

COURSE OUTLINE

Enterprise Resource Planning

Objective:

This course will introduce you to enterprise systems and show how organizations use enterprise systems to run their operations more efficiently and effectively. You will learn about the critical success factors and implementation strategies that lead to enterprise system success, and about the informational, knowledge, and decision-making opportunities afforded by enterprise systems. The course will examine typical Enterprise Systems modules: materials management (MM), supply chain management (SCM), customer relationship management (CRM), financials, projects, human resource management (HRM) etc. Enterprise systems use a single database to integrate business transactions along and between processes, leading to benefits such as efficient and error-free workflows plus accounting, management reporting and improved decision-making.

Table 1.1: Course Layout

Course Title	Enterprise Resource Planning
Program(s)	MBA-Executive & MSc (Project Management)
Instructor's Name & email address	Saad Ahmed Javed; saad.ahmed.javed@live.com
Number of Lectures	12
Duration of each class	2 hours / session
Class Timings	4:30 am – 6:30 pm OR as conveyed by the Coordination Department of the Institute.
Textbook(s)	Enterprise Systems For Management, by Motiwalla and Thompson, Pearson/Prentice Hall 2011 Concepts in Enterprise Resource Planning, latest Editions By Ellen Monk and Bret Wagner, Thomson Course Technology Essentials of Business Processes and Information Systems Simha Magal and Jeffrey Word. ISBN-13: 978-0-470-23059-6 For further learning material: https://saadajaved.wordpress.com/management/

Table 1.2: Distribution of Marks

Assignments (Two)	10
Quiz (Two)	10
Class Participation	10
Presentation of ERP Project	10
Mid Term	25
Final Term	35
TOTAL	100

Student Learning Outcomes:

By the end of this course, you should be able to:

- 1) Demonstrate a good understanding of basic issues in Enterprise Systems,
- 2) Explain the scope of common Enterprise Systems (e.g., MM, SCM, CRM, HRM, procurement),
- 3) Explain the challenges associated with implementing enterprise systems and their impacts on organizations
- 4) Describe the selection, acquisition and implementation of enterprise systems
- 5) Use one of the popular ERP packages to support business operations and decision-making.
- 6) Communicate and assess an organization's readiness for enterprise system implementation with a professional approach in written form,
- 7) Demonstrate an ability to work independently and in a group.

Topics:

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

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 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.

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

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 ;Serialisation / Lot Control ;Tooling, Human Resource, Plant Maintenance- Preventive Maintenance Control; Equipment Tracking; Component Tracking; Plant Maintenance Calibration Tracking; Plant Maintenance Warranty Claims Tracking, Quality Management - Functions of Quality Management; CAQ and CIQ; Materials Management- Pre-purchasing; Purchasing; Vendor Evaluation; Inventory Management and Invoice Verification and Material Inspection

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 of JIT; Potential Pitfalls of JIT; 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)

ERP: A Purchasing Perspective: Role of ERP in Purchasing, Purchase Module: Features of purchase module; Benefits of purchase module, ERP Purchase System

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

ERP: An Inventory Management Perspective: Role of ERP in Inventory Management: Features of ERP inventory management system; Benefits of ERP inventory management system; Limitations of ERP inventory management system, Importance of Web ERP in Inventory Management, ERP Inventory Management Module, Sub-Modules of the ERP Inventory Management Module, Installation of ERP Inventory Management System, Failure of ERP Inventory Installation

ERP: An CRM Perspective: Role of ERP in CRM, Concept of CRM: Objectives of CRM; Benefits of CRM; Components of CRM, Types of CRM: Operational CRM, Analytical CRM, Sales intelligence CRM, Collaborative CRM, Sub-Modules of CRM: Marketing module; Service module; Sales module

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

ERP: An Finance Perspective: Role of ERP in Finance, Accounting and Finance Processes: Cash management; Capital budgeting, Features of ERP Financial Module, Benefits of ERP Financial Module, Sage Accpac ERP – A Financial ERP Tool

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

Different ERP Vendors - ERP Vendors, SAP-AG: Products and technology R/3 overview; SAP advantage, Baan Company , Oracle Corporation: Products and technology; Oracle Application; Vertical solutions, Microsoft Corporation, Ramco Systems, Systems Software Associates Inc. (SSA), QAD

Future Directions in ERP: New Trends in ERP, ERP to ERP II-Implementation of Organisation-Wide ERP, Development of New Markets and Channels, Latest ERP Implementation Methodologies, ERP and E-business, Market Snapshot, The SOA Factor

About the Instructor:

He is a Researcher associated with the Research Centre of the Lahore School of Management (LSM), the University of Lahore, Lahore. He is the President of the Academy of Young Researchers & Scholars (AYRS), Lahore, and is working as adjunct faculty at NCBA&E since 2015. He is also working on an educational project by the Government of the Punjab. He has done his graduation from the University of Punjab and MS/M.Phil in Project Management from COMSATS Institute of Information & Technology. He has published number of research papers in international journals. His areas on interest includes Consumer Behavior, ERP, Product Design, Organizational Behavior, Human Resource Management, Project Management, Entrepreneurship, Ethics, CSR etc.