

Academic Year: ( 2022 / 2023 )

Review date: 17-05-2022

Department assigned to the subject: Department of Mechanical Engineering

Coordinating teacher: RIVERA RIQUELME, FRANCISCO ANTONIO

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

**OBJECTIVES**

- Knowledge and understanding of Production Systems and Industrial Organization.
- Ability to identify engineering problems within the industrial field, to establish different resolution methods and to select the most appropriate one for their solution.
- Ability to apply their knowledge and understanding to solve problems and design processes in the field of Industrial Engineering in accordance with criteria of cost, quality, safety, efficiency and respect for the environment.

**DESCRIPTION OF CONTENTS: PROGRAMME**

Linear Programming Models  
 Network Models  
 Dynamic Programming  
 Markov Chains  
 Queueing Systems  
 Markov Decision Processes  
 Nonlinear Programming

**LEARNING ACTIVITIES AND METHODOLOGY**

Lectures, exercises and practical sessions. Face-to-face tutorials.

**ASSESSMENT SYSTEM**

60% Final written exam.

40 % Continuous evaluation. One partial exam will be held. Attendance to the practical sessions.

**% end-of-term-examination:** 60

**% of continuous assessment (assignments, laboratory, practicals...):** 40

**BASIC BIBLIOGRAPHY**

- Bazaraa, M.S.; Jarvis, J.J.; Sherali, H.D Programación lineal y flujo en redes, Limusa, 2004
- Hillier, F.S.; Lieberman, G.J Introducción a la investigación de operaciones, McGraw-Hill, 2010
- Taha, H.A Investigación de operaciones, Pearson, 2017