

7.00 credits

42.5 h + 40.0 h

Q1

Teacher(s)	Colis Bernard ;Lateur Pierre ;Ney Laurent ;Rattez Hadrien ;Saraiva Esteves Pacheco De Alm João ;
Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Prerequisites	<p>This project requires in-depth knowledge of mechanics of structures, stability of structures, reinforced concrete structures, geotechnics, loaded and free-surface hydraulics, hydraulic structures, bridges, roads, steel structures as taught in the courses of the minor in construction, in the courses LGCIV2071, LGCIV2072, LGCIV2051, LGCIV2013, LGCIV2033, and in the project LGCIV2011.</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><b>IMPORTANT NOTE: IN CASE OF FORCE MAJEURE (E.G., AN EPIDEMIC), THE CONTENT, ACTIVITIES, TEACHING METHODS AND EVALUATION METHODS MAY BE ADAPTED</b></p> <p>This project deals with all the disciplines of civil engineering. The theme is chosen based on the data available at the time of the project, usually based on a real project, completed or in progress.</p> <p>It can be for instance:</p> <ul style="list-style-type: none"> <li>• A concrete or steel or timber (foot)bridge;</li> <li>• A hydraulic engineering structure (dam, lock, ...);</li> <li>• An underground or urban structure (tunnel, road, metro ...);</li> <li>• A hydraulic structure like a water tower;</li> <li>• The development of a technical landfill site.</li> </ul> <p>Volume 1 will focus on the concepts of project management and on the review of design and calculation methods. Volume 2 will focus on the project itself via workshops.</p>
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></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"> <li>• (AA1.1, AA1.2, AA1.3)</li> <li>• (AA2.1, AA2.2, AA2.3, AA2.4, AA2.5)</li> <li>• (AA4.1, AA4.2, AA4.3, AA4.4)</li> <li>• (AA5.1, AA5.2, AA5.3, AA5.4, AA5.5, AA5.6)</li> <li>• (AA6.1, AA6.2, AA6.3, AA6.4)</li> </ul> <p>More specifically, at the end of this project, the student must be able to:</p> <ol style="list-style-type: none"> <li>1. Technical and engineering skills:             <ul style="list-style-type: none"> <li>• Apply the technical knowledge taught in the prerequisite courses (in particular calculation and design of structures);</li> <li>• 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. .;</li> <li>• Design one or more technical solutions in accordance with the specifications of the project.</li> </ul> </li> <li>2. Project management / managerial skills:             <ul style="list-style-type: none"> <li>• Organize and coordinate the work of the group;</li> <li>• Manage new datas and make the right decisions;</li> <li>• Establish the schedule of the works;</li> <li>• Determine the appropriate mode of procurement;</li> <li>• Make a price calculation.</li> </ul> </li> <li>3. Social skills :             <ul style="list-style-type: none"> <li>• Communicate effectively, not only within the group but also with teachers.</li> </ul> </li> </ol>

<p>Evaluation methods</p>	<p>There is no second session for this project. Students absent from the first session of S1 without valid justification will be excluded from the project. Any other unjustified absence will be penalized by a two-point reduction in the final grade.</p> <p>Evaluation will be based on:</p> <ul style="list-style-type: none"> <li>• Participation and attendance during the sessions;</li> <li>• The quality of the interim and final reports;</li> <li>• The quality of the intermediate and final presentations;</li> <li>• A written and/or oral exam on the "site management" part;</li> <li>• An individual oral exam on all aspects of the project may be scheduled.</li> </ul> <p>Different grades may be given to students in the same group depending on their attendance at the sessions, their answers to the questions asked during the intermediate and final defenses, their participation in the writing of the report, their individual examination, etc.</p> <p>Familiarity with all aspects of this project/course, including the more theoretical aspects of site management, is necessary for success.</p> <p>In their written reports, students are required to systematically indicate all parts where AIs (such as ChatGPT) have been used, e.g. in footnotes, specifying whether the AI was used to search for information, to write the text or to correct it. Sources of information must be systematically cited in accordance with bibliographic referencing standards. Students remain responsible for the content of their work, regardless of the sources used.</p>
<p>Teaching methods</p>	<p>Lectures and supervised workshops in the classroom.</p>
<p>Content</p>	<p><b>IMPORTANT NOTE: IN CASE OF FORCE MAJEURE (E.G., AN EPIDEMIC), THE CONTENT, ACTIVITIES, TEACHING METHODS AND EVALUATION METHODS MAY BE ADAPTED</b></p> <p>This project deals with all the disciplines of civil engineering. The theme is chosen based on the data available at the time of the project, usually based on a real project, completed or in progress.</p> <p>It can be for instance:</p> <ul style="list-style-type: none"> <li>- A concrete or steel or timber (foot)bridge;</li> <li>- A hydraulic engineering structure (dam, lock, ...);</li> <li>- An underground or urban structure (tunnel, road, metro ...);</li> <li>- A hydraulic structure like a water tower;</li> <li>- The development of a technical landfill site.</li> </ul> <p>Volume 1 will focus on the concepts of project management and on the review of design and calculation methods. Volume 2 will focus on the project itself via workshops.</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.</p>
<p>Faculty or entity in charge</p>	<p>GC</p>

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Civil Engineering	<a href="#">GCE2M</a>	7	<a href="#">LGCIV2011</a>	