

## Faculty of Applied Sciences



### AUCE1701 Construction: structure

[30h] 3 credits

This course is taught in the 1st semester

**Teacher(s):** Paolo Amaldi  
**Language:** French  
**Level:** First cycle

#### Aims

By the end of the course, students will be able to :Be introduced to the principal types of constructible spatial structures available to architectural design;Understand through sensory intuition and experimentation the physical behavior of these structures;Understand their respective potentials and qualities for the design of habitable places;Relate these structures to different building types from history or from the contemporary situation

#### Main themes

The course will describe and analyze, structurally and spatially, the main types of constructive systems available for architectural design. The course will examine how matter supports itself (e.g. load-bearing masonry) and how it can span open spaces. Elementary building systems will be addressed (wall, column, post, beam, lintel, arch, floor, slab, vault, cupola) and situated within relatively complex buildings. The course will describe and analyze phenomena of compression, tension, bending, fixed and free supports, shearing, buckling, and torsion. The technology of construction will be studied in its complicity with the poetics of place. The course will be based on case studies: exemplary buildings or works from history or from the contemporary era, both major and minor or common buildings.

#### Content and teaching methods

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

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#### Other credits in programs

<b>ARCH11BA</b>	Première année de bachelier en sciences de l'ingénieur, orientation ingénieur civil architecte	(3 credits)	Mandatory
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