

## Mechatronic project



Hourly volume

## Introducing

Basic of algorithmic

## 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 softwareinthe-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

#### Necessary prerequisites

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

# Practical info

## Location(s)

**Q** Toulouse



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