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| SEC 301 | Management Information System (MIS) | 4L:0T:0P | 4 Credits |
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Course Objective

The course aims to provide students with comprehensive knowledge and practical skills in managing information systems (MIS), database management, information system applications, and project management using modern tools and methodologies. Students will learn to analyze, design, and implement effective MIS solutions in various business contexts.

Course Outcomes:

1. Understand the basic concepts, types, dimensions, and components of MIS, and evaluate the benefits and evolution of IT infrastructure in the digital firm era.
2. Apply database management principles by setting up and managing DBMS packages, creating Entity-Relationship diagrams, and understanding data models, data warehouses, and administration techniques.
3. Analyze various MIS applications, including DSS, GDSS, and knowledge management systems, and develop e-commerce solutions by leveraging enterprise models, business process reengineering, and digital communication strategies.
4. Evaluate project management objectives and methodologies, including agile practices such as SCRUM, and manage projects effectively to control risk factors and understand ethical, social, and political issues in the information era.

Course Content :

Unit 1: Fundamentals concepts of MIS

Basics concepts of MIS/ Types of MIS, Dimension and components of IS, Benefits of MIS, IT infrastructure, and IT infrastructure evolution, Components of IT infrastructure, New approaches for system building in the digital firm era

Unit 2: Data base management system:

Objectives of data base approach- Characters of database Management systems- Data processing system- Components of DBMS packages - Data base administration- Entity – Relationship (conceptual)

Unit 3 : Information system applications:

MIS applications, DSS – GDSS - DSS applications in E enterprise - Knowledge Management System and Knowledge Based Expert System - Enterprise Model System and E-Business, E- Commerce, E-communication, Business Process Reengineering.

Unit 4: Managing Projects

Objectives of project management, Fundamentals of project management information systems with agile methodologies -Introduction of SCRUM, Roles and meetings, User stories, Project risk, Controlling risk factors, Ethical, social, and political issues in the information era.

Practical Work List (Suggestive)

- Analyze a real-world Management Information System (MIS) implementation case, identifying the types of MIS used, benefits realized, and challenges faced. Present findings using written and visual formats.
- Set up and manage a Database Management System (DBMS), perform basic operations, and create an Entity-Relationship diagram for a business scenario to demonstrate database conceptual design.
- Design and build an e-commerce website, incorporating features of digital markets, digital goods, and e-commerce business models.
- Manage a mock project using agile methodologies, including roles, meetings, user stories, and risk management.

Text Book –(Latest Edition):

1. Laudon, K. C., & Laudon, J. P.. Management information systems: managing the digital firm. Fifteenth Edition. Pearson.
2. Coronel, C., & Morris, S.. Database systems: design, implementation, & management. Cengage Learning.
3. Olson, D. . Information systems project management (First;1; ed.). US: Business Expert Press.
4. Schiel, J. The ScrumMaster Study Guide. Auerbach Publications.
5. The Scrum Master Guidebook: A Reference for Obtaining Mastery" , CHANDAN LAL PATARY
6. Scrum: The Art of Doing Twice the Work in Half the Time", Jeff Sutherland, J.J. Sutherland
7. Stair, R., & Reynolds, G. Fundamentals of information systems. Cengage Learning.

Case Studies

1. Developing MIS for National Innovation Foundation: Choosing Process, Product and Vendor, Sanjay Verma; Priyanka Sharma, <https://hbsp.harvard.edu/product/A00137-PDF-ENG?Ntt=MIS>
2. Enterprise-Wide Business-IT Engagement In An Empowered Business Environment: The Case Of FedEx Express EMEA, Stijn Viaene; Steven De Hertogh, <https://hbsp.harvard.edu/product/JIT025-PDF-ENG?Ntt=MIS>
3. From Products to Product-Service Systems: IT-Driven Transformation of a Medical Equipment Manufacturer, Jens Fahling; Felix Kobler; Jan Marco Leimeister; Helmut Krcmar, <https://hbsp.harvard.edu/product/JIT062-PDF-ENG?Ntt=MIS>
