

8.0 credits	80.0 h	1q
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Teacher(s) :	Jacquemart Anne-Laure (coordinator) ; Defourny Pierre ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	iCampus
Prerequisites :	Bachelor courses in bioengineering, the project is open to all masters in bioengineering (A, C, E or F)
Main themes :	The integrated project in information technology and management requires students to implement in an integrated and interdisciplinary way the knowledge and skills they have acquired in the course of their bio-engineer training, whatever their specific orientation, to analyze and understand a problem involving data and information acquired in the course of a study in the field of biological, agricultural or environmental engineering. These aspects will cover issues related to data acquisition, data treatment within the competence of students and the final presentation of high-level information obtained from the initially low-level data. The complexity of the selected project will be compatible with both a real work situation and with a problem that can completely solved within the time limit set by the course. The project results in oral and written communication of the proposed solution in a way that is understandable and usable by an engineer with no particular specialization.
Aims :	<p>a. Contribution de l'activité au référentiel AA (AA du programme)</p> <p>2.4 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9 6.2, 6.3, 6.5, 6.6, 6.7, 6.8 7.1, 7.2 8.1, 8.2</p> <p>b. Formulation spécifique pour cette activité des AA du programme</p> <p>At the end of the course LBIRE2211, students will be able to:</p> <ul style="list-style-type: none"> · Integrate their basic science knowledge with technical, legal and economic constraints to formalize a complex engineering problem related to information technology and management; · Develop innovative solutions to solve a multidisciplinary problem in engineering science; · Work as a team to plan all the stages of a multidisciplinary project and commit collectively after effectively distributing the tasks within the team; · Work effectively as a team by demonstrating leadership, dialogue and adaptation to the successful completion of the project within a specified time frame; · Communicate the intellectual approach and the proposed solutions by justifying and defending them with the necessary scientific rigor; · Communicate effectively and respectfully with diverse stakeholders by demonstrating listening skills, empathy and assertiveness ; · Understand the legal and technical aspects of the resolution of problems related to the management and processing of information throughout the information chain. <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 :	Written and oral presentation based on the final results or solution.
Teaching methods :	Group work and weekly meetings with the teachers during which students present the progress of their project.
Content :	A concrete and topical problem is submitted to the students during a meeting with actors or experts in information technology and management (or by default by the teachers) in the field of biological, agricultural or environmental engineering. Like a group of experts or a consultancy company, students are organized in groups of 2 to 4 people to structure the approach and identify the problems to be solved during the various stages of the project. Students have to mobilize the necessary resources for the successful completion of the project. Depending on the problem addressed, the work will include at least two of the following subjects: data collection from relevant agencies, data validation or correction, database management, statistical analysis or modeling, analysis of the expected benefits and risks associated with the proposed solution, preparation and presentation of the results in a way that is understandable and usable by engineers without any particular specialization, hinges on the dissemination of results to the public

	(e.g. programming of user interfaces or definition of synthetic indicators). Through regular meetings, students will have to explain the proposed methodology and present intermediate results at different stages of the project. A group report will have to be provided during the last week of term. That report will be defended orally during the exam session in January.
Cycle and year of study :	> Master [120] in Environmental Bioengineering
Faculty or entity in charge:	AGRO