



# Production

## Operations Management

OM-346/QM 346

|                 |                              |
|-----------------|------------------------------|
| Program         | <b>BBA, BS A&amp;F, BBIS</b> |
| Trimester       | <b>Spring 2023</b>           |
| Credit Hours    | <b>3</b>                     |
| Duration        | <b>15 Weeks</b>              |
| Prerequisites   | <i>Data Modelling</i>        |
| Resource Person | <b>Ayesha Sajjad</b>         |

### CAPSULE STATEMENT

The need of becoming a specialist in every field is getting stronger day by day. To successfully manage today's complex supply chain environment, students need an understanding of traditional business operations and the linkage of these operations to customers and suppliers. They must understand not only the processes that drive their own organization, but also the processes of suppliers' and customers' businesses. Effective management of these operations has become an area of growing concern. Continuous improvement of products, services and processes, and elimination of all forms of waste, have become inevitable for companies who aim to remain competitive in the global market.

### LEARNING OBJECTIVES

The purpose of the course is to provide the participants with ability to:

- Impart the knowledge of production and operations management.
- Understand the scientific management tools for productivity enhancement in their work areas.

- Apply quantitative methods and principles of management in industrial environment.
- To know about best business practices while achieving competitive advantage over other companies.

## **LEARNING METHODOLOGY**

Using a mix of case studies, class discussions and practical examples of world famous companies, the course will emphasize the concepts underlying operations management, providing a flavor for the challenges facing operations managers. Within this hierarchical decision framework, we will address the important levers for managing companies—inventories, facilities, planning, and processes etc.

Tests / Quizzes and strong class participation are the winning elements for achieving the high scores.

## **ASSESSMENT**

### *COURSE EVALUATION WEIGHTAGE*

|                                  |            |
|----------------------------------|------------|
| Quiz .....                       | 15%        |
| Term Project.....                | 10%        |
| Assignments .....                | 15 %       |
| Class Analysis.....              | 05%        |
| Skill Development Exercises..... | Non-graded |
| Mid-Term Test .....              | 20%        |
| Final Exam .....                 | 35%        |

## **RECOMMENDED TEXT BOOK**

*Operations Management Sustainability and Supply Chain Management* (12<sup>th</sup> Edition) by JAY HEIZER | BARRY RENDER | CHUCK MUNSON

# PRODUCTION OPERATIONS MANAGEMENT (BBH)

| Week | Course Contents   | Chapter |                            |
|------|---|---------|----------------------------|
| 1    | Introduction to Operations Management? Why study OM, Production Environment, Productivity Challenge, and Productivity Measurement                       | 1       |                            |
| 2    | Operational Strategy for Competitive Advantage, details and strategy development & implementation & Operations in Global Environment                    | 2       | Skill Development Exercise |
| 3    | Design of Goods and Services, Product Life Cycle, Product Development   | 3       | Quiz 1                     |
| 4    | Process Strategy and Capacity Planning, OEE   | 6       | Case Study                 |
| 5    | Location Strategies, Location Evaluation Methods (Factor-rating method, Locational break-even analysis, Center of gravity method, Transportation model) | 7       | Quiz 2                     |
| 6    | Layout Strategy, Types and Importance, Skill Development Exercises  | 8       | Skill Development Exercise |
| 7    | Human Resources and Job Design, Work Measurement  |         | Assignment 1               |
| 8    | Mid Term Exam   |         |                            |
| 9    | Inventory Management, Inventory Models (economic order quantity, Production order quantity, Quantity discount model)                                    | 9       | Quiz 3                     |
| 10   | Inventory Management, Probabilistic Models and Safety Stock   | 10      | Skill Development Exercise |
| 11   | Just-in Time, Lean Manufacturing  | 12      | Exercises                  |
| 12   | Aggregate Planning and Case Study   | 12      | Assignment 2               |
|      | Material Requirement Planning & ERP   | 13      | Quiz 4                     |
| 14   | Short-Term Scheduling, Scheduling Charts  | 14      | Case Study                 |
| 15   | Recent Developments in OM, TPM, FMS, Lean Manufacturing   | 15      | Skill Development Exercise |

## CLASS POLICY

### Participation:

1. Participants are expected to come prepared for each session and participate fully in the class activities.

2. The participation may be voluntary, or a participant may be called upon to respond to a particular question.

**Attendance:**

1. Participants are expected to attend the classes regularly.
2. Any participant who fails to attend a session will be marked ABSENT.
3. In case of **more than 6** ABSENTS, the participant's class participation would be affected.

**Case studies:**

1. No. of case analysis sessions would be conducted in the class.
2. The format would be a formal presentation by every member of the group.
3. Participants will not only analyze the case and the situation but also at the end would give their own suggestions.
4. Participants would be graded on their individual performances as well as their group performances
5. A written report of the case analysis if required, would also be submitted by the students.
6. No make-up cases will be given

**Quizzes:**

1. From a total of (n) quizzes, best (n - 1) quizzes may be considered for the final grade.
2. No make-up quizzes will be given.