

69750 - Introduction to Circular Economy

Syllabus Information

Academic year: 2024/25

Subject: 69750 - Introduction to Circular Economy

Faculty / School: 100 - Facultad de Ciencias

Degree: 627 - Master's Degree in Circular Economy
655 -

ECTS: 6.0

Year: 01

Semester: First semester

Subject type: Compulsory

Module:

1. General information

The *Introduction to the Circular Economy* subject provides an overview of this topic. It introduces the fundamental concepts of the discipline, which are developed in the remaining compulsory and elective subjects. In this subject, students learn to correctly use the essential vocabulary of Circular Economy and to relate the fundamental concepts of this field. The subject is taught from the University of Zaragoza.

2. Learning results

- To analyse quantitatively the interaction between the economy and the environment.
- Emotional intelligence. To understand and regulate one's own emotions and those of others in order to interact and participate effectively and constructively in social and professional life.
- To use with rigour the vocabulary of the scientific, technical, legal, economic, environmental and social aspects of Circular Economy.
- To identify the fundamentals of Circular Economy and the tools for its implementation.

3. Syllabus

Topic 1. Planetary Boundaries.

Topic 2. Concepts of Circular Economy.

Topic 3. Bioeconomy.

Topic 4. Sustainable Chemistry.

Topic 5. Recycling Technologies.

Topic 6. Information and Communication Technologies.

Topic 7. Design for Circular Economy.

Topic 8. Industrial Ecology.

Topic 9. Industrial Logistics.

Topic 10. Circular Cities.

Topic 11. Legislation in Circular Economy.

Topic 12. Circular Economy Policy.

Topic 13. Circular Economy and Society.

Topic 14. Implementation of Circular Economy.

Topic 15. Circular Economy Management.

4. Academic activities

Master Classes: 24 hours.

Sessions of 50 minutes each for the entire group. Lecturers explain the theoretical contents and solve representative applied problems. Teaching materials are available on Moodle.

Problem solving and case studies: 36 hours of student work, including 12 face-to-face hours.

The preparation and defense of a report and the solving of practical problems are required.

Study: 83 hours.

Students must study theory, read supplementary readings and solve problems.

Assessment tests: 7 hours.

There is a final written exam which includes multiple choice, short answer and problem solving questions.

5. Assessment system

The subject is assessed using two assessment methods: continuous and global. For this purpose, the grades obtained in the following tests will be used:

- Two reports (rated *I1* and *I2*). Each report consists of a report on a topic related to the subject or the critical analysis of a research or popularisation article. The reports are submitted to the teacher electronically.
- Final test of short questions and problem solving (graded *F*). The test is held simultaneously in each university under conditions that guarantee the proper identification of students and the impossibility of fraud..

The grades obtained by each student in the above assessment activities are weighted according to the following formulas:

Formula 1:

Final grade of the subject: $0.15 \times I1 + 0.15 \times I2 + 0.7 \times F$

Formula 2:

Final grade of the subject: *F*

It is not necessary to achieve minimum grades in the assessment tests for the application of the above formulas. The final grade is calculated as the best grade obtained between those obtained with formulas 1 and 2.

6. Sustainable Development Goals

8 - Decent Work and Economic Growth
12 - Responsible Production and Consumption
13 - Climate Action