Markets and Environment

Academic Year: (2020 / 2021) **Review date: 08-07-2020**

Department assigned to the subject: Economics Department

Coordinating teacher: SAN JUAN MESONADA, CARLOS

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 1

OBJECTIVES

knowledge skills
- capacity to understand and analyze problems in environmental economics
- capacity to evaluate the environmental consequences of economic activity
- capacity to interpret environmental taxes and market-based instruments of environmental regulation
- capacity to apply theoretical models from environmental and natural resource economics to real-world problems

technical skills
- effective problem-solving
- solve problems using spreadsheet or econometric software
- ability to work in groups
- critical reasoning
- written and oral communication

DESCRIPTION OF CONTENTS: PROGRAMME

The program begins by explaining the economics of renewable and non-renewable natural resources. Next, the instruments to correct market failures are introduced, first the control and management solutions: Pigouvian taxes, subsidies and quality standards comparing them with taxes. Secondly, the market based instruments such as tradable pollution rights. Different concepts for the valuation of non-market amenities such as environmental quality are presented, including hedonic pricing, travel cost methods and contingent valuation. Their use is exemplified with an introduction to environmental cost- benefit analysis. Next, the techniques of valuation of the environmental impacts, the problems related to the regulation of transboundary pollution in the international treaties. Finally, the course touches upon the theory of optimal management of renewable and non-renewable resources.

LEARNING ACTIVITIES AND METHODOLOGY

Students will acquire the knowledge and technical skills set out above by following the lectures ("magistrales"), by solving problems that will be turned in to the professor and corrected jointly in class, and by attending review sessions ("reducidas") in which problems are solved at the black board. Likewise, part of the skills will be acquired by the students through individual research.
The educational activities are aimed at enabling the students to use the tools of economic analysis acquired in previous classes and to apply them to the regulation of environmental problems. The teaching method is interactive and based on the use of computer software (spreadsheet and/or econometric applications) for the analysis of case studies related to environmental protection and to natural resources management.

ASSESSMENT SYSTEM

Evaluation of the student will be based on class participation (20%, including preparation and presentation of homework), a midterm exam (40%) and a final exam (40%).

The retake exam (convocatoria extraordinaria) in June will allow to pass the course with the 100% of the grade base in the exam grade or the weighted average of the continuous evaluation grade (60%) plus the final exam grade (40%). The UC3M students in exchange or internship live (or similar situation) may opt for the 80-20 system: 80% final exam grade plus 20% individual course paper if the lecturer of his group authorize this alternative evaluation system. The topic of these assay should be authorize by the lecturer in advance.

Class participation and Integrity: Attendance and class participation are encouraged. Repeated

absences from class, failure to actively and regularly participate, or disruptive behavior will result in lower or no credit in this category. Plagiarism or other forms of academic dishonesty will not be tolerated and may result in a bad grade for the continuous evaluation.

% end-of-term-examination:	40
% of continuous assessment (assigments, laboratory, practicals…):	60

BASIC BIBLIOGRAPHY

- Charles Kolstad Intermediate Environmental Economics, Oxford University Press , 2011 (International 2nd Edition)

- Tom Tietenberg Environmental and Natural Resource Economics, Addison Wesley, 2003 or later

ADDITIONAL BIBLIOGRAPHY

- Pere Riera, Dolores García, Bengt Kriström, Runar Brännlund Manual de Economía Ambiental y de los Recursos Naturales, Thomson Editores, Madrid, 2005