Devi Ahilya University, Indore, India **Institute of Engineering & Technology**				**III Year B.E. Mechanical Engg.,** **(Full Time)**			
Subject Code & Name	**Instructions** **Hours per Week**			**Credits**			
6MERG4 **Materials Management**	**L**	**T**	**P**	**L**	**T**	**P**	**Total**
Duration of Theory Paper: **3 Hours**	**3**	**1**	**-**	**3**	**1**	**-**	**4**

Course Objective:

The course is designed

1. To inbuilt the concepts of Material handling and purchase procedure of an organization.
2. To impart the basics of standardization & stores management within organization.
3. To concrete the concepts of inventory management for effective decision making related to material & inventory.

Prerequisite(s): Basic concepts of Industrial Engineering and Management, Principles of Management.

COURSE CONTENTS

UNIT-I

Introduction: Objective of materials management, field and scope of material management, general analysis material quality, material planning programming. Integrated approach to Materials Management, Standardization, simplification, codification.

UNIT-II

Purchase Management: Scientific purchasing; objectives, organization of purchasing functions, Purchase cycle, Method of Buying; buying under certainty, buying under uncertainty, Purchasing under different circumstances , inspection and testing , purchasing for mass production , purchase contract , make or buy decision , material import , DGS & D rate contract.

UNIT-III

Stores Management: Stores organization, functions of scientific stores management, types of stores, store layout, store security, stores receipts, methods of storing, record – keeping & checking, issue methods, stores layout.

UNIT-IV

Inventory Management: Selective control of inventory, various inventory models, quantity discounts, shortages, instantaneous production with back orders, fixed time mode, single period model of profit maximization with time independent costs, lead time , re-order point , buffer stock, models with price breaks, , POQ system.

UNIT-V

Supply chain Management: Understanding the Supply chain, Process view of the supply chain, Supply chain performance: achieving Strategic Fit, Supply chain Drivers and Obstacles.

Course Outcome:

Students earned credits will develop ability to

CO1. To understand the basics of Material handling techniques used in industries.

CO2. To understan the basics of purchase procedure and its management.

CO3. To understand the basics of stores and inventory managemnt techniques used in industries. An overview of supply chain management.

BOOKS RECOMMENDED:

[1]. Lee & Dobler, *Material management.* Tata Mc.Graw Hill, 1990, 5e
[2]. Arnold J.R Tony & Stephen N. Chapman, *Introduction to Material management. PHI*, 2003, 7e
[3]. Gopal Krishnan, *Material Management*,PHI 2015, 2e
[4] L.C.Jhamb, Materials and Logistics Managemnt, Everest Publication, 1e
[5] Sunil Chopara and Peter Meindl, Supply chain Management, Pearson Education, 6e

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Course Outcome:

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CO.No.	CO	PO
CO1	To understand the basics of Material handling techniques used in industries.	PO1, PO2, PO3
CO2	To understan the basics of purchase procedure and its management.	PO1, PO2, PO5
CO3	To understand the basics of stores and inventory managemnt techniques used in industries. An overview of supply chain management.	PO1, PO4, PO5

CO-PO Relationship

CO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12
CO1	3	3	3									
CO2	3	3			3							
CO3	3			3	3							
CO4												
CO5												

4.

5. * CO (rows) mention nil/very small/insignificant contribution to the PO(column)
   1→ relevant and small significance 2 → medium or moderate and 3 →strong