



GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Business Administration

Level: PG

Branch: Information Technology

Course / Subject Code: MB01096011

Course / Subject Name : Information Technology Management

w. e. f. Academic Year:	2024-25
Semester:	1
Category of the Course:	Core Course (CC)

Prerequisite:	UG Level
Rationale:	It is a well-known fact that technology is the fourth factor of production. Inventions in information technology have changed the lives of people, and at the same point in time, it has changed the way of doing business. Hence, it becomes imperative for students to understand the nature and usefulness of information systems in business; and how it bridges the gap between existing and upcoming business models and consumers' expectations.

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Understand the nature of information systems. dimensions, and links with the ability of information systems to influence the competitive advantage	RU
02	Understand the types of information systems and their application in business.	RU
03	Analyze the purposes of functional and enterprise applications.	RUAN
04	Understand the importance of ethics, security, and disruptive technologies in business.	RU

**Revised Bloom's Taxonomy (RBT)*

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Tutorial / Practical		
				ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
3	1	0	4	70	30	50	0	150



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Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	• Organization and Information Technology Systems: • The Organization: • Structure, Managers, and activities. • The level of people and types of decisions and their information needs. • Changing Environment and its Impact on Business - The IT/IS and its influence. Information Technology Systems: • Data, information, and its attributes. • Information Systems – meaning, function dimensions, and need. • Categorization of Organizational Information Systems – hierarchical and functional perspective. • Managerial challenges related to the use of information technology and systems in the organization Strategic business use of IS: • Interdependence between the organization and IS • IS strategies for competitive advantage using Porter's Five Forces Model and Value Chain Model Growth of IT Sector in India; Trends in IT sector	11	25
2.	Types of Information Technology Systems - I: Meaning, functions, and applications of: - Transaction Processing Systems - Management Information Systems - Decision Support Systems - Executive Support / Information Systems • Digital Dashboards • Data Visualization – Overview, Importance & Hands-on session on Excel / Tableau • Artificial Intelligence and Machine Learning - Expert Systems	11	25
3.	Overview of Data Communications and Networking Layers: Analog and Digital data, Analog and Digital Signals, Analog versus Digital, Data Rate Limit, Transmission Impairment, More about signals.	12	25



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	Data Communication: Characteristics of Data Communication, Components of Data Communication Data Flow: Simplex, Half Duplex, Full Duplex Network Hardware: - LAN, MAN, WAN, Wireless Networks and Internetworks Network Software: Protocol Hierarchies, Design Issues for the Layer, Interfaces and Services Networking Layers: Physical Layer, Data Link Layer, Network Layer, Transport Layer, Session Layer, Presentation Layer, and Application Layer. Reference Models: Comparison of the OSI and TCP / IP Reference Models Internet Fundamentals: Internetworking, History & Scope of the Internet, Internet protocol, and standardization, Role of ISP & Factors for choosing an ISP, Internet service providers in India, Types of connectivity such as Dial-Up, leased line, VSAT, etc., Internet server & client modules. Internet Applications & Services: E-mail, Email protocols, Format of an email message, Email routing, Email client, FTP, Types of FTP servers, FTP clients, Telnet, Telnet protocol, Telnet Server, Telnet clients, Internet Relay Chat, IRC network & servers, Channels, WWW (World Wide Web), Browser.		
4.	Information Security: First line of defense – People /employees, Computer crime – hacking & cracking, cyber theft, unauthorized use at work, software piracy, theft of intellectual property, viruses & worms, adware and spyware Second line of defense – Technology for authorization, prevention, detection, and response - (Digital Signatures, cryptography, Firewalls, Intrusion Detection Systems) Information security Audit Contemporary/ emerging technologies: • Cloud and mobile computing • E-commerce, M-commerce • E-Governance • Internet of Things (IoT)	11	25



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5.	Practical: Students should simulate an organization and its processes and create a hypothetical information system. Students should study the information systems adapted by various business entities.	15	(30 marks CEC)
Total		60	100

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	U Level	A Level	N Level	E Level	C Level
25	30	20	15	5	5

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

References/Suggested Learning Resources:

(a) Books:

No.	Author	Name of the Book	Publisher	Year of Publication / Edition
1	Kenneth Laudon, Jane Laudon	Essentials of Management Information Systems	PHI	10th
2	Kenneth Laudon, Jane Laudon	Information Systems: Managing the Digital Firm Management	Pearson	Latest
3	Andrew S. Tanenbaum	Computer Networks	PHI	Latest
4	Behrouz A. Forouzan	Data Communications and Networking	McGraw Hill	Latest
5	Stephen Haag, Amy Philips	Business Driven Technology	McGraw Hill	Latest
6	James A O'Brien, George	Management Information	TMH	Latest
7	Stephen Haag, Maeve Cummings, Amy Philips	Management Information Systems for the Information Age	McGraw Hill	Latest
8	W.S. Jawadekar	Management Information systems	TMH	Latest
9	Raymond McLeod and George P. Schell	Management Information systems	Pearson	10th



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(b) Open source software and website:

List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.

1. MIS Quarterly, University of Minnesota
2. CIO
3. Computer Express
4. Digichip
5. PC World
6. Computer Shopper
7. Dataquest

CO- PO Mapping:

Semester 1	Course Name: Information Technology Management				
	POs				
Course Outcomes	PO1	PO2	PO3	PO4	PO5
CO1	3	3	1	-	2
CO2	3	2	1	-	2
CO3	3	3	1	1	2
CO4	2	2	1	2	2

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.

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