GUJARAT TECHNOLOGICAL UNIVERSITY

BRANCH NAME: INDUSTRIAL ENGINEERING
SUBJECT NAME: MANAGEMENT INFORMATION SYSTEM
SUBJECT CODE: 2181503
B.E. 8th SEMESTER

Type of course: Department Elective

Prerequisite: No specific pre-requisite. Students should have basic knowledge of management and understanding about the system concept.

Rationale: This course is designed for students to understand MIS in both the wider managerial context and in the narrower confines of the selection, support, design and development of computer applications. It also focuses on the concepts which students needs to understand, in order to make effective use of computerized information systems.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks						Total Marks
L	T	P	C	Theory Marks			Practical Marks			
				ESE (E)	PA (M)		ESE (V)		PA (I)	
					PA	ALA	ESE	OEP		
4	0	2	6	70	20	10	20	10	20	150

Content:

Sr. No.	Content	Total Hrs	% Weight age
1	Introduction: MIS Concept, Definition, Role and impact of MIS, MIS & computers, MIS and academics	4	6
2	Decision making : Concepts, Methods, tools and procedures, Organizational decision making	6	9
3	Information: Concept, classification, Methods of data and information collection, Organization and information	6	9
4	System concepts : Concept and control, Types, Handling system complexity, post implementation problems in a system, need for systems analysis, System analysis of existing system and new requirements, System development model, Structured system analysis and design (SSAD)	8	14
5	Development of MIS : Development of Long range plans, Determining information requirement, Development and Implementation, Organization for Development of MIS, Choice of Information Technology, Strategic	10	15

	decision, Configuration design, IT implementation plan, Phases of MISD implementation Assessing information needs, Identification and development of information sources, design and development of information flow network and cost considerations, need and design of an integrated information system for MIS, role of computers in MIS: Processing information flow, Maintaining records and generating outputs for decision making. Implementation and evaluation of MIS		
6	Database Management System: Concepts, Models, Data models, Database design, Conceptual and physical model, MIS and RDBMS, Real time systems and design, Object-oriented Technology (OOT), Client-server architecture	6	9
7	Applications : In manufacturing sector-Personnel management, Financial management, Production management, Materials management, Marketing management, Service sector application	8	12
8	DSS: Decision support system, Artificial Intelligence system, Knowledge-based expert system, Enterprise Management System and MIS	8	14
9	Case studies	8	12

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
30	35	15	10	5	5

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

1. Management Information Sstems by W.S Javadekar, Tata McGraw Hill Publishing Company,New Delhi
2. Management Information system by Ross, Murdick
3. Management Information system by Kanetkar
4. Introduction to data processing by F.R. Grawford (Tata Mcgraw hill)
5. Information systems theory & Practice by Burch and strarter
6. Operations management by Barry Shore
7. System analysis and Data processing by Menon

Course Outcome:

After learning the course the students should be able to:

- Understand types of MIS applications in organizations.
- Discuss the development of management information systems in organizations.
- Select and design MIS systems appropriate to meet management requirements.
- Critically evaluate MIS contributions to the strategic management of organizations.
- Discuss and evaluate cases related to application of MIS in different organizations.

List of Experiments:

1. Study of basic system concept.
2. Importance of system approach.
3. Study model of general information system.
4. Role of management information system in organization.
5. Study the characteristics of good management information system.
6. Study various levels of management information system.
7. Computer and management information system.
8. Study of various information storage devices.

Major Equipment: None

List of Open Source Software/learning website: www. nptel.ac.in

ACTIVE LEARNING ASSIGNMENTS: Preparation of power-point slides, which include videos, animations, pictures, graphics for better understanding theory and practical work – The faculty will allocate chapters/ parts of chapters to groups of students so that the entire syllabus to be covered. The power-point slides should be put up on the web-site of the College/ Institute, along with the names of the students of the group, the name of the faculty, Department and College on the first slide. The best three works should submit to GTU.