

Control Engineering

Piloting and management of an industrial system

IDENTIFICATION

CODE : GI-4-S1-EC-PCS
ECTS : 3.0

HOURS

Lectures : 2.0 h
Seminars : 16.0 h
Laboratory : 24.0 h
Project : 0.0 h
Teacher-student
contact : 42.0 h
Personal work : 10.0 h
Total : 52.0 h

ASSESSMENT METHOD

IE/COP ES [évaluation en situation]
P/COP ES [évaluation en situation]
IE/SCADA/MES ES [évaluation en situation]

TEACHING AIDS

- printed and online book
- complementary docs
- Moodle page
- oral testimony by an industrialist

TEACHING LANGUAGE

French

CONTACT

M. ZAMAI Eric
eric.zamai@insa-lyon.fr

AIMS

This course belongs to teaching unit Management of industrial operations (GI-4-S1-UE-POPI) and contributes to the following skills :

- C1 Observing, measuring, analyzing and interpreting an activity or a system from data (Level 2)
- C2 Modeling and designing an information, decision and production system, of goods and services (Level 2)
- C3 Evaluating, prototyping and simulating a system (Level 2)
- C4 Sizing the hardware and / or software of a system (Level 2)
- C5 Managing a production system and react to malfunctions (Level 2)
- C6 Selecting appropriate production tools, integrating them into an environment and configuring them, and setting up a production system (Level 2)
- C13 Considering technological and methodological innovation (Level 2)
- C15 Managing a project based on a master plan (planning, budgeting, definition of monitoring indicators) (Level 2)

By allowing the engineering students to work and be evaluated on the following knowledge :

- [C4, C6, C13]
- [C15]
- [C1, C2, C3]

To be able to :

- [C1, C2, C3, C4, C5, C6? C13]

CONTENT

- Introduction to automation
- Automated systems of production (functions, uses)
- Conducting a project of automation (tools and methods for design and building)

PRE-REQUISITE

- Industrial Machine environment: sensors, actuators
- basic PLC programming
- System Engineering basics