

## PRODUCTION AND OPERATION MANAGEMENT

III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
		L	T	P		C	CIA	SEE
CMBC30	Core	3	1	-	4	30	70	100
		<b>Contact Classes: 45</b>		<b>Tutorials Classes: 15</b>		<b>Practical Classes: Nil</b>		<b>Total Classes: 60</b>
<p><b>I. COURSE OVERVIEW:</b>            The course imparts the knowledge on various issues relating to production and operations management with respect to production planning and design related issues and scheduling and controlling of production operations and quality control through various methods like p, c, r and x bar charts and also acquire skills to plan for the requirements of materials and also deals with the issues relating to stores and inventory.</p> <p><b>II. COURSE OBJECTIVES:</b>  <b>The students will try to learn:</b></p> <ol style="list-style-type: none"> <li>I. The concepts relating to production and production systems available for manufacturing units.</li> <li>II. Scheduling and layout alternatives to decide on plant location decisions.</li> <li>III. The quality and quality determination with quality control charts and work study.</li> <li>IV. Material requirement planning and materials budgeting for making production related decisions.</li> <li>V. Stores management and inventory management techniques.</li> </ol> <p><b>COURSE OUTCOMES:</b>  <b>After successful completion of the course, students will be able to:</b></p> <p><b>CO 1:</b> Demonstrate the relationship between OM (operations management) and productivity while performing production activity.</p> <p><b>CO 2:</b> describe the issues relating to process strategies for various kinds of manufacturing systems while manufacturing goods</p> <p><b>CO 3:</b> Appraise the production planning system aggregate planning, scheduling and sequencing of products in organizations production activities.</p> <p><b>CO 4:</b> Identify suitable plant layouts and plant locations for attaining lowest manufacturing cost.</p> <p><b>CO 5:</b> Discover quality circles and SQC through control charts for better maintenance of quality standards.</p> <p><b>CO 6:</b> Examine work study techniques at manufacturing plants for reducing the idle time and unnecessary movements.</p> <p><b>CO 7:</b> Summarize on material requirement planning for avoiding production delays.</p> <p><b>CO 8:</b> Examine various kinds of supplier relating decisions and waste management for selective affective suppliers and to minimize the wastage.</p> <p><b>CO 9:</b> Appraise various methods of stores management for effective maintenance of materials.</p> <p><b>CO 10:</b> Contrast on effective inventory control and various kinds of methods of controlling inventories suitable to organizations for better maintenance of inventory.</p>								
<b>IV. SYLLABUS</b>								
<b>UNIT-I</b>	<b>INTRODUCTION TO OPERATIONS MANAGEMENT</b>						<b>Classes:10</b>	
Introduction to operations management, role of operations management in total management system, and interface between the operation systems and systems of other functional areas, process planning and process design, production planning and control: basic functions of production planning and control, production cycle, characteristics of process technologies, project, job shop, assembly, batch and continuous, inter relationship between product life cycle and process life cycle.								
<b>UNIT-II</b>	<b>SCHEDULING AND CONTROL OF PRODUCTION OPERATIONS</b>						<b>Classes:10</b>	

Aggregate planning, operations scheduling and product sequencing: sequencing of products in multi- product multi stage situations, plant capacity and line balancing; Plant layout, different types of layouts, location and the factors influencing location; Maintenance management: objectives, failure concept, reliability, preventive and breakdown maintenance, replacement policies.		
<b>UNIT-III</b>	<b>QUALITY CONTROL</b>	<b>Classes:09</b>
Standards and specifications, quality assurance and quality circles, statistical quality control: control charts for variables, average, range and standard deviation; Control charts for attributes, fraction defective and number of defects, acceptance sampling plans, and OC curve work-study.		
Various techniques in the methods study for identifying the most appropriate method; Work measurement, its uses and different methods, computation of allowance and allowed time.		
<b>UNIT-IV</b>	<b>MATERIALS MANAGEMENT</b>	<b>Classes: 08</b>
Need and importance of materials management-materials requirement planning materials budgeting- techniques for prioritization of materials-sources of supply of materials ,selection, evaluation and performance of suppliers make or buy decisions and its implications under various circumstances vendor rating , determinants of vendor rating, concept of waste management.		
<b>UNIT-V</b>	<b>STORES MANAGEMENT</b>	<b>Classes: 08</b>
Objectives of stores management, requirements for efficient. Management of stores, safety stock inventory control, different systems of inventory control types of inventory; Costs systems of inventory control ABC, VED and FNSD analyses, value analysis, importance in cost reduction, concepts and procedures.		
<b>Text Books:</b>		
<ol style="list-style-type: none"> <li>1. Jay Heizer, Barry Render, Chuck Munson, “Operations Management”, Pearson Education, 12<sup>th</sup> Edition, 2020.</li> <li>2. Stevenson J. William, “Operations Management”, 13<sup>th</sup> Edition, Tata McGraw Hill, 2017.</li> <li>3. Jay Heizer, Barry Render, “Operations Management”, 11<sup>th</sup> Edition, 2016.</li> <li>4. B Mahadevan, “Operations Management: Theory and Practice”, Pearson Education India, 3<sup>rd</sup> Edition, 2015.</li> <li>5. K Aswathappa, K ShridharaBhat, “Production and Operations Management”, Himalaya Publishing House Pvt. Ltd, 2<sup>nd</sup> Edition 2015.</li> <li>6. Panneerselvam R, “Production and Operations Management”, Prentice Hall India Learning Private Limited, 3<sup>rd</sup> Edition, 2012.</li> <li>7. Mahadevan.B, “Operations Management”, Pearson Education, Revised 2<sup>nd</sup> Edition, 2010.</li> <li>8. Stevenson J. William, “Operations Management”, Tata McGraw Hill, 9<sup>th</sup> Edition, 2009.</li> <li>9. James R Evans, David A. Collier, “Operations Management”, Cengage Learning, 3<sup>rd</sup> Edition, 2007.</li> </ol>		
<b>Reference Books:</b>		
<ol style="list-style-type: none"> <li>1. Aswathappa K. and SridharaBhat, “Production and Operations Management”, HPH, 2<sup>nd</sup> Edition, 2010.</li> <li>2. Ray Wild, “Operations Management, Thomson Learning, 1<sup>st</sup> Edition, 2003.</li> <li>3. Kanishka Bedi, “Production and Operations Management”, Oxford University Press, 2<sup>nd</sup> Edition, 2007.</li> <li>4. UpendraKachru, “Production and Operations Management”, Excel Books, 2<sup>nd</sup> Edition, 2010.</li> </ol>		
<b>Web References:</b>		
<ol style="list-style-type: none"> <li>1. <a href="http://tn.upi.edu/pdf/Operations_Management.pdf">http://tn.upi.edu/pdf/Operations_Management.pdf</a></li> <li>2. <a href="https://notendur.hi.is/~kth93/3.20.pdf">https://notendur.hi.is/~kth93/3.20.pdf</a></li> </ol>		
<b>E-Text Books:</b>		
<ol style="list-style-type: none"> <li>1. <a href="http://ebooks.cambridge.org/ebook.jsf?bid=CBO9781139150002">http://ebooks.cambridge.org/ebook.jsf?bid=CBO9781139150002</a></li> <li>2. <a href="http://www.ebook777.com/operations-management-11th-Edition/">http://www.ebook777.com/operations-management-11th-Edition/</a></li> </ol>		