

## 25204 - Applied economics

### Syllabus Information

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**Academic Year:** 2020/21

**Subject:** 25204 - Applied economics

**Faculty / School:** 201 - Escuela Politécnica Superior

**Degree:** 571 - Degree in Environmental Sciences

**ECTS:** 6.0

**Year:** 2

**Semester:** Second Four-month period

**Subject Type:** Basic Education

**Module:** ---

## 1.General information

### 1.1.Aims of the course

The aim of the subject Applied Economics is to provide the student with a series of analytical and graphic economic concepts and tools that make him able to understand the behaviour of individual and global economic agents in their relationship with natural resources and the environment. In this subject, the environmental scientist is provided with environmental economics concepts necessary to acquire the conceptual bases that allow an analysis of the behaviour of the economic system from different approaches and contexts. It should provide the student with skills to interpret the link between environment and economic reality according to theoretical and conceptual frameworks of economic analysis. Specific:

- Understand the basic concepts and terminology commonly used in the relationship between economy and natural resources
- Develop the capacity for analysis and reasoning to interpret and understand economic phenomena
- Learn to work with statistical sources and available economic information, understand their content and analyze and correctly handle the data they contain.

These approaches and objectives are aligned, with several of the Sustainable Development Goals, SDGs, of the 2030 Agenda (<https://www.un.org/Sustainabledevelopment/en/>) and some of its goals, contributing to their achievement. The link of the subject stands out, among others who are also involved in its development, with the following SDGs:

**GOAL 4: QUALITY EDUCATION.** Target 4.7 By 2030, ensure that all students acquire the technical and skills needed to promote sustainable development.

**GOAL 8: DECENT WORK AND ECONOMIC GROWTH.** Target 8.4. Improve Progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation.

**GOAL 9: INDUSTRIES, INNOVATION AND INFRASTRUCTURE.** Target 9.4. By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.

**GOAL 11: SUSTAINABLE CITIES AND COMMUNITIES.** Target 11.6. By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION.** Target 12.2. By 2030, achieve the sustainable management and efficient use of natural resources.

**GOAL 17: Partnerships for the goals.** Target 17.17. Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

### 1.2.Context and importance of this course in the degree

### 1.3.Recommendations to take this course

## 2.Learning goals

### 2.1.Competences

### 2.2.Learning goals

### 2.3.Importance of learning goals

## 3.Assessment (1st and 2nd call)

### 3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

## 4.Methodology, learning tasks, syllabus and resources

### 4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, practice sessions and autonomous work and study.

### 4.2.Learning tasks

This course is organized as follows:

- **Lectures.** The fundamental concepts of the topics of the syllabus will be explained by the teacher.
- **Practice sessions.** Two kind of activities will be used:
  - Activities to learn theoretical concepts but with the active participation of the students, because they will apply already acquired knowledge in order to understand new concepts.
  - Resolution of practical exercises.
- **Tutorials** will allow a more direct and personal support to students in order to answer questions about the contents of the course and guide them in their studies and in the resolution of exercises. These tutorials may be individual or in a group.

### 4.3.Syllabus

This course will address the following topics:

#### **Lectures**

##### Section I. Basic Economics

- Topic 1. What is Economics? (2030 Agenda)
- Topic 2. How markets work. The market. Supply and Demand (SDG 8,9 y 12)
- Topic 3. Market structure: Perfect and imperfect competition (SDG 8 y 9)

##### Section II. Environmental Economics

- Topic 4. Government failure. Externalities, public goods and natural resources (SDG 13 y 17)
- Topic 5. Economic growth and environment. Sustainable development (SDG 6, 8, 9 y 12)
- Topic 6. Environmental Valuation. Revealed preference and declared preferences environmental (SDG 3, 6 y 7)
- Topic 7. Cost Benefit analysis (CBA) and Cost Efficiency analysis (ACE) (SDG 3, 15 y 17)
- Topic 8. Environmental policies. Efficiency and equity (SDG17)

#### **Practice sessions**

Each theory topic related to a practical dossier that includes problems, documents or short texts for analysis and other questions of all the contents affected in the corresponding topic. And they will be carried out either in the computer room, or in the ordinary classroom. Each of the practices will involve the implementation and learning of one or more goals of the different sustainable development goals (SDGs). The student must first identify each of them as a previous step to solving the task and later while solving the problems be able to show that they have acquired the skills and attitudes necessary to integrate and link the content of the theoretical and practical explanations. of the Applied Economics subject with the specific goals of the SDGs and with the challenges of sustainable development, challenges for the 2030 Agenda.

#### 4.4.Course planning and calendar

Activities/week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	
<b>Classroom activities</b>																						<b>60</b>
<b>Lectures</b>	2	2	2	2	2	2	2				2	2	2	2	2							<b>24</b>
<b>Practice sessions</b>		2	2	2	2	2	2			2	2	2	2	2	2	2						<b>26</b>
<b>Tutorials</b>										2	2											<b>4</b>
<b>Exam</b>										2						2					2	<b>6</b>
<b>Non-classroom activities</b>																						<b>90</b>
<b>Autonomous</b>	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	6	6	8	4		<b>90</b>
<b>TOTAL</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>6</b>		<b>150</b>

#### 4.5.Bibliography and recommended resources

- BB** Azqueta Oyarzun, Diego. Introducción a la economía ambiental / Diego Azqueta Oyarzun . 2ª ed. @editorMadrid [etc.] : McGraw-Hill, D.L. 2007
- BB** Krugman, Paul R. Fundamentos de Economía / Paul Krugman, Robin Wells, Kathryn Graddy ; traducción, Alejandro Estruch Manjón ; [versión española traducida por Jimena García-Pardo y Alonso de Ojeda] . 3ª ed. Barcelona [etc.] : Reverté, D.L. 2014
- BB** Labandeira, Xavier. Economía ambiental / Xavier Labandeira, Carmelo J. León, María Xosé Vázquez . [1ª ed.] Madrid [etc.] : Pearson, D. L. 2006
- BB** Manual de economía ambiental y de los recursos naturales / Pere Riera ... [et al.] . 3ª ed. Madrid : Paraninfo, D.L. 2016
- BC** Cueva Martín, Alejandro de la. Fuentes de información en medio ambiente / Alejandro de la Cueva Martín, Francisca Ginés Huertas Valencia : Patronat Sud-Nord. Solidaritat i Cultura- F.G.U.V. : Publicacions de la Universitat de València, 2010
- BC** Fernández-Bolaños Valentín, Antonio. Economía y política medioambiental : situación actual y perspectivas en la Unión Europea / Antonio Fernández- Bolaños Valentín . Madrid : Piramide, 2002
- BC** Mankiw, N. Gregory. Principios de economía / N. Gregory Mankiw ; traducción, Esther Rabasco ; revisión técnica, Gloria Moreno . 6ª ed. Madrid : Paraninfo, D.L. 2012
- BC** Martínez Alier, Joan. Economía ecológica y política ambiental / Joan Martínez Alier y Jordi Roca Jusmet . 2ª ed. corr. y aum. México : Fondo de Cultura Económica, 2001

The updated recommended bibliography can be consulted in: <http://psfunizar10.unizar.es/br13/egAsignaturas.php?id=10967>