480011 - EEAE - Fundamentals of Economics, Environmental Economics and Ecological Economics

Coordinating unit: 250 - ETSECCPB - Barcelona School of Civil Engineering
Teaching unit: 745 - EAB - Department of Agri-Food Engineering and Biotechnology
Academic year: 2019
Degree: MASTER'S DEGREE IN SUSTAINABILITY SCIENCE AND TECHNOLOGY (Syllabus 2013). (Teaching unit Compulsory)
ECTS credits: 5
Teaching languages: Spanish

Teaching staff
Coordinator: JOSE MARIA GIL ROIG
Others: ZEIN KALLAS

Degree competences to which the subject contributes

Basic:
CB7. That students can apply their knowledge and ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.

Specific:
3. The ability to critically analyse and assess theories, strategies and policies on development and sustainability; perspectives on the sustainability paradigm, discussions within the field and its environmental, social, cultural and economic implications; the particularities of and differences between environmental and ecological economics; and the problems of valuing goods, services, resources and externalities economically.
4. The ability to apply, critically analyse results and assess valorisation theories, approaches and methods in the fields of food and rural development and agricultural, water, energy, building construction, transport and spatial engineering.
5. The ability to integrate knowledge of integrated management of the natural environment and natural resources, particularly water and energy resources, in the development and proposal of scientific and technological solutions to challenges to sustainability.

General:
CG03. The ability to analyze, evaluate and synthesize, critically, new and complex ideas and promote, within academic and professional, scientific, technological, social or cultural knowledge society contexts.

Transversal:
2. FOREIGN LANGUAGE: Achieving a level of spoken and written proficiency in a foreign language, preferably English, that meets the needs of the profession and the labour market.
1. SUSTAINABILITY AND SOCIAL COMMITMENT: Being aware of and understanding the complexity of the economic and social phenomena typical of a welfare society, and being able to relate social welfare to globalisation and sustainability and to use technique, technology, economics and sustainability in a balanced and compatible manner.
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Teaching methodology

The following teaching methods will be used in the development of the course:

Lecture or conference (EXP): Sharing knowledge through lectures by professors or by external guest speakers.
Problem solving and case studies (RP): group decision exercises, debates and group dynamics, with the teacher and students in the classroom; class presentation of an activity carried out individually or in small groups.
Tutorials of practical or theoretical works (TD): to perform an activity in the classroom, or a theoretical or practical exercise, individually or in small groups, with the advice of the teacher.
Carry out a project, activity or work of reduced scope (PR): to carry out, individually or in a group, of a homework assignment of reduced complexity or scope, applying knowledge and presenting results.

Evaluation Activities (EV)

Training activities:

The following training activities will be used in the development of the course:

Face-to-face
Theoretical classes and conferences (CTC): knowledge, understanding and synthesis of contents presented by the lecturer (professor) or by guest speakers.
Practical classes (CP): participation in group exercises, as well as discussions and group dynamics, with the teacher and other students in the classroom.
Theoretical/practical work tutorials (TD): carry out in the class an activity or exercise, theoretical or practical in nature, individually or in small groups, with the advice of the professor.

Remote
Carry out a project, activity or work of reduced scope (PR): to carry out, individually or in a group, of a homework assignment of reduced complexity or scope, applying knowledge and presenting results.
Autonomous study (EA): study or development of the subject individually or in groups, understanding, assimilating, analysing and synthesising knowledge.

Learning objectives of the subject

At the end of the Course, the student:

Will know main concepts of Economics, methodologies to evaluate goods (private and public), services and resources as well as social and environmental costs associated to the economic activity and, finally, will be able to make critical assessments of economic activity from considering potential.

Will know the basic principles of the neoclassical theory and the main epistemological differences between environmental and ecological economics and will be able to read and understand economic texts around the public debate about the environmental conservation.
### Study load

<table>
<thead>
<tr>
<th></th>
<th>Hours large group:</th>
<th>30h</th>
<th>24.00%</th>
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<tbody>
<tr>
<td>Total learning time:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours small group:</td>
<td>0h</td>
<td>0.00%</td>
<td></td>
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<tr>
<td>Guided activities:</td>
<td>15h</td>
<td>12.00%</td>
<td></td>
</tr>
<tr>
<td>Self study:</td>
<td>80h</td>
<td>64.00%</td>
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1- Introduction to Economics

Degree competences to which the content contributes:
Description:
Related activities:
Activity 1: Introduction to Economics

Specific objectives:

2- Environmental Economics

Degree competences to which the content contributes:
Description:
Related activities:
Activity 2: Environmental Economics

Specific objectives:

3- Ecological Economics

Degree competences to which the content contributes:
Description:
Related activities:
Activity 3: Ecological Economics

Specific objectives:

4- Practical Work

Degree competences to which the content contributes:
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**Description:**
The student will have to elaborate a formal final work of about 25 pages related to the course content. It consists of a critical literature review on a specific issue related to the course.

**Related activities:**
Activity 4: Delivery of Practical work

**Specific objectives:**
### INTRODUCTION TO ECONOMICS

**Description:**
To solve some exercises related to activity content.

**Descriptions of the assignments due and their relation to the assessment:**
Individual 5-page practical work consisting in answering to practical exercises and problems related to activity content (in PDF).

**Specific objectives:**
To assess to what extent students have learned theoretical concepts.

### ENVIRONMENTAL ECONOMICS

**Description:**
To make a critical assessment of a scientific paper related to the activity 2 content.

**Descriptions of the assignments due and their relation to the assessment:**
PDF file

**Specific objectives:**
To evaluate the students' ability to make a critical assessment and to manage academic.

### ECOLOGICAL ECONOMICS

**Description:**
To make a synthesis report about the concept of Ecological Economics.

**Descriptions of the assignments due and their relation to the assessment:**
Five-page PDF file

**Specific objectives:**
To assess the students' skills to differentiate between environmental and ecological economics.

### FINAL WORK

**Description:**
Final work on any topic related to course content

**Descriptions of the assignments due and their relation to the assessment:**
Twenty-five-page PDF file

**Specific objectives:**
To assess the students' skill to make a critical literature review as well as their learning skills about the course content.

### FINAL EXAM

**Description:**
Final exam
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Descriptions of the assignments due and their relation to the assessment:

Written exam

Specific objectives:

To assess students' learning skills through short questions and a case study.

Qualification system

EV1: Written test (PE). 45%
EV2: Oral test (PO). 0%
EV3: Individual or group coursework (TR). This includes results and reports and their oral presentation. 45%
EV4: Class and laboratory attendance and participation (AP). 5%
EV5: Performance and quality of group work (TG). 5%

Bibliography

Basic:


Complementary:


Others resources:

Class notes