

MID-WESTERN UNIVERSITY, FACULTY OF MANAGEMENT  
BACHELOR IN BUSINESS ADMINISTRATION (BBA), SYLLABUS 2072 (2016)

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<b>Course Title</b>		<b>Operation Research</b>
<b>Course Code Number</b>		<b>MGT 371</b>
<b>Year/Semester</b>		<b>IV/VII</b>
<b>Credit Hours</b>		<b>03</b>
<b>Course Objectives:</b>		
<b>Main Objective</b>		This Course emphasizes on application of Operations Research for solving business problems. The module covers topics that include: linear programming, Production Planning, Scheduling, Controlling, Inventory Management, Maintenance Management, etc.
<b>Enabling Objectives</b>		<p>After the completion of all the learning units of the course, participants will be able to:</p> <ul style="list-style-type: none"> <li>• Emphasizes the application of Operations Research for solving business problems</li> <li>• Develop problem modeling and solving skills and learn how to make intelligent business decisions from the point of view of optimization</li> <li>• Use quantitative methods and techniques for effective decisions-making; model formulation and applications that are used in solving business decision problems.</li> </ul>
<b>Learning Unit (LU)</b>	<b>Learning Hours (LH)</b>	<b>Contents</b>
<b>LU 1</b>	<b>LH 4</b>	<b>Introduction</b> Meaning, Definition, Functions and Its Environment Operation Production System, Life Cycle Approach, Historical Development of Production & Operation Management, Operation Competitiveness, Strategy, Productivity .
<b>LU 2</b>	<b>LH 4</b>	<b>Manufacturing &amp; Service Environment</b> Production Design, Process Selection, Automation & Decision Making, Nature & Importance of Service, Designing Service Organization & Guarantees
<b>LU 3</b>	<b>LH 4</b>	<b>Capacity Planning</b> Importance and Concept of Capacity Defining and Different Measure, Determinates of Effective Capacity with Planning Process
<b>LU 4</b>	<b>LH 6</b>	<b>Process and Product</b> Process & Product Selection Facilities, Layout Concept, Classification, Process and Approaches, Design Product for Manufacture and Assembly, Process Selection, How Structure & Flow Technologies, Nature of Service as a Produced, Services system, Design Matrix Emerging Issues in Product Design .

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<b>LU 5</b>	<b>LH 6</b>	<b>Liner Programming</b> Introduction to LP, Objectives and Constraints Graphic Method, Simplex Method, Duality Up to Three Variables, Assignment Models, Transportation Model
<b>LU 6</b>	<b>LH 4</b>	<b>Production Planning, Scheduling, Controlling</b> Concept, Aggregate Planning, Disaggregation, Master Production Scheduling, Loading, Sequencing, Detailed Scheduling, Expediting
<b>LU 7</b>	<b>LH 10</b>	<b>Inventory Management</b> Inventory Cost, Independent Vs Dependent Demand, Inventory System, Basic Model Types, EOQ Model, Prof Determinacy Realistic Cost, Material Requirement Planning System and Its Structure.
<b>LU 8</b>	<b>LH 6</b>	<b>Maintenance Management</b> Concept and Types Maintenance Management Concept and Types of Maintenance, Break Down and Preventive Maintenance, Decision
<b>LU 9</b>	<b>LH 8</b>	<b>Total Quality Management</b> Concept of Quality Product and Service Quality, philosophical Elements, Specification and Quality Costs, Statistical Quality Control, Process Control, acceptance Sampling, Quality Management System ISO 9000 and 1S0 14000 Series
<b>References</b>		<ol style="list-style-type: none"> <li>1. Adam &amp; Efert (2007) Production and Operation Management , New Delhi , Prentice Hall of India,</li> <li>2. Chase, Jacofs. Aquilano and Agrawal (2006) Operation Management for Competitive Advantage , New Delhi ; Tata Mc- Graw - Hill Publishy Co.td.</li> <li>3. Manandhar , K.D and Shrestha , K.N (2000) . Production and Operation Management, Kathmandu Valley Publisher.</li> <li>4. Shrestha , S and Silwal D (2000) Production and Operation Management, Kathmandu ; Taleju PrakashaN .</li> <li>5. Krajewski and Ritzman (2002) Singapor Pte. Itel.</li> <li>6. Bajracharya P, Bajracharya S and Maharjan B. (2007) Production and Operation Management , Kathmandu, Quest Publication .</li> </ol>

Net Contact Hour is 48 excluding the exams and tests.

Evaluation Module: 50 percent will be assessed through the internal evaluation and 50 percent will be assessed through end semester examination