LBIR1343
2013-2014

Environmental Economics

4.0 credits	37.5 h + 7.5 h	2q

Teacher(s) :	Gaspart Frédéric ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	Icampus
Prerequisites :	BIR 1241 'Principes d'économie' or an introduction to microeconomic theory
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 :	a. Contribution of the activity to the program LO 1.1-1.3, 1.5, 2.1-2.3 microeconomics, optimization, game theory 3.1-3.2, 4.1-4.2 connecting a narrative with a typical problem, knowing which information must be looked for 3.3, 4.3 finding the relevant elements to build and solve a simple microeconomic model 3.5-3.7, 4.4 interpreting the conclusions of microeconomic models and their limits, assessing variations in a vicinity of classical hypotheses 6.2, 6.4 homeworks 7.1-7.4 normative economics, welfare assessment of decision making b. Specific formulation of LO for this activity : At the end of the course, students will be able : - to understand and to use the elements of microeconomic theory that are necessary in the fields of environmental economics and natural resources economics. - to identify, characterize and represent with mathematical tools the typical problems of environmental and natural resources management. - to define and to solve a normal-form game corresponding to a simple situation of strategic interaction. - to connect the main policy instruments with the problems for which they are relevant. - to assess Pareto-efficiency and welfare comparisons in equilibrium situations (competitive or Nash equilibrium) with or without policy intervention in a simple microeconomic model. *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 :	Written exams, exercises. Students are allowed to consult their notes or additional material.
Teaching methods :	Lectures and homeworks.
Content :	1. Individual choice, properties of individual demand, model of a private firm 2. General equilibrium : concepts, Edgeworth box, fundamental theorems of Welfare economics, transfer paradox 3. Competitive model with unilateral pollution (Pigou), inter-temporal free access (« Easter Island ») and privately owned resources (Hoteling's Law) 4. Strategic models of public goods, reciprocal pollution, Tragedy of the Commons (including the Coase solution and tradable permits) Students receive periodically consolidation-and-discovery homeworks. Homeworks must be solved within ten days and are then discussed during the lectures.
Bibliography :	Nothing compulsory. Some articles or handbooks can be referred to for specific concerns.

Cycle and year of study :	> Master [120] in Agricultural Bioengineering > Advanced Master in Rural Economics and Sociology > Master [120] in Biology of Organisms and Ecology > Bachelor in Bioengineering > Master [120] in Chemistry > Master [60] in Geography : General > Master [120] in Geography : General
Faculty or entity in charge:	AGRO