

3.0 credits	30.0 h + 7.5 h	1q
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Teacher(s) :	Gaspart Frédéric (coordinator) ; Cogels Olivier ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Inline resources:	Icampus
Prerequisites :	Knowledge and know-how in basic courses of the bio-engineering programme.
Aims :	<p>The course is divided in two parts.</p> <p>Part 1</p> <ol style="list-style-type: none"> <li>1. Understanding decision processes and the various methods of decision making most commonly relied upon in agronomics, environmental sciences, economics and management.</li> <li>2. Taking into account risk and multi-criteria objectives.</li> <li>3. Formulating decision problems as they occur in agronomics and in natural resources management.</li> <li>4. Selecting adequate methods.</li> </ol> <p>Part 2</p> <ol style="list-style-type: none"> <li>1. Mastering the project approach as an intervention mean in industrialized and developing countries, linked to their specific social, political and environmental context</li> <li>2. Mastering the successive steps of the life cycle of the project, integrating all these elements in a systematic pattern with a view to a feasibility analysis.</li> <li>3. Mastering the methods of project follow-up and assessment, including financial and economic assessment.</li> <li>4. Knowing the basics of planning methods and human resource management.</li> </ol> <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 :	The evaluation is based on a written exam with exercises for Part 1 and a take-home exam for Part 2.
Content :	<p>Part 1 (in English)</p> <p>The course outlines, explains and compares various methods and decision making tools available in natural and social sciences. It distinguishes and shows the complementarities of statistics and economic analysis. Multi-criteria decisions and decisions under uncertainty in situations with several interacting decision-makers are illustrated with examples taken in fields relevant for the students.</p> <p>Part 2 (in French)</p> <p>Stemming from the professional activity of the bio-engineer, the course outlines the project-based approach in a context of rural development or environmental management by public or private actors. The project-based approach is defined in contrast with other modes of intervention and outlined through the project life-cycle (identification, design, feasibility, programming, funding, implementation, follow-up, assessment). The incentives of various actors (fund raisers, field workers, target groups, etc.) and institutional partnerships are analysed.</p> <p>Lectures emphasize the criteria and the methods for an impact assessment, and the practical implementation thereof. Critical analyses are performed by the students on case studies in the realms of rural development and the environment, so that they develop a professional attitude towards these problems. Finally, drawing from practical examples, lectures describe the methods for the identification, the design and the study of feasibility at the technical, environmental, organisational, social, financial and economic levels. Some legal and normative aspects are discussed.</p> <p>Methods and tools are presented on the basis of the following schedule :</p> <ul style="list-style-type: none"> <li>- basic definitions and concepts : project, program, project management, project life-cycle, strategies, stakeholders, resources, etc.</li> <li>- Strategic planning and programming</li> <li>- Identification of projects, the idea of a project, the problem tree, the target tree</li> <li>- Planning : strategies, indices, WBS organigram, GANTT diagram, risk analysis, budget, quality planning, organisational and managerial aspects, monitoring</li> <li>- Implementation : launch, actor roles, organisational modes, risk/conflict/change management, communication</li> <li>- follow-up, monitoring, reporting</li> <li>- Ex-post assessment</li> </ul>

<p>Cycle and year of study :</p>	<p><a href="#">&gt; Master [120] in Environmental Bioengineering</a>  <a href="#">&gt; Master [120] in Forests and Natural Areas Engineering</a></p>
<p>Faculty or entity in charge:</p>	<p>AGRO</p>