UCLouvain

larcb1262

2026

Assembly: Construction and Structure

5.00 credits	40.0 h + 15.0 h	Q2

Teacher(s)	Pelsser Yvette ;
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 addresses the key aspects of construction using concrete, timber, and steel. It introduces the technologies associated with these primary structural materials, enabling students to make informed structural choices while considering their constructive and structural implications. The course trains students to integrate various constructive and structural constraints, particularly in situations involving the intersection of walls or the assembly of multiple structural elements, to design appropriate and effective constructive details.
Learning outcomes	**At the end of this learning unit, the student is able to :** • Describe the behavior and constructive arrangements of the main structural materials within their environment, • Design a structure by considering the properties and behavior of the material as well as possible assembly methods, • Explain the principles of dimensioning reinforced concrete, timber, and metal structures, and evaluate their performance, • Analyze and propose a basic construction detail for the connection of multiple walls, addressing various constructional and structural requirements, • Critically evaluate specific technical documents, • Communicate effectively with the structural engineer and other stakeholders involved in the construction process. **General Learning Outcomes** In line with the program's learning outcomes (LOs), this course contributes to the development and acquisition of the following LOs: • LO2.4 Proficiently illustrate construction logics. • LO3.1 Acquire and explain the physical and physiological principles related to architecture. • LO3.2 Acquire and explain the construction and technical processes related to architecture. • LO3.3 Acquire and apply scientific and technical knowledge to realize an architectural project. • LO3.4 Acquire and explain the environmental, social, and economic consequences of construction and technical choices.
Bibliography	Muzeau, J.-P. (dir.). (2022). *Manuel de construction métallique : Extraits des Eurocodes à l'usage des étudiants* Eyrolles & Afnor éditions. Hirt, M. A., Bez, R., & Nussbaumer, A. (2006). *Construction métallique (TGC vol. 10) : Notions fondamentales et méthodes de dimensionnement*. Presses polytechniques et universitaires romandes. Herzog, T., Natterer, J., Schweitzer, R., Volz, M., & Winter, W. (2015, mai). *Construire en bois*. Bâle, Presses Polytechniques Romandes Groupement Belge du Béton (GBB). (2018, septembre). *Manuel Technologie du Béton*. Centre scientifique et technique de la construction. (2017, mars). *Note d'information technique 260 : Le ferraillage du béton*. Bruxelles : CSTC. Le cas échéant, la bibliographie complète sera communiquée aux étudiants et étudiantes ultérieurement, via MOODLE
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	LARCB1161 AND LARCB1162	🔍