

Academic Year: ( 2022 / 2023 )

Review date: 05-07-2021

Department assigned to the subject: Systems Engineering and Automation Department

Coordinating teacher: SALICHS SANCHEZ-CABALLERO, MIGUEL

Type: Electives ECTS Credits : 6.0

Year : 1 Semester : 2

**OBJECTIVES**

- \* To get to know the Automation foundations in industrial systems.
- \* Capacity for dealing with simple automation projects
- \* To get to know the equipment usually used in industry in the automation process.

**DESCRIPTION OF CONTENTS: PROGRAMME**

1. Presentation of the subject and Introduction
2. Logic Systems: Logic Systems Representation. State Diagrams. Functional Diagram
3. Technologies. Automata Programming (Execution modes, languages programming, common elements)
4. Ladder Programming.
5. Grafcet (SFC)
6. Actuators and Sensors

**LEARNING ACTIVITIES AND METHODOLOGY**

Theoretical and experimental lectures, student work in the labs, individual tutorials and personal work of the student.

**ASSESSMENT SYSTEM**

Assistance

Programming exam at the lab

Automation project

<b>% end-of-term-examination:</b>	0
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	10

**BASIC BIBLIOGRAPHY**

- Flavio Bonfatti, Paola Daniela Monari, Umberto Sampieri IEC 61131-3 Programming Methodology: Software Engineering Methods for Industrial Automated Systems, ICS Triplex, 2003
- null International Standard IEC 61131-3., IEC, 1993