Universidad Zaragoza

30044 - Flexible Automation and Robotics

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

Robotics and Flexible Automation is an optional subject that delves into the knowledge of the fundamentals of automation acquired in previous courses, and contributes to the fundamentals of the industrial robot, which is the most flexible and versatile of the elements involved in automated production.

5.2.Learning tasks

5.3.Syllabus

Robot control and programming

- Morphology of the industrial robot and technologies.
- Spatial description
- Manipulator kinematics
- Robot programming
- Robot control system: trajectory generation and dynamic control.

Flexible automation and PLC advanced programming

Selection and implantation of industrial robots

Industrial robotics research

5.4.Course planning and calendar

5.5.Bibliography and recommended resources