

# UNIVERSITY OF MADRAS

## MASTER OF BUSINESS ADMINISTRATION (MBA) DEGREE PROGRAMME SYLLABUS WITH EFFECT FROM 2023-2024

Subject Code	Subject Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
434C2D	Operations Management	Core	3	1	-	-	4	60	25	75	100
Course Objectives											
C1	To understand the production function, production design & capacity planning,										
C2	Exploring the Make or Buy decision, and thus understanding the role of inventory management										
C3	To determine multiple plant location decisions and effective utilization of plant layout. To explain the models, concepts, and techniques adopted in the areas of inventory control and maintenance.										
C4	To elucidate the importance and usefulness of work-study and quality control tools										
C5	To provide insights on service operations management and waiting line analysis.										
SYLLABUS											
UNIT	Details							No. of Hours	Course Objectives		
I	INTRODUCTION: Operations Management- Nature, Scope, Historical Development, Functions- Long term Vs Short term issues- A Systems Perspective- Challenges- Manufacturing Trends in India-Production Design and Process Planning- Types of Production Processes- Plant Capacity-Capacity Planning- Make or Buy Decisions- Use of Crossover Chart for Selection Processes-Types of Charts used in Operations Management.							12	C1		
II	FACILITY DESIGN: Plant Location: Factors to be considered in Plant Location- Location Analysis Techniques- Choice of General Region, Particular community and Site- Multiple Plant Location Decision- Plant Location Trends. Layout of Manufacturing Facilities: Principles of a Good Layout-Layout Factors- Basic Types of Layout- Principles of Materials Handling- Materials Handling Equipment - Role of Ergonomics in Job Design.							12	C2		

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III	INVENTORY CONTROL AND MAINTENANCE: Basic Inventory Models- Economic Order Quantity- Economic Batch Quantity- Reorder Point-Safety Stock- Inventory Costs-Classification and Codification of Stock- ABC Classification-Materials Requirement Planning (MRP)- JIT- Implications of Supply Chain Management. Maintenance: Preventive Vs Breakdown Maintenance- Group Replacement Vs Individual Replacement- Breakdown Time Distribution- Maintenance of Cost Balance- Procedure for Maintenance.	12	C3
IV	DESIGN OF WORK SYSTEMS AND QUALITY CONTROL: Work Study- Objectives- Procedure- Method Study and Motion Study- Work Measurement- Time Study-Performance Rating- Allowance Factors- Standard Time- Work Sampling Techniques- Job Sequencing and Scheduling. Quality Control: Purpose of Inspection and Quality Control- Different Types of Inspection- Acceptance Sampling- The Operating Characteristic Curve- Control Charts for Variables and Attributes; Quality Circles; TQM – Six Sigma, Kaizen	14	C4
V	SERVICE OPERATIONS MANAGEMENT: Introduction to Services Management- Nature of Services- Types of Services- Service Encounter- Designing Service Organizations- Service Facility Location and Layout- Service Blueprinting-Waiting Line Analysis for Service Improvement- Service Processes and Service Delivery.	10	C5
	<b>Total</b>	<b>60</b>	
<b>Course Outcomes</b>			
<b>Course Outcomes</b>	On completion of this course, students will;	<b>Program Outcomes</b>	
<b>CO1</b>	Understand the concepts of production and its design, capacity planning and make or buy decisions.	PO2, PO4	
<b>CO2</b>	Be cognizant of the complexity involved in plant location decisions and utilization of plant layout.	PO2, PO7	
<b>CO3</b>	Understand the Inventory models and the importance of maintenance techniques.	PO6, PO7	
<b>CO4</b>	Be aware of work-study procedures and the importance on quality control tools	PO1, PO2, PO6, PO7	
<b>CO5</b>	Have insight on service operations, service delivery and waiting line analysis.	PO2, PO6, PO7	

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Reading List	
1.	<a href="http://www.shsu.edu/~mgt_ves/mgt560/ServiceManagement.ppt">www.shsu.edu/~mgt_ves/mgt560/ServiceManagement.ppt</a>
2.	<a href="http://zums.ac.ir/files/research/site/ebooks/strategy/operations-strategy.pdf">zums.ac.ir/files/research/site/ebooks/strategy/operations-strategy.pdf</a>
3.	<a href="https://www.emerald.com/insight/publication/issn/0144-3577">https://www.emerald.com/insight/publication/issn/0144-3577</a>
4.	<a href="https://www.inderscience.com/jhome.php?jcode=ijaom">https://www.inderscience.com/jhome.php?jcode=ijaom</a>
References Books	
1.	Aswathappa K and Shridhara Bhat K, Production and Operations Management, 2nd Edition, Himalaya Publishing House, 2021.
2.	Mahadevan B, Operations Management Theory and Practice, 3rd Edition, Pearson Education, 2015.
3.	Russel and Taylor, Operations and Supply Chain Management, 8th Edition, Wiley, 2021.
4.	William J Stevenson, Operations Management, 14th Edition, McGraw Hill, 2021.
5.	Gerard Cachon and Christian Terwiesch, Operations Management, 3 <sup>rd</sup> Edition, McGraw Hill, 2022.
6.	Prof. K C Jain, Production and Operations Management, 1 <sup>st</sup> Edition, Wiley, 2022.

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
<b>CO 1</b>		2		2				
<b>CO 2</b>		2					2	
<b>CO 3</b>						2	2	
<b>CO 4</b>	2	2				2	2	
<b>CO 5</b>		2				2	2	

**3-Strong      2-Medium      1-Low**