

## Faculty of Applied Sciences



### AUCE1111 Project of structure I

[15h+45h exercises] 4 credits

This course is taught in the 2nd semester

**Teacher(s):** Jean-François Remacle, Jean-François Thimus  
**Language:** French  
**Level:** First cycle

#### Aims

The aim of the course is to provide an overview and introduction to structures and their use in buildings.

#### Main themes

The first part of the course is a self-contained overview of the field of structures. We discuss different ways of classifying structural elements and systems. Then, we introduce fundamental principles of mechanics (statics) that are generally applicable to the analysis of any structure. In the last part of the course, we consider the loads that structures are designed to carry and generally discuss the structural analysis and design process as it occurs in the building context.

#### Content and teaching methods

In this course, the students will have to design a structure by themselves, typically a bridge. The structure will first be designed following the guidelines that were provided in class. They will use professional software tools in order to validate their design. Then, they will realize in our labs a reduced scale version of their structure. A prize will grant the best project.

**Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)**

Naught

#### Other credits in programs

<b>ARCH12BA</b>	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil architecte	(4 credits)
<b>FSA12BA</b>	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(4 credits)
<b>FSA13BA</b>	Troisième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(4 credits)
<b>GC22</b>	Deuxième année du programme conduisant au grade d'ingénieur civil des constructions	(4 credits)