

RAMAIAH INSTITUTE OF MANAGEMENT STUDIES

PGDM PROGRAM (AICTE APPROVED)

Syllabus for 2nd Semester, Batch 2023-2025

Subject: OPERATIONS MANAGEMENT

COURSE CODE: PG23GM206

No of credits: 4

No of teaching hours/credit: 10

COURSE OBJECTIVES	COURSE OUTCOMES
1. To understand key concepts and issues of OM in both manufacturing and service organizations. 2. To understand the relationship between operations and other business functions. 3. To understand techniques of location and facility planning; line balancing; job designing; and capacity planning in operations management. 4. To expose the students to Inventory Management and concepts of Quality Management.	After completing this course, students should be able to: C01: Develop an understanding of and get an appreciation for the production and operations management function in any organization. C02: Understand the importance of productivity and competitiveness to both organizations and nations. C03: To analyze the importance of product and service design decisions and its impact on other design decisions and operations. C04: To evaluate contemporary operations and manufacturing, supply-chain management activities and the renewed importance of this aspect of organizational strategy. C05: Plan and implement suitable quality control measures in Quality Circles to TQM in the organization.

UNIT 1: NEW PRODUCT DEVELOPMENT

- 8 HOURS

Define Production & Operations Management, Product and Services, Order qualifiers and Order Winners, Strategic Design Process, Technology Life Cycle, Steps in New Product Development and New Process Development. Assembly Charts.

(Theory)

UNIT 2: DECISION MAKING

- 5 HOURS

Make and Buy decisions, Simple Cost Analysis, Economic Analysis, Break even Analysis, Cross over Chart.

(Theory and Problems)

Note: Problems on make or buy decision and break-even analysis.

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UNIT 3: AGGREGATE PLANNING

- 8 HOURS

MPS, CRP, MRP, MRP II, ERP, JIT, Kanban, Job and Machine Scheduling, Personnel scheduling
(Theory and Problems)

Note: Problems on Job and Machine Scheduling – N Jobs-two machines, N Jobs-three machines, 2 Jobs-M machines cases only.

UNIT 4: FACILITY LOCATION PLANNING

- 6 HOURS

Plant Location Study, Location Informatics, Location Model, Product Layout, Process Layout, Cellular Layouts
(Theory and Problems)

Note: Problems on facility plant location.

UNIT 5: INVENTORY, PURCHASE AND MAINTENANCE MANAGEMENT - 8 HOURS

Inventory, Tools and Techniques of Inventory Management, Inventory models – ABC/VED Analysis, Fixed order quantity and period system, Centralised and decentralised purchasing, Types of purchasing, Purchasing Research, Total Productive Maintenance, Economics of Maintenance
(Theory and Problems)

Note: Problems on ABC analysis and EOQ

UNIT 6: QUALITY MANAGEMENT

- 5 HOURS

Benefits of Quality management, ISO, Baldrige Criteria, Process control Chart, Method Analysis and Work Measurement, TQM, Continuous Improvement, Quality Functions, SPC, Process Capability Index.

REFERENCE BOOKS:

- Operations and Supply Management by Richard Chase, Ravi Shankar, F. Robert Jacobs, Nicholas Aquilano, McGraw Hill Education; Fourteenth edition (1 July 2017), ISBN-10 : 9789339204105 .ISBN-13 : 978-9339204105
- Production and Operations Management, 6e S. Chary (Author) McGraw-Hill Education ISBN-9353164826, 9789353164829
- Production and Operations Management by Kanishka Bedi, Oxford University Press; 3rd edition (4 September 2013) ISBN-10 : 9780198072096: ISBN-13 : 978-0198072096
- Operations Management Jay Heizer, Barry Render, Chuck Munson, Amit Sachan Pearson Education; Twelfth edition (30 July 2017), ISBN-10 : 9789332586703 ISBN-13 : 978-9332586703