UCLouvain

larcb1261

2025

Structural Analysis

5.00 credits	30.0 h + 30.0 h	Q1

Teacher(s)	Pelsser Yvette ;Rondeaux Jean-François ;
Language :	French
Place of the course	Bruxelles Saint-Gilles
Prerequisites	*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.*
Main themes	This course trains students to understand and analyze the behavior of architectural structures. It introduces to fundamental concepts to: · Analyze simple structures using tools from statics and material resistance, · Collaborate effectively with structural engineers.
Learning outcomes	**At the end of this learning unit, the student is able to :** · 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. **General Learning Outcomes** In line with the program's learning outcomes (LOs), this course contributes to the development and acquisition of the following LOs: · 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	🔍