

Flexible production systems

Academic Year: (2022 / 2023)

Review date: 14-02-2022

Department assigned to the subject: Systems Engineering and Automation Department

Coordinating teacher:

Type: Compulsory ECTS Credits : 3.0

Year : 4 Semester : 1

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to Flexible Production Systems
2. Planning and design of Flexible Production Systems
3. Advanced design concepts for Flexible Production Systems: Digital Twin
4. Development of a flexible virtual production system (I)
5. Development of a flexible virtual production system (II)
6. Advanced Design Concepts for Flexible Production Systems: Virtual Commissioning
7. Implementation of a flexible virtual production system (I)
8. Implementation of a flexible virtual production system (II)
9. From virtual design to the real system
10. Commissioning a physical system designed in a virtual environment

LEARNING ACTIVITIES AND METHODOLOGY

THEORETICAL PRACTICAL CLASSES.

Knowledge and concepts students must acquire. Receive course notes and will have basic reference texts. Students partake in exercises to resolve practical problems.

TUTORING SESSIONS.

Individualized attendance (individual tutoring) or in-group (group tutoring) for students with a teacher. Subjects with 6 credits have 4 hours of tutoring/ 100% on- site attendance.

STUDENT INDIVIDUAL WORK OR GROUP WORK.

Subjects with 6 credits have 98 hours/0% on-site.

WORKSHOPS AND LABORATORY SESSIONS.

Subjects with 3 credits have 4 hours with 100% on-site instruction. Subjects with 6 credits have 8 hours/100% on-site instruction.

ASSESSMENT SYSTEM

FINAL EXAM.

Global assessment of knowledge, skills and capacities acquired throughout the course. The percentage of the evaluation varies for each subject between 60% and 0%.

CONTINUOUS EVALUATION.

Assesses papers, projects, class presentations, debates, exercises, internships and workshops throughout the course. The percentage of the evaluation varies for each subject between 40% and 100% of the final grade.

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