

Project Research – Innovation

Introducing

Description

The student will work on an open problem in applied science and will implement the four major skills of the engineer in applied mathematics

- Reformulate a user need to produce a problem that can be treated mathematically
- Analyze and design a digitally implementable solution to the mathematical problem posed
- Implement the digital solution to make it a demonstrator
- Use the technical and digital solution to produce a decision support tool (a study or a calculation code) meeting user needs

Objectives

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

- Principles of mathematical modeling of an application problem in relation to another discipline or a particular industrial sector
- Self-evaluation of the results obtained in relation to the objectives.

The student will be able to:

- Interact with a specialist or engineer from another discipline
- Organize collaborative work in small groups
- Define the framework and specifications of an original mathematical modeling problem

- Conduct the necessary bibliographic research to solve the problem
- Develop the deterministic and/or stochastic model adapted to its resolution
- Implement its numerical resolution
- Report in writing and orally on the results obtained

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