

4.00 credits

40.0 h

Q1

Teacher(s)	Sgambi Luca ;
Language :	French
Place of the course	Tournai
Main themes	<p>This teaching unit forms part of continuous learning on structures and their behaviour.</p> <ul style="list-style-type: none"> • Load, overload and stresses in buildings • Soil mechanics: definition, components and structure of the soil, law of fundamental behaviour, action of water, constraints and balances including earth pressures, unstable soils and landslides • Direct and deep foundations • Supports: slopes, retaining walls, shoring and anchors <p>Advanced study:</p> <ul style="list-style-type: none"> • Prefabricated structures in concrete : process of design and choice of construction system, general stability and bracing, pre-stressed flat and ribbed floor elements, joints and brackets • Complex and large scale/storeyed structures : design and conditions for implementation, including foundations <p>These topics are studied with the aim of experiencing the professional practice of the engineering consultant in the field of building stability.</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Specific learning outcomes:</p> <p>By the end of this teaching unit, students are able to</p> <ul style="list-style-type: none"> • describe and critically analyse the mechanical working of building structures as a driver of an efficient work of architecture. • assess the specific issues raised by the design of a structure so as to make sensible, coherent and rational choices. • assess the technical and construction principles to be developed for large scale structures; assess the methods and conditions of implementation. • analyse and make use of technical documents. • enter into a professional dialogue with an engineer using knowledge of structures rigorously : communicate an architectural project with the use of plans, presentations or other documents adapted with a view to posing questions about the project and developing it. <p>Contribution to the learning outcomes reference network:</p> <p>Use the technical dimension</p> <ul style="list-style-type: none"> • Be familiar with and interpret the main technical principles of construction • Be able to apply the various basic technical principles in producing a work of architecture <p>Make committed choices</p> <ul style="list-style-type: none"> • Understand the merits of an idea which can lead to the objectives to be achieved by the project; follow through with determination, even by means of a modest intervention, the implementation of this idea and the achievement of these objectives
Evaluation methods	<p>Each student's final rating is the average of two ratings. The first evaluation concerns a structural design work on a design problem assigned by the teacher at the beginning of the course. This work can be done in groups. The second evaluation concerns a written examination on the topics carried out in the classroom. On both assessments, the teacher sets a minimum threshold of 6/20 below which the student cannot have a positive final assessment.</p>
Teaching methods	<p>The course includes a part of theoretical lessons ex-cathedra, a part of the course dedicated to exercises and the development of a structural design exercise.</p>
Inline resources	<p>To support the course, the teacher provides tutorials that can cover all the topics discussed. All tutorials are available by MOODLE.</p>
Other infos	<p>More detailed information about the course and evaluation procedures will be explained during the first lesson and will be contained in the "Plan du cours" (downloadable from MOODLE).</p>

Faculty or entity in charge	LOCI
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Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Architecture (Tournai)	ARCT2M	4		