

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

6.00 credits	27.5 h + 40.0 h	Q1
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Teacher(s)	Rattez Hadrien ;
Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Prerequisites	<p>This project requires in-depth knowledge in the design and stability of structures, reinforced concrete structures, geotechnics, hydraulics, hydraulic structures, bridges, roads, metal structures as taught in the construction minor courses, in the courses LGCIV2071, LGCIV2072, LGCIV2051, LGCIV2013, LGCIV2033 and in the LGCIV2011 project.</p> <p><i>The prerequisites for this Teaching Unit (UE) are specified at the end of this sheet, with regard to the programs/ training courses which offer this UE.</i></p> <p><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></p>
Main themes	<p>This project covers all civil engineering disciplines. The theme is chosen based on the data available at the time of the project, usually based on an actual project, completed or in progress.</p> <p>For example, it could be:</p> <ul style="list-style-type: none"> • A concrete or steel bridge or footbridge. • An ecoduc. • An observation tower. • A water tower. • A hydraulic engineering structure (dam, lock, etc.) and its associated structures. • An underground or urban structure (tunnel, road, metro, etc.). • The development of a technical landfill site. <p>Volume 1 will be devoted mainly to the presentation/recall of the design and calculation methods used to treat a project as a whole.</p> <p>Volume 2 will focus on the project itself and supporting students in their design and calculation process</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>With reference to the AA reference framework of the "Master Civil Engineer of Constructions" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes:</p> <ul style="list-style-type: none"> • (AA1.1, AA1.2, AA1.3) • (AA2.1, AA2.2, AA2.3, AA2.4, AA2.5) • (AA4.1, AA4.2, AA4.3, AA4.4) • (AA5.1, AA5.2, AA5.3, AA5.4, AA5.5, AA5.6) • (AA6.1, AA6.2, AA6.3, AA6.4) <p>More specifically, at the end of this project, the student must be able to:</p> <p>Technical and engineering skills:</p> <p>1</p> <ul style="list-style-type: none"> • Apply the technical knowledge taught in the prerequisite courses (in particular calculation and design of structures); • Analyze a problem in all its dimensions and ask the right questions to make the right choices of design, materials, geometric shapes, execution methods, etc. .; • Design one or more technical solutions in accordance with the specifications of the project. • Apply the notions of calculation and sizing seen in the prerequisite courses. <p>Social skills :</p> <ul style="list-style-type: none"> • Communicate effectively, not only within the group but also with professors, especially during the presentations.

<p>Evaluation methods</p>	<p>There is no second session possible for this project. Students absent during the first session of week 1 without valid proof will be excluded from the project. Any other unjustified absence will be penalized by a reduction of two points in the final grade.</p> <p>The evaluation will be made on the basis of:</p> <ul style="list-style-type: none"> • Participation and attendance during sessions. • The quality of the intermediate reports and the final report. • The quality of the intermediate and final presentations. • An individual oral examination covering all aspects of the project may be planned. <p>Different grades may be awarded to students in the same group based on their attendance at the sessions, their answers to the questions asked during the intermediate and final defenses, their participation in writing the report, their individual examination, etc.</p> <p>Good knowledge of all aspects of this project/course is necessary for success.</p> <p>In written reports, the student is required to systematically indicate all parts where AI (such as ChatGPT) has been used, e.g. in a footnote specifying whether AI was used to search for information, to draft the text or to correct it. Furthermore, sources of information must be systematically cited while respecting bibliographic referencing standards. The student also remains responsible for the content of his or her production, regardless of the sources used.</p>
<p>Teaching methods</p>	<p>EX cathedra courses and supervised studio sessions</p>
<p>Content</p>	<p>IMPORTANT NOTE: IN CASE OF FORCE MAJEURE (E.G., AN EPIDEMIC), THE CONTENT, ACTIVITIES, TEACHING METHODS AND EVALUATION METHODS MAY BE ADAPTED.</p> <p>The theme is chosen based on the data available at the time of the project, whether or not based on a real project, completed or in progress.</p> <p>See "themes covered" section.</p>
<p>Inline resources</p>	<p>See MOODLE page of the course.</p>
<p>Bibliography</p>	<p>Voir page MOODLE du cours</p>
<p>Other infos</p>	<p>One or more construction site visits may be organized (participation required).</p>
<p>Faculty or entity in charge</p>	<p>GC</p>

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Civil Engineering	GCE2M	6	LGCIV2011	