

FAR WESTERN UNIVERSITY
Faculty of Management

Course Title: **Operation Management**

Total Marks: 100

Course Code: **MGT 355**

Pass Marks: 45

Nature of course: Theory

Time per period: 1 hr.

Semester: Fifth

Total periods: 45

Level: BBA

Credit hours: 3

Course Description

Operations management has been recognized as an important subject for the management students. Rapid changes in technology have created numerous opportunities and challenges, which have resulted in enhancement of manufacturing capabilities through new materials, facilities, techniques and procedures. Operation management is of central importance to any organization, whether they are manufacturing companies producing physical products or organizations offering services. Operation Management leads the way for the organizations to achieve its goals with minimum effort. Hence, the study of the subject at undergraduate has more significance.

The main objective of this course is to introduce the concepts and techniques related to the design, planning, control, and improvement of manufacturing and service operations. The course begins with an understanding of operation management and other topics covered product design and process management, forecasting, location and capacity decisions supply chain management, inventory management, quality management waiting theory and productivity.

A. The general objectives of the course are as follows:

- Provide students with an understanding of the concept, nature, and implementation of operation management.
- Understand the value chain analysis for product and services.
- Develop students' understanding of the psychological, social and cultural factors affecting operation behavior of operation managers
- Acquaint students to understand the concept, nature, relevance, and process of operation research.
- Expose students to the various application areas of operation management.
- Develop students' skill to conduct operation techniques in several trading and service organizations.

B. Specific objectives	Contents
<ul style="list-style-type: none"> • Understand Operation Management and its role in organization • Describe the decisions that fall with in the field of operation management • Explain the objectives and strategic perspectives of operation management 	<p>Unit I: Introduction (3)</p> <ul style="list-style-type: none"> 1.1 Concept of Operation Management 1.2 Role of operation management in organization 1.3 Objectives of Operations Management 1.4 Strategic perspective of operation management

<ul style="list-style-type: none"> • Explain the concept, steps and factors to be considered in product design • Describe the service design • Point out the emerging issues in designing product and service 	<p>Unit II: Product Design and Process Selection (3)</p> <p>2.1.Product Design 2.2.Steps in Product Design 2.3.Factors to Consider in Product Design 2.4.Process Selection 2.5.Relationship between Product Design and Process 2.6.Nature of Services as a Product 2.7.Designing Services 2.8.Emerging Issues in Product Design</p>
<ul style="list-style-type: none"> • Understand demand management • Explain the role and approaches of demand forecasting for products and services • Understanding the location and layout decisions • Describe the capacity concepts • Explain the service specific capacity issues • Discuss the impact of capacity planning and control 	<p>Unit III: Key decisions in OM (12)</p> <p>3.1.Demand Management 3.2.Forecasting decisions 3.2.1 Role of demand forecasting for products and services 3.2.2. Forecasting approaches 3.2.3. Qualitative Techniques in Forecasting 3.2.4. Time Series Analysis 3.2.5. Causal Relationship Forecasting 3.3. Location and Layout decisions 3.3.1. Concept and importance of Location 3.3.2. Location decisions in supply chain 3.3.3. Methods of Determining Facility Location 3.3.4. Importance of Layout 3.3.5. Types of Layout 3.4. Capacity decisions 3.4.1. Capacity concepts 3.4.2. Determination of level of capacity 3.4.3. Capacity measurement 3.4.4. Impact of capacity planning and control 3.4.5. Capacity constraints 3.4.6. Service specific capacity issues</p>
<ul style="list-style-type: none"> • Describe the scope and importance of Supply Chain Management • Understand the role of supply chain strategy in linking corporate strategy and operations 	<p>Unit IV: Supply Chain Management (3)</p> <p>4.1.Supply Chain Strategy 4.2.Supply Chain Design Strategy 4.3.Out Sourcing and Mass Customization</p>
<ul style="list-style-type: none"> • Understand the role of inventory and basic inventory management systems • Be familiar with basic inventory models • Understand the process of developing a master schedule and materials plan 	<p>Unit V: Inventory System (5)</p> <p>5.1.Inventory Costs 5.2.Independent vs. Dependent Demands 5.3.Inventory Systems 5.4.Basic Model Types 5.5.EOQ Models 5.6.JIT model 5.7.Problems in Determining Realistic Costs</p>

	5.8. Materials Requirement Planning Systems and its structure
<ul style="list-style-type: none"> • Understand the role of quality management in organizations • Understand the nature and use of ISO 9000 quality management system • Know how to use the basic quality control tools 	Unit VI: Quality Management and Japanese Operations Managements (8) 6.1. Quality Management 6.2. Philosophical Elements of Quality Management 6.3. Quality specification and Quality Costs 6.4. Statistical Quality Control 6.5. Process Control 6.6. Features of Japanese Operations Managements 6.7. Stabilizing Schedule 6.8. Elimination of Waste 6.9. Acceptance Sampling ISO 9000
<ul style="list-style-type: none"> • Understand the waiting line problem • Explain necessary theory and models for line waiting 	Unit VII: Waiting Line Theory (4) 7.1. Economics of the Waiting Line Problem 7.2. The Queuing System 7.3. Waiting Line Characteristics 7.4. Simple Waiting Line Models
<ul style="list-style-type: none"> • Explain the productivity and factors affecting productivity • Understand the guidelines for improving the productivity • Discuss tools and techniques for productivity measurement 	Unit VIII: Productivity (4) 8.1. Meaning and type of productivity 8.2. Factors affecting productivity 8.3. Guides to productivity improvement 8.4. Measuring productivity

Text books:

1. Chase, Richard B. and Nicholas J. Aquilano: *Production and Operations Management: A Life Cycle Approach*, Irwin.
2. Adam, Everett E. Jr. and Ronald J. Ebert: *Production and Operations Management*, Prentice, Hall of India.