Markets and Environment

Academic Year: (2022 / 2023) **Review date: 11-05-2022**

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

Lesson 1 - Introduction

a) Economics of Natural Resources: Central Questions
b) The functions of the environment
c) Market failures
d) Externalities
e) Public and communal goods

Lesson 2 The Management of Natural Resources

The economic management of renewable and non-renewable resources

2.1 Non-renewable resources (RNR)

a) The concept of RNRs
b) The Hotelling Rule
c) Comparative statics
d) The monopoly
e) Recycling

2.2 Renewable resources (RR)

f) The concept of RR
g) Growth and extraction of RR
h) EU fisheries policy
i) Economic aspects of forest management
j) The extinction of species

Lesson 3 Instruments to correct market failures

a) Optimal level of contamination
b) Command and control solutions
c) Market instruments

Lesson 4 Valuation of Natural Resources

a) Revealed preferences
b) Declared preferences
c) Cost-Benefit Analysis

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

GRADING
- Final course grade: final exam grade 40% and continuous assessment grade 60%

- the final exam will consist of theory questions (60%) and exercises (40%)

Continuous assessment: 60% of the final grade for the course

- Theory controls (partial exam) and exercises 40%

- final work (optional in groups of maximum three students) 20%

- active participation in class (debates, questions, etc.) bonus of up to 5%

Class Participation and Ethical Integrity: Attendance and participation in class are required. Repeated absences (more than three), lack of involvement or inappropriate behaviour will prevent passing this subject. Plagiarism (on tests or assignments) or other forms of dishonest behaviour will mean failure on continuous evaluation.

UC3M students doing internships in a company or academic exchange (or similar situation) may choose, with prior authorization from their professor, for the 80-20 system: 80% exam grade plus 20% essay grade. The professor of the subject must previously authorize the subject of this essay.
The midterm exam is scheduled to take place in weeks 10 or 11, depending on how the group's dates and days of class fall.

% 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