Multidisciplinary design

ECTS
4 crédits

Hourly volume
45h

Introducing

Objectives

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

Design of experiments
-To know the global concepts of DoE and understand the interest of the tool.

Surrogate models and sizing of mechatronic systems
-To explain the process and the different models usefull for the optimal sizing of mechatronic systems

The student will be able to:
Design of experiments
-To be able to define and set into work some tests allowing to get an optimistic process.
-To carry out one's own design of experiments.

Surrogate models and sizing of mechatronic systems
-To define the sizing scenarios of a technical system
-To establish the estimation models and simulation modes of the set of components
-To set a design procedure and to define the optimization problem
-To Implement the calculations in a numerical environment

Necessary prerequisites

Probability (basic), statistics (basic), notions of system architecture (mechanical, hydraulic, electric, etc.)

Practical info

Location(s)

Toulouse