

GUJARAT TECHNOLOGICAL UNIVERSITY

COMPUTER ENGINEERING (SYSTEMS AND NETWORK SECURITY)

(56)

IT SYSTEMS AND MANAGEMENT

SUBJECT CODE: 2725606

SEMESTER: II

Type of course: Major Elective III

Prerequisite: Management Information Systems, Business Information Systems, Networking concepts, Service management

Rationale: objective behind designing this subject is to help student understanding use of Information systems (IS)/Information technology (IT) for resource management of the organization. IS/IT is a major resource that can radically affect the structure of an organization, the way it serves customers, and the way it helps people in organizations to communicate both internally and externally, and the way an organization runs its business. This subject focuses on many strategic and contemporary uses of information systems such as implementing enterprise planning systems for improving internal operation, adopting customer relationship management systems and supply chain management systems to enhance relations with customers and suppliers/partners respectively, and establishing knowledge management systems for better managing organizational knowledge resources as well as using different information systems for supporting managers' decision making.

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) | | | |
| | | | | | PA | OEP | PA | RP | | |
| 3 | 2# | 0 | 4 | 70 | 30 | 30 | 0 | 10 | 10 | 150 |

Content:

| Sr. No | Topics | Teaching Hrs. | Module Weightage |
|--------|---|---------------|------------------|
| 1 | Introduction to Information Technology: Need for information technology; information technology firms; what they are and how they do things; Opportunities the IT industries offer. | 6 | 10 |
| 2 | Introduction to Information Systems and its Choice: Concepts and overview of information systems; Major types of system in organization, A systematic, framework for information systems; Components of information systems; information systems design, analysis and management, Systems from functional perspectives, Integrating functions and business processes : Introduction to Enterprise application, Nature of IT decision Strategic decision, Choice | 8 | 20 |

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|---|---|---|----|
| | of the IT and the MIS, , Evaluation, IT Implementation plan, Information systems for Competitive Advantages | | |
| 3 | Information Systems, Organizations, management and Strategy: Organizations and Information Systems, How information system impact organizations and business firms, The impact of IT on management decision making, Information business and business strategy | 7 | 10 |
| 4 | IT Infrastructure management: Introduction, challenges, design issues in IT organization and IT infrastructure, Determining customer's requirements, IT systems, management process, IT service management process, Information system design process, patterns for IT systems management, IT infrastructure library | 4 | 15 |
| 5 | IT Service management: Service delivery process, Service level management, financial management, IT service continuity management, capacity management, availability management, Configuration management, incident management, problem management, change management, release management | 3 | 10 |
| 6 | IT Networks management: Hardware and software inventories, Hardware and software inventories, Configuration management, Security and server management | 5 | 20 |
| 7 | Use of IS for organization functional area: Managing knowledge resources, CRM, SCM, Operations | 2 | 15 |

Reference Books:

1. Managing Information Systems, Ten Essential Topics, Xu, Jun, Quaddus, Mohammed 2013, XI, 166 p. 1 illus. A product of Atlantis Press
2. O'Brien, J.A.1999: Management Information Systems, New York: Irwin Mcgraw Hill.
3. Information Technology for management, Turban, McLean, Wetherbe, 4th edition, Wiley
4. Management Information Systems, Loudon and Loudon, 10th edition, Pearsons Educations
5. IT Service Management by Ernest Brewster, Richard Griffiths, Aidan Lawes, John Sansbury, Viva Books Private Limited

Course Outcome:

After successful completion of the course, student will be able to

- Understand the use of information systems to make strategic decisions for business organization
- Understand the core concepts and gain knowledge of managing information systems
- To be familiar with IT applications in different business functions, operations, CRM, SCM and service areas
- Understand use of information systems to manage network and knowledge resources

List of Open Source Software/learning website:

- <http://www.inderscience.com/jhome.php?jcode=ijisam>
- <http://www.springer.com/economics/book/978-94-91216-88-6>

Review Presentation (RP): The concerned faculty member shall provide the list of peer reviewed Journals and Tier-I and Tier-II Conferences relating to the subject (or relating to the area of thesis for seminar) to the students in the beginning of the semester. The same list will be uploaded on GTU website during the first two weeks of the start of the semester. Every student or a group of students shall critically study 2 papers, integrate the details and make presentation in the last two weeks of the semester. The GTU marks entry portal will allow entry of marks only after uploading of the best 3 presentations. A unique id number will be generated only after uploading the presentations. Thereafter the entry of marks will be allowed. The best 3 presentations of each college will be uploaded on GTU website.