

MATERIALS MANAGEMENT

Course Code	20ME4703D	Year	IV	Semester	I
Course Category	Professional Elective-V	Branch	ME	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	IEM
Continuous Internal Evaluation	30	Semester End Evaluation	70	Total Marks	100

Course Outcomes: Upon successful completion of the course, the student will be able to

	Statement	Skill	BTL	Units
CO1	Understand the concepts of planning, budgeting, purchasing and management of materials	Understand	L2	1,2,3,4,5
CO2	Explain materials planning and budgeting techniques	Understand	L2	2
CO3	Summarize concept of Purchasing, concept of stores management	Apply	L3	3,4
CO4	Apply inventory control techniques	Apply	L3	5

**Contribution of Course outcomes towards achievement of Program outcomes
& Strength of correlations (High:3, Medium: 2, Low:1)**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	1					3		2			3		2	3
CO2	1					3		2			3		2	3
CO3	1					3		2			3		2	3
CO4	1					3		2			3		2	3

Syllabus

UNIT	Content	Mapped CO
I	Introduction to Materials Management: Introduction, Definition, Scope, objectives, functions, Integrated materials management, Organization of Materials Management, Types of Organizational structures, Manpower planning for Materials Management, Manpower planning techniques.	CO1
II	Materials planning and budgeting: Introduction, Materials planning-Factors, Techniques, Materials Requirement and Capacity Requirement Planning, Aggregate planning, Master production schedule- Bill of materials, MRP II, JIT Production planning, Budgeting-Materials budget, purchase budget.	CO1, CO2
III	Purchasing: Introduction, functions of purchasing department, objectives of purchasing, Methods of purchasing, Purchase Procedure, Steps in purchasing, Make or Buy Decisions, Criteria for make or Buy Decision, Production work order, Purchase order.	CO1, CO3
IV	Stores Management: Introduction, Functions, Stores and store keeping, Store location, Layout of stores, stores systems and procedure, Store records, Case studies in Stores management (from Public sector undertakings)	CO1, CO3
V	Inventory Control: Introduction, Inventory control records, Material requisition form, Purchase requisition form, perpetual Inventory record; Inventory Policy. Selective Inventory control: Mechanics of ABC analysis, purpose of ABC analysis, advantages and Disadvantages, Determining buffer stock, simple problems, VED analysis, SED analysis, FSN analysis.	CO1, CO4project

Learning Resources**Text books**

1. S.C. Sharma, Materials Management and Materials Handling, 4th Edition, KhannaPublishers,2008.
2. B. Kumar, Industrial Engineering and Management, 2nd Edition, Khanna Publishers, 2008.

Reference books

1. P. Gopalakrishnan and M. Sundaresan, Materials Management - An integrated approach, 4th Edition, PHI, 2004