<u>**Course Outline**</u>

Programme Name: Post Graduate Diploma in Business Management (2014-16)

Course Title: Operations Management-I

(September-December, 2014)

Credits: 3

Session Duration: 90 Minutes

TERM: II

Faculty Name: Dr. Rajwinder Singh

Telephone: 0674-3042128 (Ext. -147)

Office Hours: 9:30 AM-5:30PM

Objective of the course

  a) To help the students understand, appreciate and apply concepts and contemporary practices of managing operations in manufacturing and service organizations in the prevailing business environment.
  b) To develop an understanding of the operations management concepts in strategic decision making.
  c) To develop analytic capabilities of the students by equipping them with concepts, tools and techniques required for managing operations.

At the end of the course the students shall be able to:

  • Understand the importance of operations management
  • Formulate business strategy for the organization
  • Apply tools and techniques of operations management for betterment of business

Pre-requisite for the course:

  • Basic knowledge of mathematics

Pedagogy

The pedagogy will be the combination of lectures, case studies, movies and quantitative problem solving. The lectures shall be presented followed by discussion. The students shall be informed to read the material before coming to the classes. Later, the lecture shall be delivered on the same study and referred case studies shall be discussed. The students shall also be provided with tutorials to find solutions to the business. The course shall be taught as per the lessons planned.

Evaluation criteria

  Mid-term exam: 20%

  End exam: 30%

  Quizzes (5): 20%

  Project/Assignment: 20%

  Case analysis: 10%

  TOTAL: 100%

Quiz

Out of 5 quizzes, one shall be unannounced (surprise test). The quiz questions shall be multiple choice type as well as short answer type based on the concept and application.

Case Analysis

Students are required to submit a hard copy of the case analysis report based on the case questions before presenting. There is no word limit for the report. The report shall be written on a normal page with 12 fonts New Time Roman with 1.5 line spacing, justified. This format shall be applicable for all purposes.

Project

As part of the evaluation, students are required to do a project that shall involve the study of real life application of from the domain of operations management. The students must visit the organizations to collect the first hand information. If this is not possible, then desk research shall be done. The students shall be able to do a critical analysis of the particular aspect(s) of the operations management being studied. Later, they have to deliver a presentation on the same. The presentation shall be evaluated for content, presentation style, communication skill and quarry handling.

Text books

a) Chase R.B., Shankar R., Aquilano N. J. and Jacobs F. R. "Operations and Supply Chain Management", Tata McGraw Hill Education Limited, 12 the Edition.
b) Krajewski L., Ritzman L. and Malhotra M. "Operations Management 9e", Pearson Education Inc.

Reference Books

1. Russell R. R., Taylor B. W. "Operations and Supply Chain Management", John Wiley & Sons; 7th Edition (5 October 2010).
2. Gaither and Frazier, "Operations Management', Cengage Learning, 9th Edition
3. Vladimir Modrak, Pavol Semanco, "Design and Management of Lean Production Systems", Idea Group,U.S.; 1st Edition (28 February 2014)

Topic/Text book (page No.)	Session No.
Introduction to Operations Management • Definition and scope (Ref-b, pp. 4-7) • Historical development of OM (Ref-loose material) • Operations management as a system (Ref-a, Chapter 1 & 2) • Product vs. Service comparisons (Ref-a, Chapter 1 & 2) • Classification of manufacturing systems (Ref-a, Chapter 1 & 2) • Components of operations strategy (Ref-a, Chapter 1 & 2) • Case 1: Creative Concepts (Ref-b, p. 25) • Case 2: Fast-Food Feast (Ref-a, p. 22)	1,2
Operations Strategy & Decision Making • Decision making under certainty/uncertainty (Ref-b, pp. 27-39) • Decision tree analysis (Ref-b, pp. 27-39) • Break-even analysis (Ref-b, pp. 27-39) • Operations strategy (Ref-b, pp. 47-54) • Numerical problems in decision making & Break even analysis	3, 4,
Product & Service Design • Product design process (Ref-a, Chapter 4) • Product development process (Ref-a, Chapter 4) • Economic analysis of product development projects (Ref-a, Chapter 4) • Designing for the customer (Ref-a, Chapter 4) • Designing for manufacturability (Ref-a, Chapter 4) • Designing of service products (Ref-a, Chapter 4) • Case 3: Tata Swach-An Innovation for need is an Innovation needed • Case 4: IKEA-Design and Pricing • Case 5: Dental Spa	5, 6, 7,

Topic/Text book (page No.)	Session No.
Process Analysis • Importance of processes (Ref-a, Chapter-6) • Generic process and their choice (Ref-a, Chapter-6) • Process analysis and improvement (Ref-a, Chapter-6) • Process flowcharting (Ref-a, Chapter-6) • Case 6: Service design for mobile banking	8, 9
Facility Location • Factors affecting the facility location (Ref-a, Chapter-11) • Methods for facility location: Weighted score model, Load distance model, Center of gravity model (Ref-a, Chapter-11) • Types of facility layouts: Product, Process, Cellular, Hybrid (Ref-a, Chapter-11) • Design of layouts (Ref-a, Chapter-11) • Case 7: Relocation of "Tata Nano" Manufacturing Plant (Ref-a, Chapter-11)	10, 11,
Strategic Capacity Management • Types of capacity decisions (Ref-a, Chapter-5) • Capacity measurement (Ref-a, Chapter-5) • Economy of Scale (Ref-a, Chapter-5) • Determining machine requirements (Ref-a, Chapter-5) • Case 8: Strategic capacity management at Indian Railways	12, 13,
Forecasting • Delphi techniques(Ref-a, Chapter-15) • Moving/Weighted moving average method(Ref-a, Chapter-15) • Exponential smoothing(Ref-a, Chapter-15) • Trend analysis(Ref-a, Chapter-15) • Case: GE Aircraft Engine	14,15,16
Project Management • Concept(Ref-a, Chapter-3/Ref-2, chapter 10) • Structuring projects(Ref-a, Chapter-3/Ref-2, chapter 10) • Work breakdown structure(Ref-a, Chapter-3/Ref-2, chapter 10) • Project control charts(Ref-a, Chapter-3/Ref-2, chapter 10) • Network planning models(Ref-a, Chapter-3/Ref-2, chapter 10)	17,18,19
Project Presentation	20, 21