

Información del Plan Docente

Academic Year 2016/17

Academic center 201 - Escuela Politécnica Superior

Degree 277 - Degree in Environmental Sciences

ECTS 6.0
Course 2

Period First Four-month period

Subject Type Compulsory

Module ---

- 1.Basic info
- 1.1.Recommendations to take this course
- 1.2. Activities and key dates for the course
- 2.Initiation
- 2.1.Learning outcomes that define the subject
- 2.2.Introduction
- 3.Context and competences
- 3.1.Goals
- 3.2.Context and meaning of the subject in the degree
- 3.3.Competences
- 3.4.Importance of learning outcomes
- 4.Evaluation
- 5. Activities and resources

5.1.General methodological presentation

The learning process that is designed for this subject is based on the following:

1- Theoretical lectures:

They are 26 lectures, of 50 minutes each. They are usually conducted as presentations, although teaching methods as the 'flipped classroom' and 'problem-based learning' will also be used, in order to work on some theoretical contents of the syllabus. In the theoretical clases, the students will be able to participate, intervening and interacting with explanations, comments or discussions, readings or presenting case studies, solving problems, etc., either individually or in groups. Before addressing each subject, material for reading and literature with which the student will prepare the agenda will be delivered by the teacher through the 'Digital Teaching Ring' -ADD-. Both the basic and the complementary bibliography, will be specified; before each theoretical topic, also the necessary instructions will be given to develop the 'flipped



classroom' and work on specific problems or learning.

The teacher also will deliver the images projected in class (Power Point), in which will appear schematically and summarized the theoretical contents covered in class.

2- Practical lectures:

2.1. Practical work:

Throughout the practical classes, the instructions for performing the various tasks will be given. Practical work will be addressed after seeing the theoretical contents in theoretical classes.

2.2. Fieldtrip:

Practical work will be also developed with a fieldtrip, in which students will apply and recognize theoretical contents on the territory. It will be prepared in advance according to a script provided by the teacher.

3- Tutorials:

Six hours a week (personalized tutoring sessions) will be also offered by the teacher in order students, individually or in groups, will be able to make consults.

Among the activities, the delivery of lectures or seminars thanks to the participation of some external partner, either in the theoretical or practical part, is also provided.

5.2.Learning activities

The program that is offered to the students to help to achieve the expected results includes the following activities ...

Theoretical classroom sessions.

Before addressing each subject, material for reading and literature with which the student will prepare the agenda will be delivered by the teacher through the 'Digital Teaching Ring' -ADD-. Both the basic and the complementary bibliography, will be specified; before each theoretical topic, also the necessary instructions will be given to develop the 'flipped classroom' and work on specific problems or learning.

Assessment Theoretical Tasks made in the classroom.

To carry out these works, the necessary materials for their preparation and how to obtain it will be given or indicate, prior to each session.

Practical sessions.

For the implementation of the practice "Agenda 21", students will be required to read actual experiences, some of which will be presented in the classroom or they should be read previously by the students. The necessary material will be provided by the teacher. The collection and treatment of various sources of study and data will also be required. The requirements for carrying out the practice will be presented and explained throughout the practical lectures.

Tutorials.

Compulsory tutorials for conducting practices may be carried out by groups of students; these will developed to support the practical work of students.

5.3.Program



Theoretical lectures in the classroom:

Theme 1. Unsustainable growth and sustainable development from a social perspective. Tools for sustainability.

Theme 2. The growth and distribution of population. Inequalities, social environmental and territorial problems. The demographic future and resources.

Theme 3. Socioeconomic and environmental problems in rural areas. Depopulation: causes and consequences.

Theme 4. The spatial mobility of the population and the transports.

Theme 5. Tourism, territory and environment.

Theme 6. Urbanization and territory. Urban growth and its environmental impact.

Each of these previous sections will be presented in approximately 4 hours, in the classroom, covering the 26 hours devoted to theory.

Pratical Programme:

In groups, the students will have to write an assessment, about one municipality, with later oral presentation. Sessions:

- Explanation of the practice and presentation of the 'Agenda 21': Origins, evolution, parts and methodology, implementation, results, and evaluation of results.
- Presentation of real cases of 'Agenda 21'.
- Socioterritorial and environmental Analysis: Analysis of variables.
- Collection of data, processing and representation of statistical information.
- The Participation Plan: building a survey.
- Plan of Action: strategic lines, programmes and actions.
- Evaluation and monitoring: environmental indicators.

5.4. Planning and scheduling

The information of this course will be presented on the first day of the semester, and it will also be exposed on the Digital Teaching Ring -ADD- of the University of Zaragoza; for this, it is highly recommended the assistance of the students that think enroll in the course.

This course is composed of 6 ECTS, and the estimated dedication by the students are 150 hours (both in classroom activities and in non-contact dedication). This 150 hours must be distributed along the semester, as can be seen in the following table-calendar (the numbers represent the hours).



oct The @ ry 2 Problems Evaluation	2		2	2	2	2	2	2	2		2	2			2			3	26 1 3
Practica2 work	2		2	2	2			2	2		2	2			2				20
Oral	_					2													2
presentation Fieldwork	n						8												8
(practice) Tota 4 presencial: Activities, non	4		4	4	4	4	10	4	4		5	4			4	0	0	3	60
presential Indivadual work	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	3	3	2	41
(theory) Individu a l work	2	2	3	3	3	3	2	4	3	2	2	2	2	3	3	3	3	2	49
(practical) Tota2 4 no	4	4	5	5	5	5	4	6	5	4	4	3	4	5	5	6	6	4	90
presential: Tota 8 by weeks:	8	8	9	9	9	9	14	10	9	9	8	7	4	10	5	6	6	7	150

In addition to the activities in the classroom, it is estimated that each student must devote about 90 hours to the study and personal work (in this time it is excluded the time that each student, individually, will need for tutoring). This work relates mainly to the study of theory, to the development of practical work (Agenda 21), to the realization of small exercises/assessments, and to the consulting of bibliography and readings.

Theoretical classes will be held in a classroom with capacity for more than 70 students, while the practical sessions are conducted in a classroom with 25 computers. The two classrooms have Internet access, projector and blackboard.

5.5.Bibliography and recomended resources

Basic bibliography

Ballesteros J. y Pérez Adán, J. (Coords.) (2000): Sociedad y medio ambiente . 2ª Ed. Colección: Estructuras y procesos. Serie Medio Ambiente, 2. Madrid: Trotta.

Camarero, L. (Coord.) y Cruz, F.; González, M.; del Pino, J. A.; Oliva, J. y Sampedro, R. (2007): L *a población rural de España. De los desequilibrios a la sostenibilidad social* . Colecc. Estudios Sociales, núm. 27. Barcelona: Ed. Fundación "La Caixa".

Camarero, L. et al. (Coord.) (2006): Medio ambiente y sociedad: elementos de explicación sociológica. Madrid: Thomson.



Duarte, C. M. (2009): Cambio global: impacto de la actividad humana sobre el sistema tierra . Madrid: Ed. Catarata - Consejo Superior de Investigaciones Científicas (CSIC).

Romero, J. (Coord.) (2004): *Geografía Humana. Procesos, riesgos e incertidumbres en un mundo globalizado* . Barcelona: Ariel.

Sánchez Barricarte, J.J. (2008): El crecimiento de la población mundial. Implicaciones socioeconómicas, ecológicas y éticas. Colecc. Estudios de Economía y Sociología. Valencia: Ed. Tirant lo Blanch.

Further Reading

Aguado Moraleja, I.; Barrutia Legarreta, J. Ma y Echabarría Miguel, C. (2007): "La Agenda 21 Local en España". *Economiaz*, núm. 64, cuatrimestre 1º, pp. 174-213.

Brunet Estarellas, P. J.; Almeida García, F. y Coll López, M. (2005): "Agenda 21: Subsidiariedad y Cooperación a favor del Desarrollo Territorial Sostenible". *Boletín de la A.G.E.*, núm. 39, pp. 423-446.

Castells, M. (2001): La era de la información (Economía, Sociedad y Cultura). Vol. 1. La sociedad Red . Madrid: Alianza Editorial.

Espinoza Guerra, L. E.; Martín Díaz, J.; Alberich, T.; Blanco, I. y Cañas, J. (2003): Agenda 21 Local. ¿Qué es? ¿Cómo se hace? ¿Para qué sirve la planificación participativa?. Madrid: Ed. Fundación de Iniciativas locales.

González González, Mª J. y Torres, Mª L. (2005): "Indicadores básicos para la planificación de la sostenibilidad urbana local". *Biblio 3W. Revista Bibliográfica de Geografía y Ciencias Sociales* (Serie documental de Geo Crítica), vol. X, núm. 586, 30 de mayo de 2005.

Puyol, R. (1984): Población y recursos. El incierto futuro. Madrid: Ed. Pirámide.