


The version you're consulting is not final. This course description may change. The final version will be published on 1st June.

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| 5.00 credits | 30.0 h + 30.0 h | Q1 |
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| Language : | French |
| Place of the course | Bruxelles Saint-Gilles |
| Prerequisites | <i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i> |
| Main themes | <p>This course trains students to understand and analyze the behavior of architectural structures. It introduces to fundamental concepts to:</p> <ul style="list-style-type: none"> • Analyze simple structures using tools from statics and material resistance, • Collaborate effectively with structural engineers. |
| Learning outcomes | <p>At the end of this learning unit, the student is able to :</p> <ul style="list-style-type: none"> • Apply the fundamental principles of mechanics to isostatic plane structures, • Produce a static diagram of a structure under a given load, • Use the principles of equilibrium and elasticity to calculate reactions at supports, internal forces, stresses, and associated deformations, • Describe instability phenomena in a structure, • Describe the mechanical properties of common materials, • Analyze and determine the behavior of various types of plane structures, • Assess the impact of hyperstaticity on structural behavior, • Formulate overall stability conditions for a structure, • Determine the loads acting on a building and analyze their transfer to the foundations, • Communicate effectively with the structural engineer regarding stability. <p>General Learning Outcomes</p> <p>In line with the program's learning outcomes (LOs), this course contributes to the development and acquisition of the following LOs:</p> <ul style="list-style-type: none"> • LO3.1 Acquire and explain the physical and physiological principles related to architecture. • LO3.3 Acquire and apply scientific and technical knowledge to realize an architectural project. • LO4.1 Learn and explain the concepts and methods of scientific disciplines. • LO4.3 Learn and apply the content of artistic or scientific disciplines to enrich the architectural project. |
| Faculty or entity in charge | LOCI |

Programmes containing this learning unit (UE)

| Program title | Acronym | Credits | Prerequisite | Learning outcomes |
|---|---------|---------|--------------|---|
| Bachelor in Architecture (Bruxelles) | ARCB1BA | 5 | LARCB1162 |  |