



## QURTUBA UNIVERSITY

Of Science and Information Technology

D.I Khan, Peshawar Khyber Pakhtunkhwa, Pakistan.

<b>Course Name</b>	<b>Production and Operations Management</b>
<b>Course Code</b>	<b>MGT411</b>
<b>Semester</b>	<b>Fourth</b>
<b>Credit Hours</b>	<b>03</b>
<b>Total Weeks</b>	<b>16/18</b>
<b>Total Hours</b>	<b>48/54</b>
<b>Total Marks</b>	<b>100</b>
<b>Pre-requisite</b>	<b>None</b>

### Course Objectives

Production and Operations Management also called POMA is a core course in a typical graduate as well as an undergraduate Business Administration Program. It will give you an introduction to the functional area of production and operations management as practiced in manufacturing industries and the services sector. It includes decision-making, project management, facility layout in manufacturing and services industries, waiting lines, quality control, just-in-time systems, forecasting, aggregate planning, inventory management, materials requirements planning (MRP), and operations scheduling.

### Grading Criteria

<b>Distribution</b>	<b>Weight</b>
Quizzes, Assignments, and class participation	10
Mid Term	20
Final Term	70
Total	100

### Recommended Books

- Operations management for competitive advantage. 11th edition Author: Richard B chase, F Robert Jacobs, Nicholas J Aquilano, Nitin K Agarwal

## WEEK WISE BREAKDOWN

<b>Week</b>	<b>Description</b>
<b>1</b>	<p><b>Introduction to the field</b></p> <ul style="list-style-type: none"> <li>◇ What is operations Management</li> <li>◇ Transformation process               <ul style="list-style-type: none"> <li>○ Difference between services and goods</li> </ul> </li> <li>◇ OM in the operational chart</li> <li>◇ Operations as services</li> <li>◇ Why is operations not perceived as important</li> <li>◇ Historical developments of OM</li> </ul>
<b>2</b>	<p><b>Product Design</b></p> <ul style="list-style-type: none"> <li>◇ The product design process</li> <li>◇ The product development process</li> <li>◇ Economic analysis of product development projects</li> <li>◇ Designing for the customer               <ul style="list-style-type: none"> <li>○ Quality function deployment</li> <li>○ Value analysis/value engineering</li> </ul> </li> <li>◇ Measuring product development performance</li> <li>◇ Learning curves (Technical note-4)</li> </ul>
<b>3</b>	<p><b>Process analysis</b></p> <ul style="list-style-type: none"> <li>◇ Self-ordering kiosks and environment</li> <li>◇ Process analysis</li> <li>◇ Process flow charting</li> <li>◇ Types of processes</li> <li>◇ Measuring process performance</li> <li>◇ Process throughput Time reduction</li> <li>◇ Problems</li> </ul>
<b>4</b>	<p><b>Waiting line management</b></p> <ul style="list-style-type: none"> <li>◇ The queuing system               <ul style="list-style-type: none"> <li>○ Customers arrivals</li> <li>○ Distribution of arrivals</li> <li>○ The queuing system factors</li> <li>○ Exit</li> </ul> </li> <li>◇ Waiting lines models</li> <li>◇ Problems</li> </ul>
<b>5</b>	<p><b>Quality management- focus on six-sigma</b></p> <ul style="list-style-type: none"> <li>◇ Total quality management</li> <li>◇ Quality specifications and quality costs               <ul style="list-style-type: none"> <li>○ Developing quality specifications</li> <li>○ Cost of quality</li> <li>○ Functions of QC departments</li> </ul> </li> <li>◇ Six sigma quality               <ul style="list-style-type: none"> <li>○ Six sigma methodology</li> <li>○ Analytical tools for six sigma and continuous improvement</li> <li>○ Six sigma roles and responsibilities</li> <li>○ What makes a good champion</li> <li>○ ISO certifications</li> </ul> </li> </ul>
<b>6</b>	<p><b>Supply chain strategy</b></p>

	<ul style="list-style-type: none"> <li>◇ Supply chain strategy</li> <li>◇ Measuring supply chain performance</li> <li>◇ Supply chain design strategy</li> <li>◇ Outsourcing</li> <li>◇ Global outsourcing</li> <li>◇ Mass customization</li> </ul>
<b>7</b>	<p><b>Lean production</b></p> <ul style="list-style-type: none"> <li>◇ Lean logic</li> <li>◇ The Toyota production system <ul style="list-style-type: none"> <li>○ Elimination of waste</li> </ul> </li> <li>◇ Lean implementation requirements</li> <li>◇ Lean services</li> </ul>
<b>8</b>	<p><b>Forecasting</b></p> <ul style="list-style-type: none"> <li>◇ Demand management</li> <li>◇ Types of forecasting</li> <li>◇ Components of demands <ul style="list-style-type: none"> <li>○ Qualitative techniques of forecasting</li> <li>○ Time series analysis</li> <li>○ Causal relationship forecasting</li> </ul> </li> <li>◇ Focus forecasting</li> <li>◇ Problems</li> </ul>
	<p><b>Two Assignments + Two Test                      Mid Term Exam</b></p>
<b>9</b>	<p><b>Aggregate sales and operations planning</b></p> <ul style="list-style-type: none"> <li>◇ What is sales and operational planning</li> <li>◇ The aggregate operations plan</li> <li>◇ Aggregate planning techniques</li> <li>◇ Yield management</li> </ul>
<b>10</b>	<p><b>Inventory control</b></p> <ul style="list-style-type: none"> <li>◇ Definition of inventory</li> <li>◇ Purposes of inventory</li> <li>◇ Inventory costs</li> <li>◇ Independent verses dependent demand</li> <li>◇ Inventory system <ul style="list-style-type: none"> <li>○ A single period inventory model</li> <li>○ Multi period inventory systems</li> </ul> </li> <li>◇ Fixed order quantity models</li> <li>◇ Fixed time period model</li> <li>◇ Problems</li> </ul>
<b>12.</b>	<p><b>Material requirements planning</b></p> <ul style="list-style-type: none"> <li>◇ From push to pull</li> <li>◇ Where MRP can be used</li> <li>◇ Master production schedule <ul style="list-style-type: none"> <li>○ Time fences</li> <li>○ Material requirement planning systems <ul style="list-style-type: none"> <li>▪ Purposes of MRP</li> </ul> </li> </ul> </li> </ul>
	<p><b>Two Assignments + Two Test+ Presentation                      Final Term</b></p>

**Learning Outcomes:**

- Understand the core features of the operations and production management function at the operational and strategic levels
- Understand specifically the relationships between people, process, technology, productivity and quality and how it contributes to the competitiveness of firms.
- Explain the various parts of the operations and production management processes and their interaction with other business functions (strategy, engineering, finance, marketing, HRM, project management and innovation).