationship between business applications and a corporate information system.

Course description
Overview of information systems in an organization; Information technology concepts – hardware, systems and applications software; Organizing data and information; Business Information systems: Transaction Processing and enterprise planning systems; management information systems; decision support systems. Introduction to telecommunications, computer networks and the internet;

Pre-requisites: IST 1010

Teaching methodology
The course will be conducted through lectures, illustrations using computers, and practical lab exercises. The emphasis will be a 'hands-on' approach and at least 50% of instruction will be in the computer lab.

Course Content

Week 1
Fundamentals of information systems
- Definition of an information system in terms of systems theory.
- Data Vs Information
- Characteristics of valuable information
- Types of information Systems

Advanced Spread sheets Concepts I
- Getting Data using MS Query
- Goal Seek and Solver
- Iteration and Animation
- Setting Options and Customizing
- Some Useful Functions
- Sorting, Subtotals and Outlines

Week 2
Hardware and Software

- Hardware Characteristics
- Types of Computer Systems
- Software characteristics

Advanced Spread sheets Concepts II
- Templates
- Using Filters
- Using Forms
- Using Pivot Tables
- Writing Macros

Week 3 & 4
Organizing Data and Information

- Data Management
- Data entities Attributes and Keys
- Database Approach
- Data Modeling
- DBMS

QUIZ I

Week 5
Telecommunication

- Transmission Media
- Telecommunication Devices
- Networks
- Communication Software
- The internet

Advanced Database management systems I

- Table Creation
- Relationships
- Action Queries

Week 6
E-Commerce

- Types of E-Commerce
- E-Commerce Supply Chain
- E-Commerce Infrastructure

Advanced Database management systems II

- Form Design
- Switchboards
- Macros

Week 7
Transaction Processing Systems
- TPS Methods
- TPS Activities
- TPS Applications
- TPS Audits

MID QUARTER EXAMS

Week 8
Information and decision support systems
- Decision making and problem solving
- Programmed Vs Non Programmed Decisions
- Optimization, Satisfying, and Heuristic Approaches
- Group Support Systems
- Executive Support Systems

Web Page Design I
- Basic elements
- Presentation formatting
- Links, graphics, and sounds
- Lists
- Backgrounds and colors

Week 9
Management Information Systems

- Input and Output of MIS
- Functional Aspects
- Types of MIS
- DSS Vs MIS

Week 10
Specialized Information Systems

- Artificial Intelligence
- Expert Systems
- Virtual Reality
- Other Systems

QUIZ II

Week 11
System Development

- Development Participants
- Development Methods
- Development Phases

Information Systems Project

Week 12
Information System Security

- Computer Mistakes
- Polices and Procedures
- Computer crime and preventions
- Computer Privacy Issues
- Computer Ethics

Information Systems Project

Week 13
REVISION

Week 14

FINAL EXAM

Course evaluation
There will be at least three assignments, one project, two Quizzes one mid-term exam and a final exam. In addition, laboratory exercises will be used in the evaluation. Assignments are due 1 week after being handed out and late assignments are marked by 25% for every subsequent lesson.

Distribution of marks

Laboratory Exercises	10%
Assignments	15%
Participation	5%
Quizzes	20%
Mid-quarter exam:	20%
Final Exam:	30%

Course text
1. Ralph M. Stair and George W. Reynolds, *Principles of Information*, 5th Edition, Course Technology, 2001.

Course Tutor details
Availability: MON/WED 1:00pm - 3.00pm

Please book an appointment before to avoid disappointment.