

Mechatronic project



ECTS
4 crédits



Hourly volume

Introducing

Description

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):

- power and information channels of mechatronic systems
- the place of system simulation activities in the design cycle (V design cycle) of complex systems
- the principle of data acquisition with computers

The student will be able to:

- Establish models suitable for various engineering tasks during the design of mechatronic systems.
 - Implement models in a system simulation environment and perform validation and verification tasks associated to the V design cycle.
 - Specify and conduct model-in-the-loop and software-in-the-loop activities for a complex system.
 - Design the different elements of a simple data acquisition system
 - Implement a graphical programming language dedicated to the acquisition (LabVIEW)
 - Perform a security analysis
 - Perform a lifecycle analysis with a dedicated software
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Necessary prerequisites

Basics of mechanics, electronics, heat transfer, and automation.

Basic of algorithmic

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse