29977 - Environmental issues and tools for environmental protection

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	436 - Bachelor's Degree in Industrial Engineering Technology
ECTS	4.0
Year	4
Semester	Half-yearly
Subject Type	Optional
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

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

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. It is based on participation and the active role of the student favors the development of communication and decision-making skills. A wide range of teaching and learning tasks are implemented, such as lectures, guided assignments, autonomous work, and tutorials.

Students are expected to participate actively in the class throughout the semester.

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Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials.

Further information regarding the course will be provided on the first day of class.

5.2.Learning tasks

The course includes 4 ECTS organized according to:

- Lectures (1.2 ECTS): 30 hours.

- Problem‐solving sessions (0.4 ECTS): 10 hours.

- Guided assignments (0.4 ECTS): 10 hours.

- Autonomous work (1.52 ECTS): 38 hours.

- Tutorials (0.4 ECTS): 10 hours.

Notes:

Lectures: the professor will explain the theoretical contents of the course and solve illustrative applied problems. The professor will proposed some exercises and cases for solving by students in class. Lectures run for 2 weekly hours. Although it is not a mandatory activity, regular attendance is highly recommended. Lectures will be complemented by problem-solving sessions (1 weekly hour during 10 week) .

Guided assignments: students will complete assignments, problems and exercises related to concepts seen problem-solving sessions and lectures.

Autonomous work : students are expected to spend about 40 hours to study theory, solve problems, prepare works and oral presentation, and take exams.

Tutorials: the professor's office hours will be posted on Moodle and the degree website to assist students with questions and doubts. It is beneficial for the student to come with clear and specific questions.

5.3.Syllabus

Theory sessions

SECTION 1. Environmental issues

Topic 1.1. Introduction to current environmental issues. Socio-economic aspects of environmental protection.

Topic 1.2. Main environmental problems of a global nature.

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Topic 1.3. Sustainable development: concept and strategy for its achievement.

Topic 1.4. Environmental Policy. International and European framework.

SECTION 2. Tools for environmental protection

Topic 2.1. Collective environmental management: regulatory and economic instruments of environmental protection.

Topic 2.2. Environmental Impact Assessment.

Topic 2.3. Environmental Management Systems. ISO 14001:2015 and EMAS: RUE 1221/2009.

Topic 2.4. Waste minimization plans.

Topic 2.5. Introduction to ecodesign and life cycle analysis applied to products.

Topic 2.6. Eco-labeling and product environmental statement. European eco-label (RUE 66/2010)

Topic 2.7. Introduction to environmental indicators: Ecological footprint, Carbon footprint, Agenda 21.

5.4.Course planning and calendar

For further details concerning the timetable, classroom and further information regarding this course please refer to the "Escuela de Ingeniería y Arquitectura " (School of Engineering and Architecture), website, https://eina.unizar.es/).

5.5.Bibliography and recommended resources