

7 credits

37.5 h + 40.0 h

Q1

Teacher(s)	Bousmar Didier ;Cols Bernard ;Lateur Pierre coordinator ;Ney Laurent ;Pardoen Benoît ;
Language :	English
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 and in the courses LGCIV1022, LGCIV1023, LGCIV1031, LGCIV2071, LGCIV2072, LGCIV2051, LGCIV2013, LGCIV2033, LGCIV1032, LGCIV1072, LGCIV2014.</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	See part "Content" hereunder
Aims	<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> <ol style="list-style-type: none"> 1. Technical and engineering skills: <ul style="list-style-type: none"> • Apply the technical knowledge taught in the prerequisite courses (in particular calculation and design of structures); 1 • 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. 2. Project management / managerial skills: <ul style="list-style-type: none"> • Organize and coordinate the work of the group; • Manage new datas and make the right decisions; • Establish the schedule of the works; • Determine the appropriate mode of procurement; • Make a price calculation. 3. Social skills : <ul style="list-style-type: none"> • Communicate effectively, not only within the group but also with teachers. <p>-----</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p>
Evaluation methods	<p>The evaluation will integrate:</p> <ul style="list-style-type: none"> • The participation to the workshops; • The quality of the group reports; • An individual oral examination of each student, covering all the aspects of the project.
Teaching methods	<p>Ex-cathedra teaching for volume 1. Workshops for volume 2.</p>
Content	<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"> • A hydraulic engineering structure (dam, lock, ...); • A concrete or steel (foot)bridge; • An underground or urban structure (tunnel, road, metro ...);

	<ul style="list-style-type: none"> • A hydraulic structure like a water tower; • The development of a technical landfill site. <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>
Inline resources	Available on Moodle
Bibliography	<ul style="list-style-type: none"> • Transparents du cours ; • Documents normatifs appropriés à chaque projet ; • Documentation commerciale relative à des produits de construction (palplanches, coussins d'accostage, appuis en néoprène, etc.)
Other infos	A site visit can be organized as part of the project
Faculty or entity in charge	GC

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Civil Engineering	GCE2M	7	LGCIV2071 AND LGCIV2013 AND LGCIV2033 AND LGCIV2051	