
Academic Year: (2024 / 2025)

Review date: 19-09-2024

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: ISASI SANCHEZ, LUIS

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No prerequisites

OBJECTIVES

MAIN OBJECTIVES

To provide the student with enough knowledge and skills to properly understand and manage the following topics, specifically within the 4.0 Industry.

- Management frameworks and information systems in CI 4.0
- Supply chain management and international SCM
- Production and logistics planning and control.
- Lean management and lean production
- Project management tools

LEARNING RESULT

After completing this subject matter, the student will be able to:

- Design new flexible production systems of low and medium complexity that are capable of producing on demand
- Manage the production of a medium-sized system and manage the supply

DESCRIPTION OF CONTENTS: PROGRAMME

- Production and logistics planning and control.
*** Operations strategy, design, R+D+I, service processes, distribution and warehousing
- Management frameworks and information systems in CI 4.0
*** SCM IS, ERP, implementation and tailoring. Decisions and DSSs
- Lean management and lean production
*** Lean operations, Lean Management, Lean Construction
- Project management tools
*** PMBOK
- Supply chain management and international SCM

LEARNING ACTIVITIES AND METHODOLOGY

FORMATIVE ACTIVITIES

- AF1 Lectures
- AF2 Practical sessions
- AF4 Laboratory sessions
- AF5 Tutorials
- AF6 Group work

AF7 Individual work of the student
AF8 Midterm and final exams

Activity Code	Total Hours	Presential Hours	Student's presentiality (%)
AF1	12	12	100
AF2	6	6	100
AF4	3	3	100
AF5	2	2	100
AF6	25	0	0
AF7	25	0	0
AF8	2	2	100
TOTAL SUBJECT	75	25	33%

TEACHING METHODOLOGY

MD1 Teacher lectures with support of computer and audiovisual media, in which the main concepts of the subject are developed and the bibliography is provided to complement the students' learning.

MD2 Critical reading of texts recommended by the teacher of the subject: articles, reports, manuals and / or academic articles, either for further discussion in class, or to expand and consolidate the knowledge of the subject.

MD3 Resolution of practical cases, problems, etc. raised by the teacher individually or in groups.

MD4 Exhibition and discussion in class of topics related to the content of the subject, as well as case studies.

MD5 Writing reports and memorandum individually or within a workgroup.

ASSESSMENT SYSTEM

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

ASSESSMENT SYSTEM

SE1 Class participation

SE2 Continuous evaluation: Individual or group projects and assignments, midterms

SE3 Final exam

ASSESSMENT SYSTEM

SE2	40%
SE3	60%

BASIC BIBLIOGRAPHY

- Laudon, K.C.; Laudon, J.P. Management Information Systems: Managing the Digital Firm, Prentice Hall, 2017
- PMI PMBOK guide, PMI, 2017

ADDITIONAL BIBLIOGRAPHY

- Chase, R.B. Aquilano, N.J.; Jacobs, F.R. Operations Management, McGraw-Hill.
- Henry C. Lucas Jr Information Technology: Strategic Decision Making for Managers, John Wiley & Sons.