

## 28845 - Production Management

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 28845 - Production Management

**Faculty / School:** 175 - Escuela Universitaria Politécnica de La Almunia

**Degree:** 424 - Bachelor's Degree in Mechatronic Engineering

**ECTS:** 6.0

**Year:** 4

**Semester:** Second semester

**Subject type:** Optional

**Module:**

### 1. General information

This subject shows how to manage the functional area of production, recognizing that it must act in coherence with the rest of the functional areas and that it can be a source of competitive advantage for the company. Its design introduces the student in the knowledge of models and quantitative techniques, which will favor efficient decision making in the operations area.

### 2. Learning results

1. Distinguish the different production strategies, as well as identify the influence of the globalization of operations on the company's production strategy and plans them.
2. Relate the types of productive processes and select the productive process according to different parameters.
3. Know how to use the different diagrams for the representation of work methods.
4. Identify the different stages in the improvement of a production process.
5. Apply time measurement and task time estimation techniques.
6. Organize the planning, scheduling and production control of a company. Know and differentiate the different phases.
7. Use techniques and applications to manage the company's production process. Be able to put them into practice in real environments.
8. Make production scheduling decisions taking into account capacity analysis.
9. Apply operations scheduling techniques and models to make decisions on the allocation and sequencing of the works.
10. Know how to use techniques for the continuous improvement of the company's production processes.

### 3. Syllabus

TOPIC 01 INTRODUCTION TO OPERATIONS MANAGEMENT

TOPIC 02 PRODUCTION PROCESSES AND PRODUCTION METHODS

TOPIC 03 METHODS FOR FORECASTING DEMAND

TOPIC 04 PRODUCTION PLANNING, SCHEDULING AND CONTROL

TOPIC 05 PRODUCTION PRODUCTIVITY

TOPIC 06 PROCESS OPTIMIZATION

TOPIC 07 TIME STUDY

TOPIC 08 METHODS ENGINEERING WORK STUDY

TOPIC 09 INVENTORY MANAGEMENT

TOPIC 10 LEAN MANUFACTURING

TOPIC 11 PROJECT SCHEDULING AND CONTROL

TOPIC 12 QUALITY OF FINISHED PRODUCTS

### 4. Academic activities

#### Face-to-face activities:

- Theoretical lectures: Theoretical concepts of the subject will be explained and practical examples will be developed by the teacher.

#### Non-face-to-face activities:

- Tutored autonomous activities: They will be focused on the realization of work/projects, either individually or in small groups.
- Reinforcement activities: Various exercises, videos and general activities will be conducted through Moodle Individual tutoring: They may be face-to-face or virtual.

## 5. Assessment system

The Assessment Tests will consist of written tests and practical work:

1. WRITTEN TESTS. They will consist of TWO TESTS consisting of theory questions and problem solving. They make up 60% of the grade. The following will be valued out of 10 points
2. PRACTICAL TESTS. They will consist of the elaboration of papers that will be published on the Moodle platform. They account for 35%.
- 3.- Participation in the class. It will consist of attention and active participation in class. It accounts for 5%.

The student must obtain a final grade greater than or equal to 5 to pass the course, and it is essential to pass the two exams as well as the practical tests/workshops. However, it will be possible to compensate partial exams with assignments if the result of a test is between 4 and 5 points and the average grade of the practical tests/assignments is equal to or higher than 7 out of 10 points.

For the first call, those students who fail a partial exam will only be able to take the exam of the failed partial exam.

For the second call, those students who have not passed the subject in the first call with the entire syllabus may sit for the second call with all the syllabus.

## 6. Sustainable Development Goals

- 5 - Gender Equality
- 9 - Industry, Innovation and Infrastructure
- 12 - Responsible Production and Consumption