



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering

Subject Code: 3161509

Semester –VI

Industrial Engineering

Subject Name: Management Information Systems

Type of course:

Prerequisite: Nil

Rationale:

The subject is designed to understand importance of Information system to Manufacturing and management. It also help students to understand flow of information inside the organization.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	0	2	4	70	30	30	20	150

Content:

Sr. No.	Content	Total Hrs
1	Management within organizations: Management activities, roles and levels, Management Planning and Control, Strategic Planning within an organization: activities, techniques and results. The nature of decision-making: decision-making models and classification of decision-making situations, The nature of information: classifications and characteristics. MIS subtypes, Measurement of MIS performance and capabilities.	08
2	MIS applications and relationships: Kinds of Information Systems: Transaction Processing System(TPS) – Office Automation System (OAS) – Management Information System (MIS) – Decision Support System (DSS)and Group Decision Support System (GDSS) – Expert System (ES) –Executive Support System (ESS)Data warehouses and data mining facilities: the relationship between data warehousing and other MIS facilities.	08
3	Development of MIS: Development of Long range plans, Determining information requirement, Development and Implementation, Organization for Development of MIS, Choice of Information Technology, Strategic 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.	10
4	Information System Application: Transaction Processing Applications, Applications for Budgeting and Planning,	06



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	Automation, Manufacturing Management System,	
5	Database Management System: Architecture of RDBMS. Brief history of DBMS development. ER Model. Relational Data Model, Relational algebra, Database design, Conceptual and physical model, MIS and RDBMS.	06
6	Enterprise System: Enterprise Resources Planning (ERP)-Features, selection criteria, merits, issues and challenges in Implementation.	06
	Total Hours	44

Suggested Specification table with Marks (Theory): (For BE only)

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
10	15	25	20	20	10

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. Kenneth C. Laudon & Jane P. Laudon, Essentials of Management Information Systems, Tenth Edition, Pearson Prentice-Hall, 2012
2. Laudon K.C, Laudon J.P, Brabston M.E, "Management Information Systems –
3. Managing the digital firm", Pearson Education, 2004
4. Turban E.F, Potter R.E, "Introduction to Information Technology"; Wiley, 2004.
5. Jeffrey A.Hoffer, Joey F.George, Joseph S. Valachich, "Modern Systems Analysis and Design", Third Edition, Prentice Hall, 2002.

Course Outcomes: Students will be able to:

Sr. No.	CO statement	Marks % weightage
CO-1	Interpret management information system & its applications.	25
CO-2	Develop management information system for industry.	25
CO-3	Examine hardware, software, Internet and communications capabilities and their implication for MIS.	25
CO-4	Evaluate enterprise system and data base management system.	25



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Term Work:

The term work shall be based on the topics mentioned above.

List of Experiments:

Assign tutorials based on Syllabus

Major Equipment:

Nil

List of Open Source Software/learning website: