


Frames and Composite steel and concrete structures

 **ECTS**
6 credits **Component**
INSTITUT
NATIONAL
DES SCIENCES
APPLIQUEES
TOULOUSE **Number of
hours**
75h

Presentation

Description

Programme (detailed contents):

Steel and timbers structures and frames:

Studying the main framework, and stability system - Determining wind and snow loads - Designing certain structural components: roof components, joists, slab beams, gable posts, column and girder of the portal frame, stability members – Fire resistance of timber members – Designing connections - Calculating loads applied on foundations.

Composite steel and concrete structures: Technology of composite steel and concrete structures, benefits in case of fire, design of columns, beams and slabs according Eurocode 4.

Organization: lecture, project.

Objectives

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

- * Elaborating methods, planning and budget for a construction project.

- * Designing and calculating an steel structure and timber component

The student will be able to:

- * Foresee the execution methods.
- * Establish a projected budget and planning
- * Design the framework and stability of a steel structure
- * Calculate members and components according to EC3 and EC5.

Pre-requisites

Steel & timber structures

Useful info

Place

➤ Toulouse