

GUJARAT TECHNOLOGICAL UNIVERSITY

MASTER OF BUSINESS ADMINISTRATION

Year – 2 (Semester – III) (W.E.F. Academic Year 2018-19)

Specialization: Production and Operations Management

Subject Name: Inventory Management, Materials Planning and Management (IMMPM)

Subject Code: 3539273

1. Learning Outcome:

- Acquaintance with basics of Inventory Management and Materials planning, management replenishment and execution.
- Understanding the contemporary and cutting edge Inventory Management, Materials Planning and Management practices by study of fundamentals of Supply Chain Management.

2. Course Duration: The course duration is of 36 sessions of 75 minutes each.

3. Course Content:

Module No.	Modules / Sub-Modules	No. of Sessions	70 Marks (External Evaluation)
I	Introduction to Materials Management, Organization Structure, Objectives and Functions of Materials management, Importance of Materials Management. Inventory Management: Concept and Need of Inventory Management, Definition and Need of Inventory, Importance of Inventory Management, Inventory Classification, Coding and Standardization of Materials. Factors Affecting Inventory, Dependent and Independent demand, Strategic Inventory Management.	9	17
II	Definition of Inventory and Types of Inventory Control techniques, Safety Stock and Calculation of Safety Stock, Service Levels, Strategies to increase inventory turns and reduce throughput time, reduce WIP and FG Elimination of wastes, Optimized inventory levels in service and manufacturing organizations Inventory Model : Fixed order versus Fixed Inventory System, Models with discounts, Inventory Models: (1) Deterministic (2) Probabilistic (3) Discount Model, Instantaneous and Non	9	17

	Instantaneous Replenishment models with service levels and safety stock calculations. Selective Inventory control techniques with norms and applications		
III	Materials Requirement Planning; Meaning, Purpose, and advantages of MRP. Modern Concepts of MRP. MRP – II. Just in Time, Lot Sizes, Process of MRP, Data Requirements and management, Files and database, Updating inventory records, BOM, To manage inventories in multiple locations using distribution planning MPS : Meaning, Objectives, Process, Managing MPS Inventory records	9	18
IV	Materials Management in JIT Environment; Zero Inventory; Excess Inventory; VMI (Vendor Managed Inventory), Vendor relations in JIT Concept of Outsourcing, Evaluation of Performance of Materials Management, Evaluation of Performance of Inventory Management, Evaluation of Performance of Purchasing Management	9	18
V	Practical Project based on the above topics	---	(30 marks CEC)

4. Teaching Methods:

Following pedagogical tools will be used for teaching the course:

- a.) Case discussions
- b.) Discussion on issues and techniques
- c.) Projects/Assignments/Quiz/Class Participation etc.

5. Evaluation:

The evaluation of participants will be on continuous basis comprising of the following elements:

A	Continuous Evaluation Component comprising of Projects / Assignments / Quiz / Class Participation / Class test / Presentation on specific topic etc.	(Internal Assessment- 50 Marks)
B	Mid-Semester examination	(Internal Assessment-30 Marks)
C	End –Semester Examination	(External Assessment-70 Marks)

6. Reference Books:

Sr. No.	Author	Name of the Book	Publisher	Year of Publication
1	Chitale A K, Gupta R C	Materials Management : Text and Cases	Prentice Hall Publications	Second Edition
2	Arnold Tony J R, Chapman Stephen, Clive Lloyd	Introduction to Materials Management	Pearson International Edition	Sixth Edition

3	Tersine Richard J	Principles of Inventory and Materials Management	Prentice Hall Publications	Fourth Edition
4	Anand Prakash	Purchasing management : Materials Planning and Inventory Management	Random Publications	First
5	Ray Carter	Integrated materials management	Prentice Hall	Latest
6	Bragg Steven	Inventory Management	Accounting Tools Inc	Second Edition
7	Chandra Bose	Inventory Management	Prentice Hall	Latest
8	Saxena J P	Warehouse Management and Inventory Control	Vikas Publishing	First Edition

7. List of Journals/Periodicals/Magazines/Newspapers etc.

Inventory Management and Materials Planning Journals and Articles published in India and internationally may be referred