

Academic Year/course: 2022/23

25250 - Environmental science and sustainability

Syllabus Information

Academic Year: 2022/23

Subject: 25250 - Environmental science and sustainability

Faculty / School: 201 - Escuela Politécnica Superior

Degree: 571 - Degree in Environmental Sciences

ECTS: 6.0

Year: 1

Semester: First Four-month period

Subject Type: Compulsory

Module:

1. General information

1.3. Recommendations to take this course

This subject is offered in the [English Friendly](#) form

2. Learning goals

3. Assessment (1st and 2nd call)

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

The student must demonstrate that he/she has achieved the expected learning outcomes through the following evaluation activities.

The evaluation of this course will be done through CONTINUOUS EVALUATION.

The continuous evaluation will consist of the following activities:

Elaboration of exercises during the practical sessions (35% of the grade). A minimum grade of 5 out of 10 will be necessary to make the average with the rest of the parts of the evaluation. There is the possibility of carrying out the evaluation of this activity before the date of the global test of the evaluation, specifically, in the last sessions of practical classes (see planning and calendar).

Written and oral tests, in person during the course (65% of the grade). The written test will consist of questions, mainly multiple-choice questions on the theoretical program. The oral test will consist of the preparation of a specific topic included in the syllabus of the course and its presentation during the theoretical sessions. A minimum grade of 5 out of 10 in these tests will be necessary to make the average with the rest of the parts of the evaluation.

The evaluation criteria for both types of evaluation are the following:

- Correct and fluent expression of the required concepts.
- Use of diagrams and graphics for the transmission of information.
- Use of relevant technical terminology.

- Understanding and use of basic concepts related to environmental sciences and sustainability.

If the continuous assessment is not passed, a global assessment test may be taken at the end of the course according to the EPS exam schedule.

The global evaluation test will consist of the following activities:

Written and face-to-face test (100% of the grade). The written test will consist of questions, mainly multiple-choice questions on the theoretical and practical program. A minimum grade of 5 out of 10 will be required in these tests to make the average with the other parts of the evaluation.

In relation to the ODS, its evaluation is carried out in all the activities of the subject.

The percentage of success in the subject in the last three courses is 97.67% (course 18-19), 94.87% (course 19-20) and 78.05% (course 20-21).

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, fieldwork and practice sessions.

The activities proposed along the program will approach different topics of SDG.

4.2. Learning tasks

This course is organized as follows:

- **Lectures:** Lectures introduce the main concepts and lines of the course. In addition, most difficult issues will be reviewed thoroughly. Bibliography and auto-evaluation tools are provided. Readings and instructions for all practical exercises will be provided on the course website (Moodle). External experts may also participate in some lectures. Participation is encouraged.
- **Practice sessions:** Practice sessions are part of the required activities for this course. If you miss a lecture or tutorial through illness or some other serious reason, it is your responsibility to attend an equivalent class from another stream. Some content and activities will not be available except by face-to-face attending the classes, and missing material will disadvantage you in the course assessment. These practice sessions include case study, field and expert lectures.

In relation to the SDGs, all the learning activities of the subject allow achieving the learning outcomes related to the SDGs.

4.3. Syllabus

Theory program is based on the SDG (Sustainable Development Goals). It starts with an introduction to 2030 Agenda, current situation, targets to reach and relevant aspects about the following SDG:

- SDG 2: Zero hunger
- SDG 3: Good health and well-being
- SDG 6: Clean water and sanitation
- SDG 7: Affordable and clean energy
- SDG 9: Industry, innovation and infrastructure
- SDG 11: Sustainable cities and communities
- SDG 12: Responsible consumption and production
- SDG 13: Climate action
- SDG 14: Life below water
- SDG 15: Life on land

4.4. Course planning and calendar

The student should expend 150 hours to work in this subject, distributed as following:

- ? 24 h theory session
- ? 20 h practice session
- ? 10 h field work

? 90 h autonomous work and study

? 6 h assessment

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the school website and Moodle.

The indicative chronogram of the different learning activities developed in the course is shown below:

Tipo actividad / Semana	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Actividad Presencial</i>															
Teoría		2	4	2	2	2	2	2	2	2	2	2		2	2
Problemas			2	2	2	2	2		2	2	2			2	2
Prácticas laboratorio															
Trabajos en grupo															
Salidas de prácticas												10			
Tutorías ECTS															
Evaluación															2
<i>Actividad No presencial</i>															
Trabajo individual		2	3	3	3	3	3	3	3	3	3		4	3	2
Trabajo en grupo		2	2	2	2	2	2	2	2	2	2		2	2	
TOTAL	0	6	11	9	9	9	9	7	9	9	9	12	6	9	8

4.5. Bibliography and recommended resources

- BB** Chiras, Daniel D. Environmental science / Daniel D. Chiras. 10th ed Burlington, MA : Jones & Bartlett Learning, cop. 2016
- BB** Doménech Quesada, Juan Luis. Huella ecológica y desarrollo sostenible / Juan Luis Domenech Quesada. Madrid : AENOR, D.L. 2007
- BB** Ecología y medio ambiente / Teresa Valverde ... [et al.] ; revisión técnica Gabriel Ramos García, Héctor Meraz Larraga. México : Pearson, 2005
- BB** Gestión ambiental y desarrollo sostenible. 2a. ed. Málaga: IC Editorial, 2017 [Comentario del profesor: libro electrónico]
- BB** Goleman, Daniel. Inteligencia ecológica / Daniel Goleman ; [traducción, David González Raga]. 1ª ed. Barcelona : Kairós, 2009
- BB** Smith, Thomas Michael. Ecología / Thomas M. Smith, Robert Leo Smith. 6a. ed. Madrid [etc.] : Pearson Addison-Wesley, D.L. 2007
- BB** Xercavins, J., et al. Desarrollo sostenible. Barcelona: Univesitat Politècnica de Catalunya, 2015
- BC** Austerhmühle, S. Sostenibilidad y ecoeficiencia en la empresa moderna. Lima : Universidad Peruana de Ciencias Aplicadas, 2015
- BC** Elías Castells, X. Energía, agua, medioambiente, territorialidad y sostenibilidad. Madrid: Díaz de Santos,

2012

BC Pérez Martell, R. Los objetivos de desarrollo sostenible. Barcelona : Bosch Editor, 2019

The updated recommended bibliography can be consulted in:<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=25250>