Operations Management

Academic Year: (2021 / 2022) **Review date: 10-06-2021**

Department assigned to the subject:

Coordinating teacher: BERENGUER FALGUERA, GEMMA

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Statistical Methods

OBJECTIVES

1. Gain a basic understanding of the concepts related to operations management
2. Diagnose real-world problems in the field of operations management

-Ability of oral and written communication of the diagnoses and solutions that they propose
-Capacity for teamwork
-Develop learning ability and autonomous study
-Know how to manage decision-making processes

DESCRIPTION OF CONTENTS: PROGRAMME

SESSION 1: PROJECT MANAGEMENT

Description of different project management models: CPM, PERT, agile

Recommended Textbook: Hillier and Lieberman (2007) Introduction to Operations Research, McGraw Hill.

In-class practice exercises

SESSION 2: QUALITY

Description of the modern theory of quality

Recommended Textbooks:
Galgano A. (1993). Companywide Quality Management. Prentice Hall.
Ishikawa, K. (1991) What is Total Quality Control. The Japanese Way, Prentice Hall.

In-class practice exercises

SESSION 3: LEAN

Description of lean techniques for waste reduction

Recommended Textbook:
Womack, Jones & Roos (2007). The machine that changed the World, Freepress.

In-class practice exercises

SESSION 4: SIX SIGMA 1

Description of six sigma methodology for quality improvement

Recommended Textbook:
Eckes, G. (2001) Making Six Sigma Last, Wiley.

In-class practice exercises

SESSION 5: SIX SIGMA 2

Description of design of experiments tool (DOE)

In-class practice exercises

SESSION 6: PROCESS FLOW ANALYSIS 1

Capacity, bottleneck, cycle time, Little¿s Law

In-class practice exercises

SESSION 7: PROCESS FLOW ANALYSIS 2

Reading/Case discussion: Shouldice Hospital Limited (Harvard Business School)
Product mix, inventory build-up and direct labor content

SESSION 8: INVENTORY MODELS 1

Introduction to supplier relationship and EOQ model
Newsvendor model

SESSION 9: INVENTORY MODELS 2

In-class practice exercises
Periodic Review Model

SESSION 10: SUPPLY CHAIN COORDINATION

Team activity: The Beer Game (Harvard Business School Simulation)
Final review

LEARNING ACTIVITIES AND METHODOLOGY

CLASS ACTIVITIES:

The approach in this course includes lectures, readings, and several active learning exercises. The readings are intended to illustrate the basic concepts of operations management as they apply to a variety of organizations, both manufacturing and service firms. Because of the extensive use of readings, the discussion between you and your classmates will be an important vehicle for learning these concepts. We will also have hands-on exercises.

DELIVERABLES:

There are 6 deliverables, which include 5 group submissions and 1 individual problem set. The dates and topics of all submissions will be shown in the submissions schedule table that will be provided before starting the course. The five group assignments are to be done in study teams (4 to 5 per team; see ¿Study Teams¿ below)

STUDY TEAMS:

Students are assigned a study team each term for all courses in the MBA program. The team will be 4 to 5 students. Peer evaluations will be conducted at the end of the course.

CLASS PARTICIPATION AND ATTENDANCE:

This will be determined based on your attendance and your overall contribution to the class. Your instructor may cold call you to answer questions in class, and you are expected to be prepared to answer these. If you are not attentive in class (for example distracted by electronic devices) then you will not be able to answer questions when called upon. Attendance will be taken every class session. Students can be active in the course forum as well as by contacting the instructors with questions via email.

ASSESSMENT SYSTEM

Class Attendance and Participation (5%)

Group Case Submissions (40%)

Individual Problem Set (15%)

Final Examination (40%)

% end-of-term-examination:	40
% of continuous assessment (assigments, laboratory, practicals…):	60

BASIC BIBLIOGRAPHY

- Cachon and Terwiesch Matching Supply with Demand: An Introduction to Operations Management, McGraw-Hill, 3rd Edition. 2013
- Meredith, Jack R. Operations Management for MBA, John Wiley and Sons, 2012