

Academic Year: ( 2022 / 2023 )

Review date: 22/05/2022 23:48:10

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: ISASI SANCHEZ, LUIS

Type: Compulsory ECTS Credits : 3.0

Year : 4 Semester : 2

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Statistics and Programming of 1 Course

## OBJECTIVES

By the end of this content area, students will be able to have:

1. knowledge and understanding of the basic concepts about production planning and control and logistics.
2. awareness of the wider multidisciplinary context of engineering applying knowledge of mathematics, statistics, economics and other scientific fields to the analysis of business situations.
3. the ability to apply their knowledge and understanding to identify, formulate and solve problems of industrial organization using established methods;
4. the ability to apply their knowledge and understanding to analyse engineering products, processes and methods;
5. the ability to apply their knowledge to develop and realise design and operation of productive and logistic systems;
6. the ability to select and use appropriate tools and methods in industrial organization;
7. an awareness of the non-technical implications of engineering practice;
8. demonstrate an awareness of project management and business practices, such as risk and change management, and understand their limitations;

## DESCRIPTION OF CONTENTS: PROGRAMME

1. Operations management in the supply chain
  - 1.1 Introduction to operations management
  - 1.2 Strategy
- 2 Product and process design
  - 2.1 Product design
  - 2.2 Process design
- 3 Demand forecasting
  - 3.1 Forecasting in operations management
  - 3.2 Methods for demand forecasting
- 4 Stock management in supply chain
  - 4.1 Stock management for independent demand
  - 4.2 Continuous and periodic revision methods
- 5 Material requirements planning
  - 5.1 Introduction
  - 5.2 MRP (without capacity constraints)
- 6 Lean manufacturing
  - 6.1 Lean philosophy in operations management
  - 6.2 Implementation

## LEARNING ACTIVITIES AND METHODOLOGY

Lectures, exercises, practical sessions in laboratory with cases and assignments to be carried out by the students and discussed in the sessions, readings assigned by the instructor

The students must assist to sessions of theory and practice and also must take practices with

- \* Case analysis

- \* Working in groups

All the activities could be place in live or on line, using the "aula global" tools, depend of the situation.

#### ASSESSMENT SYSTEM

<b>% end-of-term-examination/test:</b>	60
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	40
CONTINUOUS ASSESMENT (40%)	

FINAL ASSESMENT (60%) (MIN. 4 POINTS TO PASS THE SUBJECT)

#### BASIC BIBLIOGRAPHY

- R.B. Chase, F. R. Jacobs, N.J. Aquilano Administración de Operaciones. Producción y cadena de suministros, Mc Graw Hill, 2009

- Rg Schroeder, S.M Goldstein, M. J Rungtusanatham Administración de operaciones, Mc Graw Hill, 2011

#### ADDITIONAL BIBLIOGRAPHY

- J. Heizer/ B. Render Dirección de Producción Vol 1 y 2, Prentice Hall, 2007