



**1. Learning Outcome:**

<b>Learning Outcome Component</b>	<b>Learning Outcome (Learner will be able to)</b>
Business Environment and Domain Knowledge (BEDK)	Analyze the contemporary operations management for manufacturing and services business, it's strategy s need and practices for a given industry or a sector
Critical Thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	Conduct the study on cost minimizing functions of transportation and operations cost minimization.
Global Exposure and Cross-Cultural Understanding (GECCU)	Analyze the operations management with respect to lean manufacturing local and global practices and perspectives.
Social Responsiveness and Ethics (SRE)	Critically evaluate the ethical approach and customer centricity with ethical concerns while minimization of cost during vendor management.
Effective Communication (EC)	Explain the various parts of quality and 5 S as well as Kaizen and developing communication matrix to implement the same.
Leadership and Teamwork (LT)	Collaborative approach to construct effective operations management and lean manufacturing

**LO - PO Mapping: Correlation Levels:**

**1 = Slight (Low); 2 = Moderate (Medium); 3 = Substantial (High), “-“= no correlation**

<b>Sub. Code:</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>
<b>LO1:</b> Analyze the contemporary operations management for manufacturing and services business , it's strategy s need and practices for a given industry or a sector	3	2	3	-	2	2	2	1	1
<b>LO2:</b> Conduct the study on cost minimizing functions of transportation and operations cost minimization	2	3	3	1	2	1	-	1	2
<b>LO3:</b> Analyze the operations management with respect to lean manufacturing local and global practices and perspectives	2	2	3	1	3	2	-	1	2
<b>LO4:</b> Critically evaluate the ethical approach and customer centricity with ethical concerns while minimization of cost during vendor management	1	2	3	2	3	2	3	1	2



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<b>LO5:</b> Explain the various parts of quality and 5 S as well as Kaizen and developing communication matrix to implement the same.	3	2	2	2	3	3	2	2	1
<b>LO6:</b> Collaborative approach to construct effective operations management and lean manufacturing	2	1	2	3	1	3	2	2	3

**2. Course Duration:** The course duration is of **40 sessions of 60 minutes each.**

**3. Course Contents:**

<b>Module No:</b>	<b>Contents</b>	<b>No. of Sessions</b>	<b>70 Marks (External Evaluation)</b>
<b>I</b>	<b>Introduction of Operation Management:</b> Introduction to Operations Management, Understand the importance of the OM function and its strategic importance, various types of manufacturing and service systems, The systems approach to OM. Facility location and layout.	8	18
<b>II</b>	<b>Linear Equations</b> Introduction to linear equations, Maximization and Minimization problems with respect to operations cost and cost functions. Understanding and formation of Object functions, constraint functions and solutions models with graphical and mathematical methods in cost minimization function. (Theory and Numerical) <b>Transportation Problems</b> Transportation problems and solutions with North West Corner method, Least Cost methods and Vogel's Approximation method. (Theory and Numerical)	12	18
<b>III</b>	<b>Operations scheduling:</b> Definition, Objectives, Types, Sequencing (n-jobs on m machine) (theory and numerical), Queuing systems (Waiting Line Analysis) (theory and numerical), Line Balancing (theoretical concept only). Johnson's rule.	12	18
<b>IV</b>	<b>Vendor &amp; Inventory Management</b> Vendor management - new vendor selection, vendor performance monitoring, Lean Manufacturing basics mainly 5S, Kaizen Understand the basis of inventory management decisions, LIFO & FIFO Method. <b>Quality Management</b> Definition and Importance of TQM, Dimensions of quality, Cost	8	16



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	of quality and quality cost audit, Total quality management (TQM), 7 -Qc tools, Six sigma, ISO 9000 and other ISO series pertaining to Quality, Quality Policy.		
<b>V</b>	<p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>○ Choose a recent case study in manufacturing or services, examining operations strategy, vendor management, scheduling, and supply chain issues.</li> <li>○ Analyze the case considering lean principles, inventory methods, queue management, and quality philosophies. Evaluate the case's implications, providing recommendations for enhancing operations efficiency and effectiveness.</li> <li>○ Present findings in a structured report format with proper citations, emphasizing critical analysis and practical insights.</li> </ul>	---	(30 marks CEC)

**4. Pedagogy:**

- ICT enabled Classroom teaching
- Case study
- Practical / live assignment
- Interactive class room discussions

**5. Evaluation:**

Students shall be evaluated on the following components:

	<b>Internal Evaluation</b>	<b>(Internal Assessment- 50 Marks)</b>
<b>A</b>	<ul style="list-style-type: none"> <li>• Continuous Evaluation Component</li> </ul>	30 marks
	<ul style="list-style-type: none"> <li>• Class Presence &amp; Participation</li> </ul>	10 marks
	<ul style="list-style-type: none"> <li>• Quiz</li> </ul>	10 marks
<b>B</b>	<b>Mid-Semester examination</b>	<b>(Internal Assessment-30 Marks)</b>
<b>C</b>	<b>End –Semester Examination</b>	<b>(External Assessment-70 Marks)</b>

**6. Reference Books:**

No.	Author	Name of the Book	Publisher	Year of Publication / Edition
1	William J Stevnsons	Operations Management,	Tata Mc graw Hill	5 edition (August 21, 2007)
2	Heizer, Jay and Render, Barry, Jagadish Rajshekar	Operations Management	Pearson education	9th edition
3	Russell, Roberta S. and Taylor, Bernard W,	Operations Management Along the Supply Chain	John Wiley and Sons (Wiley India)	6th Edition
4	Robert Klassen, Larry J. Menor	Cases in Operations Management	SAGE	Latest Edition

**Note:** Wherever the standard books are not available for the topic appropriate print and online



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resources, journals and books published by different authors may be prescribed

### **7. List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.**

1. Journal of Operations Management: Covers topics such as operations strategy, product design, facility layout, and supply chain management.
2. Production and Operations Management: Focuses on research articles related to operations excellence, vendor and inventory management, and operations scheduling.
3. Harvard Business Review: Offers insights into operations strategy, lean manufacturing principles, and supply chain management issues.
4. International Journal of Production Economics: Publishes articles on inventory management decisions, forecasting techniques, and quality management in manufacturing.
5. Supply Chain Management Review: Provides updates on supply chain issues, queue management, and the application of Japanese manufacturing management philosophies.