

Branch: B.Sc.(IT)	Semester-VI
Subject Code: 6102	Lecture: 04 Credit: 04
Course Opted	Core Course -19
Subject Title	ENTERPRISE RESOURCE PLANNING

Course Objectives:

- To provide a contemporary and forward-looking on the theory and practice of Enterprise Resource Planning Technology.
- To focus on a strong emphasis upon practice of theory in Applications and Practical oriented approach.
- To develop the basic understanding of how ERP enriches the business organizations in achieving a multidimensional growth.

Course Outcomes

- Make basic use of Enterprise software, and its role in integrating business functions
- Analyze the strategic options for ERP identification and adoption.
- Design the ERP implementation strategies.
- Create reengineered business processes for successful ERP implementation.

Module	Sr. No.	Topic and Details	No. of Lectures Assigned	Marks Weightage %
UNIT- I	1	Enterprise: An Overview: Business Functions and Business Processes, importance of Information: Characteristics of information; Types of information, Information System: Components of an information system; Different types of information systems; Management information system, Enterprise Resource Planning: Business modelling; Integrated data model	4	10
	2	Introduction to ERP: Defining ERP, Origin and Need for an ERP System, Benefits of an ERP System, Reasons for the Growth of ERP Market, Reasons for the Failure of ERP Implementation: Roadmap for successful ERP implementation, ERP Architecture, Types of ERP Architecture	4	10
	3	ERP and Related Technologies: Business Process Re-engineering, Management Information systems, Decision Support Systems, Executive Information Systems- Advantages of EIS; Disadvantages of EIS, Data Warehousing, Data Mining, On-Line Analytical Processing, Product Life Cycle Management, Supply Chain Management, ERP Security	4	10
	4	ERP Implementation Life Cycle: ERP Tools and Software, ERP Selection Methods and Criteria, ERP Selection Process, ERP Vendor Selection, ERP Implementation Lifecycle, Pros and cons of ERP implementation, Factors for the Success of an ERP Implementation	4	15

UNIT- II	5	ERP Modules Structure: Finance, Sales and Distribution, Manufacturing and Production Planning- Material and Capacity Planning; Shop Floor Control; Quality Management; JIT/Repetitive Manufacturing; Cost Management ; Engineering Data Management; Engineering Change Control ; Configuration Management ;Serialization / Lot Control ;Tooling, Human Resource, Plant Maintenance- Preventive Maintenance Control; Equipment Tracking; Component Tracking; Plant Maintenance Calibration Tracking; Plant Maintenance Warranty Claims Tracking.	8	10
UNIT - III	6	ERP – A Manufacturing Perspective: Role of Enterprise Resource Planning (ERP) in manufacturing, Computer Aided Design/Computer Aided Manufacturing (CAD/CAM), Materials Requirement Planning (MRP)-Master Production Schedule (MPS);Bill of Material (BOM);Inventory Records; Closed Loop MRP; Manufacturing Resource Planning (MRP-II), Manufacturing and Production Planning Module of an ERP System , Distribution Requirements Planning (DRP), Just-in-Time(JIT) & KANBAN - Kanban; Benefits and pitfalls of JIT; Potential; Kanban, Product Data Management (PDM)- Data Management, Process Management; functions of PDM; Benefits of PDM, Manufacturing Operations- Make-to-Order (MTO) and Make-to-Stock (MTS); Assemble-to-Order (ATO); Engineer-to-Order (ETO); Configure-to-Order (CTO)	8	15
	7	ERP: A Purchasing Perspective: Role of ERP in Purchasing, Purchase Module: Features of purchase module; Benefits of purchase module, ERP Purchase System	4	10
	8	ERP: Sales and Distribution Perspective: Role of ERP in Sales and Distribution, Sub-Modules of the Sales and Distribution Module: Master data management, Order management, Warehouse management, Shipping and transportation, Billing and sales support, Foreign trade, Integration of Sales and Distribution Module with Other Modules	6	10
UNIT-IV	9	ERP Vendors, Consultants, and Employees: Vendors- Role of the Vendor; Consultants: Types of consultants; Role of a Consultant, Employees; Role of employees; Resistance by employees; Dealing with employee resistance, Role of Top Management, Role of Implementation Partner.	4	05
	10	ERP: A HR Perspective: Role of ERP in Human Resource Management: Workflow of ERP human resource management system; Advantages of ERP human resource management system, Human Resource Management Module: Functions of human resource management module; Features of human resource management module; Benefits of human resource management module, Common Sub-Modules of Human Resource Management Module: Personnel management; Organisational management; Payroll management; Time management; Personnel development	4	05
TOTAL			50	100

Text Book:

1. ERP in practice – Vaman - TMH

Reference Books:

1. Daniel E.O'Leary, Enterprise Resource Planning Systems, Cambridge University Press, 2002.
2. Ellen Monk, Bret Wagner, Concepts in Enterprise resource planning, Cengage learning, Third edition, 2009.