uc3m Universidad Carlos III de Madrid

Operations and Supply Chain

Academic Year: (2021 / 2022) Review date: 11-06-2021

Department assigned to the subject: Business Administration Department

Coordinating teacher: BERENGUER FALGUERA, GEMMA

Type: Compulsory ECTS Credits: 6.0

Year: 2 Semester: 1

OBJECTIVES

The student will be able to:

- Understand the basic functional areas of the firm.
- Understand the importance of planning and use basic planning and control tools.
- Understand the importance of financing and investment decisions and use basic finance tools.
- Understand the differences among the main production systems.
- Understand the scope of marketing and its importance for firm success.

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DESCRIPTION OF CONTENTS: PROGRAMME

- 1. Introduction to Operations Management.
- 2. Strategic Operations Decisions
- 3. Project Management
- 4. Estimation of demand (Forecast)
- 5. Process Analysis
- 6. Strategic decisions on process and capacity design
- 7. Statistical Process Control
- 8. Strategic decisions on total quality management
- 9. Lean Operations
- 10. Supply Chain Management
- 11. Supply chain design
- 12. Green Supply Chains and the Circular Economy
- 13. Humanitarian Logistics

LEARNING ACTIVITIES AND METHODOLOGY

Class Activities: The approach in this course includes lectures, cases, and several active learning sessions. The cases are intended to illustrate the basic concepts of operations management as they apply to a variety of organizations and industries. Because of the use of cases, the discussion between you, your classmates, and the instructor will be an important vehicle for learning these concepts. We will also have in-class quizzes and practice exercises.

Team Deliverables: There are 3 case submissions and 1 project deliverable. The dates and topics of all submissions are shown in the submissions schedule table of the Syllabus that will be distributed in class. All 4 deliverables are to be done in study teams. Students are responsible to form study teams on own. The team size should be 4 to 5 students. Details of each submission will be provided in Aula Global. Peer evaluations will be conducted at the end of the course.

Quizzes: A total of 3 Quizzes will be taken individually during some of the "grupos reducidos" sessions. Each quiz will count 10% of the final grade, and will be done closed book and closed notes.

There will be two types of Office Hours, one type will be offered in-person at the instructor's office and the second type virtually (on Google Meet) by appointment. The specific times of the in-person office hours will be described in the syllabus of the course.

ASSESSMENT SYSTEM

The grade for the course will be based on several components:

Continuous Evaluation (70%)

- Class attendance and participation (5%)
- Quizzes during practical sessions (grupos reducidos) (30%, 3 in-class quizzes, 10% each)
- Case study submission reports during theoretical sessions (magistrales) (20%, 3 Case deliverables in teams but only the highest 2 scores count)
- Final project (15%)

Final Examination (30%)

% end-of-term-examination: 30 % of continuous assessment (assignments, laboratory, practicals...): 70

BASIC BIBLIOGRAPHY

- Chopra and Meindl Supply Chain Management: strategy, planning, and operation, Pearson, 5th Edition
- Heizer, J., Render, and Munro Operations Management: Sustainability and Supply Chain Management, Pearson, 12th Edition