UCL Université catholique de Louvain

LBIRE2217B

2015-2016

Projet intégré et excursions en ressources en eau et sol: partim excursion

2.0 credits	0.0 h + 20.0 h	1q

Teacher(s) :	
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	iCampus
Prerequisites :	Common courses of BIRE. Mandatory courses for the soil and water resources section of the program. Additional : Hydraulics, irrigation, drainage, soil conservation.
Main themes :	Project The integrated project on soil and water resources aims combining different knowledges, skills and competences acquired in previous courses of the program, for i) analyzing and understanding a real-case soil and/or water management problem; ii) identifying and documenting possible technical solutions of the management problem, taking into account the administrative and legal boundary conditions; iii) selecting and designing the most promising solutions; iv) estimating the costs of the proposed solution. The soil and/or water problem that is submitted to students complies with the complexity of a real case operational engineering study, but also with the time that can be allocated by the students to the project. The proposed solution is delivered in a written report and an oral presentation targeting a non-specialized public. Excursions Professional visits of soil and water engineering works in Belgium and possibly abroad.
Aims :	a. Contribution de l'activité au référentiel AA (AA du programme) M1.4 ; M1.5 ; M2.3 ; M2.4 ; M4.1 ; M4.2 ; M4.3 ; M4.4 ; M4.5 ; M4.6 ; M4.7 ; M5.1 ; M5.3 ; M5.4 ; M5.5 ; M5.6 ; M5.7 ; M6.1 ; M6.2 ; M6.3 ; M6.4 ; M6.5 ; M6.6 ; M6.7 ; M6.8 ; M8.1 ; M8.2 ; M8.3 ; M8.5 b. Formulation spécifique pour cette activité des AA du programme Integrated Project (5 ECTS) Only for BIRE / 7E At the end of the project, the student : - is able to integrate his knowledge and engineering skills with technical, legal and economic aspects for designing an engineered solution of a complex soil and/or water management problem; - is able to adopt, during the planning and execution of the project, professional project management skills. This involves the development of skills allowing to define tangible project results and to propose appropriate project methodologies, resources and activities; - is capable of working in a team, of executing the proposed activities as scheduled , and , in case implementation problems occur, of proposing alternative solutions; - is able to present the project results, with the specific technical rigor of a bio- engineers ; - has developed the ability to work in a project team , requiring initiative and organization to support and implement a project ; - has the ability to justify and defend the approach and the chosen solutions; - was initiated in some legal and technical aspects related to soil and water resources management . After the excursions or study tour (2 ECTS BEER / IBAR and 7E / 7A) , the student: - will have been faced to a series of problems and case studies related to soil and water engineering - will have been faced with different actors and stakeholders of soil and water management of the public and private sector; - will have strengthened his technical writing skills. *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".*
Evaluation methods :	Project: Multi-criteria evaluation of project report (quality of the technical solutions, quality of the report, ...) and the oral presentation and defense of the project (quality of the presentation and quality of the answers to the questions posed by the jury). Excursions: Report of trips and / or field trip.

Teaching methods :	Project: During the first week of the semester , the course structure is introduced , student groups are formed , the specific problems of the project is introduced , the expected results are explained, and the various actors and stakeholders are introduced. Following a site visit and / or meetings with key stakeholders , students themselves define detailed project activities to be undertaken, as well as an execution plan. From the third week onwards, students implement the project execution plan. Regular meetings (weekly) with supervisors and tutors allows monitoring the project progress. In week 14 students submit their report. The project is presented and defended orally during the examination session. Excursion or study tour : Tours in Belgium (5 days) and possibly abroad (one week) to discover the many aspects of soil and water resources engineering and management.
Content :	Project A practical soil and/or water management case study (flooding problem, mudflow problem, soil erosion problem, etc...) is submitted to the students. The students are forming a project team (a group of 3-5 students) to propose an engineered solution for the problem. The project involves individual work, team work, and regular meetings with tutors and, in some cases, other professionals of the sector. The project report is due the last week of the semester. The project results are defended orally during the examination session. Excursion Visits to various sites in Belgium and possibly abroad
Bibliography :	A vademecum of the course, describing the details of the program, is available on iCampus. - For the project,a shared data directory is available on iCampus.
Faculty or entity in charge:	AGRO

Programmes / formations proposant cette unité d'enseignement (UE)				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Agricultural Bioengineering	BIRA2M	2	-	