

GUJARAT TECHNOLOGICAL UNIVERSITY

Master in Computer Application (Integrated MCA)

Year IV – (Semester-VII) (W.E.F. June 2016)

Subject Name: Enterprise Resources Planning (ERP)

Subject Code: 4470632

1. Learning Objectives :

- To be able to understand the concepts of ERP and technologies
- To be able to understand various ERP Modules
- To be able to understand how companies have implemented ERP

2. Prerequisites: NIL

3. Contents :

Unit No.	Course Content	No Of Lectures
1	Introduction to ERP; Concept of Enterprise, ERP Overview, Integrated information system, The role of Enterprise, Business Modelling, Myths about ERP, Basic ERP Concepts, Intangible benefits of ERP, Justifying ERP investment, Risks of ERP, Benefits of ERP	06
2	ERP related Technology Business Intelligence, Data ware housing, Data mining, OLAP, Business Process Reengineering, Business Models of an ERP Package, SCM, CRM, ERP Security	08
3	Modules of ERP : Core Modules Of ERP Human Resources Management, Financial Management, Inventory Management, Quality Management, Sales and Distribution	08
4	ERP Implementations ERP Lifecycle implementation, implementation Methodologies, ERP package selection, Reasons for failure and reasons for success of ERP implementation	07
5	ERP For Industries (A) ERP for manufacturing Industry: ERP for petroleum, GAS companies, ERP for Automobile Industry, ERP for Pharma, ERP for FMCG, ERP for Mining industry (B) ERP for Service Industry: ERP for retail, ERP for healthcare, ERP for Educational Institution, ERP for Telecom, ERP for banks, ERP for Insurance companies	10

4. Text Book:

1. Alexis Leon “ERP Demystifies” of TMH, Second Edition
2. Rajesh Ray “ERP text and cases “ of TMH, First Edition

5. Reference Books:

1. David L. Olson, “Managerial issues of Enterprise Resource Planning systems” Of TMH Edition 2004.
2. Ellen Mon, Bret Wagner “Concepts in ERP”, Second Edition of Cengage Learning.
3. Ashim Raj Singla “ Enterprise Resource Planning”, of Cengage Learning, First Edition

6. Chapter wise Coverage from Text Book:

Unit No	Book#	Chapters
1	1	Chapter 1, 2,3,4,5,6
2	2	Chapter 9,13, 33
	1	Chapter 15,16, 40
3	2	Chapter 20,21,22,26, 29
4	2	Chapter 2, 5,18
5	2	Chapter 35, 36

Tools/Technologies to be used:

- 1 Odoo – On Demand Open Objects (penERP)

7. Accomplishments of the student after completing the course :

Student will be able to understand the concept of ERP and related technology. They will be able to identify the reason for the successful /failure ERP implementation. They will learn various functionality of different ERP modules. At the same time they can understand the usage of ERP in manufacturing as well as Service industry.

8. Suggestions for Lab Sessions :

a) General Guidelines for ERP Practical using Odoo

- The project should be free from plagiarism of any kind.
- It is mandatory that the project should be developed using Odoo Linux is the preferred platform
- Project must have proper documentation
- This may not be a live project
- Project Must contain three Tasks (Team Size 3)
 - i. Study of any one Core Module (Accounts, Purchase, Sales, Stock)
 - ii. Customization : Minor and Major (Add new UI/ form or functionality)
 - iii. Report : Customization in existing report and addition new report

b) Knowledge about the following is expected to be demonstrated.

- Proper Functional knowledge about the purpose of identified Module
- List of interconnected modules with identified module
- Module flow-control, functions, Security and Components of identified module
- Gap Analysis Process and customization process in ERP

- Proper understanding about database and connections
- Proper understanding about UI and Report creation

c) References

- 1) References to odoo University: <https://www.odoo.com>
- 2) Holger Brunn, Alexandre Fayolle, Daniel Reis, ,Odoo Development Cookbook, Packt Publishing

d) Suggested Upgrade Points from core modules for Task II and III

Core Module Name	Sub Task Description
ACCOUNT	Invoice Authorization
	Advance payment reminder with Email and SMS
	Advance Asset Management
	Payment Authorization
	Credit Limit Invoicing for Customer
	Invoice Write off Authorization
PURCHASE	Purchase Authorization
	Request for Quotation with Delivery Condition
	Purchase Limit for Supplier
	Purchase Priority
SALE	Sales Verification
	Conditional Order Fullfillment
	Drop Shipping
	Order Feedback Survey
	Order Limit for Customer
	Sale Discount Authorization
	Actions on Sale Order
STOCK	Stock Delivery Verification
	Stock Inward Verification
	Stock Update to Vendors
	Stock Scrap Authorization
	Stock Valuation Reporting

PS: Above is a suggestive list so student can identify any task in which they can execute Task b and c.

e) Project Document Content

The project has to be well-documented in the form of a Project Report (at least 50 pages) w comprising of as below:

Task I; Functional Study

- 1) Module Overview (Maximum 400 words).
What you have understood from the module

- 2) Master Configuration
 - a) Base / Existing Configuration; Setup, lookup used for module functionality
 - b) Your configuration or modification identified for study
- 3) Security
 - A) Existing Security of Module
 - B) Modified Security by you
- 4) Transactions
List of Transaction / Reports with screen shots / sample

Task II & II (Separate for Task II and III)

- a) Change Description (Max 400 Words)
- b) Gap Analysis
- c) Implementation
 - Setup or security changes
 - Identified Components for change
 - Implementation steps
 - Transactional or Output after change implementation

f) Evaluation Parameters :

- Evaluation of the projects would be done considering the framework available at the Institute. The main parameter of assessment would be the ability of the students to understand Odoo ERP system, Module Functionality, Customization process and code. Though the project and domain specific knowledge would be assessed for, the evaluation would predominantly depend on the students' ability to explain, modify or revise of code.
- Coding standards should have been implemented.
- Though the project would be evaluated for the entire team, the examiner should emphasize on the contribution of each team member in the project