

4.0 credits	37.5 h + 7.5 h	2q
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Teacher(s) :	Gaspart Frédéric ;
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	Precursory courses : BIR 1241 'Economie politique et sociale', BIR 1342 'Economie rurale' or a course of micro-economics Supplemental courses : BAPA 2203 'Recherche opérationnelle en agriculture' or a course of environmental economics
Main themes :	In the first part, the course presents and discusses the theoretic fundamentals, necessary to apprehend the questions of environment and natural resources conservation and management (theory of the social welfare and of efficiency, public goods and externalities, property rights and cost-benefit analysis.) In the second part, the course presents and compares 1) the most common evaluation methods of damages and benefits to the environment and 2) the economical and statutory instruments of the environmental politics (standards, taxes, subsidies, tradable pollution permits.) In the third apart, the course approaches the questions of optimal resource allocation, distinguishing the renewable from the exhaustible resources. The course concludes on questions of sustainable development. Case studies, examples and exercises are used to illustrate the concepts and the methods studied.
Aims :	The objective of this course is to familiarize the students with the economic analysis applied to the management of the environment and natural resources. It is centered on a microeconomic approach to the optimal management of the natural resources and the environment. Economic models are used to analyze the efficiency of the market's allocation and the different instruments which the public decision makers dispose of. Project evaluation methods and the models of natural resources' management are presented. At the end of the course, the students will have acquired a basis allowing them to analyze environmental problems and policies inform an economic point of view. The students will have to master the concepts of opportunity costs in the political or private decision making and the importance of discounting of future costs and benefits. <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>
Evaluation methods :	Evaluation : at the end of the course, written examination
Teaching methods :	Support : Lecture notes, text book, personal notes and overhead slides Teaching team : teacher + assistant Miscellaneous : The course is given in two parts: 7.5h of revision of micro- and welfare economics and 30h of natural resource and environmental economics. The course is followed by practical exercises covering case studies and the application of microeconomic tools.
Content :	Summary: content and methods 1. Individual choice in a finite set and in a vectorial space under budget constraint, properties of individual demands, behaviour of a private firm 2. General equilibrium: one consumer and one firm, Edgeworth box ; fundamental theorem of welfare economics 3. Competitive models with unilateral pollution (Pigou), renewable resources ("Easter Island") and non-renewable (Hoteling's rule) 4. Strategic models of public goods, reciprocal pollution, Tragedy of the Commons Every three courses, students are given a few exercises in order to consolidate previously studied topics and to explore topics to be studied shortly. These exercises must be solved individually in ten days of time and are solved later in class.
Cycle and year of study :	> Bachelor in Bioengineering > Master [120] in Agricultural Bioengineering > Advanced Master in Rural Economics and Sociology > Master [120] in Biology of Organisms and Ecology > Master [60] in Geography : General > Master [120] in Geography : General > Master [120] in Chemistry
Faculty or entity in charge:	AGRO