Course guide
480031 - EEI - Fundamentals of Ethics, Business and Innovation

Last modified: 27/06/2023

Unit in charge: Barcelona School of Civil Engineering
Teaching unit: 751 - DECA - Department of Civil and Environmental Engineering.

Degree: MASTER'S DEGREE IN SUSTAINABILITY SCIENCE AND TECHNOLOGY (Syllabus 2013). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 5.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: Garola Crespo, Álvaro

Others: Garola Crespo, Álvaro

PRIOR SKILLS

No previous skills are required to take the course

REQUIREMENTS

No prerequisites are required to take the course

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. The ability to critically analyse the features and work, business and environmental management methods and strategies of organisations, institutions and key agents for promoting sustainable human development, sustainability and environmental protection, particularly against climate change, by understanding and applying the concepts and theories of business ethics and social responsibility in the fields of engineering and scientific and technical innovation.
2. The capacity to apply the methods and tools used in the identification, information management, planning, management, execution and evaluation of programmes and projects in the fields of sustainability and environmental management to specific problems in a collaborative manner.
3. Design, develop, apply and evaluate conceptual frameworks, theories, methodologies and techniques typical of ICT in contexts of promoting sustainable development and sustainability.

Generical:
CG01. Recognize the characteristics of sustainable systems, the impacts of the solutions of science and technology in sustainability, and be able to identify and incorporate elements of innovation and continuous improvement.

Basic:
CB8. Students should be able to intregrar knowledge and handle complexity, and formulate judgments based on information that was incomplete or limited, include reflecting on social and ethical responsibilities linked to the application of its conocimienttos and judgments.

TEACHING METHODOLOGY

During the development of the subject, the following teaching methodologies will be used:
Masterclass or conference: presentation of knowledge by the teaching staff through masterclasses or by external people through invited lectures.
Problem solving and case study: collective solving of exercises, carrying out debates and group dynamics, with the teacher and other students in the classroom; presentation in the classroom of an activity carried out individually or in small groups.
Directed theoretical-practical work: carrying out an activity or exercise of a theoretical or practical nature in the classroom, individually or in small groups, with the advice of the teacher.
Project, activity or work of reduced scope: learning based on carrying out, individually or in groups, a work of reduced complexity or extension, applying knowledge and presenting results.

Learning activities.
During the development of the subject, the following training activities will be used:
Face-to-face
Theoretical classes and lectures: learn, understand and synthesize the knowledge presented by the teaching staff through master classes or by lecturers.
Practical classes: participate in the collective resolution of exercises, as well as in debates and group dynamics, with the teacher and other students in the classroom.
Presentations: Present in the classroom, by the students, an activity developed individually or in small groups.
Tutorials for practical theoretical work: carry out an activity or exercise of a theoretical or practical nature in the classroom, individually or in small groups, with the advice of the teacher.

Not face-to-face
Carrying out a project, activity or work of reduced scope (PR): carry out, individually or in a group, a work of reduced complexity or extent, applying knowledge and presenting results.

Independent study (EA): study or expand the content of the subject individually or in a group, understanding, assimilating, analyzing and synthesizing knowledge.

LEARNING OBJECTIVES OF THE SUBJECT

At the end of the subject, the student:

Knows and applies concepts and theories of applied ethics in the field of engineering and scientific-technical innovation, identifying and formulating hypotheses or innovative ideas and subjecting them to tests of objectivity, coherence and feasibility.

Know and understand the ethical dimension in the company and social and corporate responsibility in general, as well as the possibilities and limitations of environmental and sustainability management systems, their promotion strategies and links with public policies and other private agents.

Efficiently applies environmental and sustainability management instruments as well as communication of the organization's social responsibility.

It integrates and critically analyzes the social, economic and environmental dimensions in business and environmental management and proposes solutions and strategies to promote projects and management systems consistent with corporate social responsibility and sustainability.

STUDY LOAD

Type	Hours	Percentage
Hours large group	24,0	19.20
Hours small group	9,0	7.20
Hours medium group	12,0	9.60
Self study	80,0	64.00

Total learning time: 125 h

CONTENTS

Foundations of ethics. Search for a shared vision.

Description:
Definition of ethics. Shared vision. Uses and customs The legal system.
Codes of ethics in professional activity.
The social, economic and environmental impact of business activities.
Engineering as a responsible activity
Case study

Specific objectives:
Know, share and apply applied ethics concepts and theories in the field of sustainability and business performance.

Related activities:
Theoretical Classes, Debates, Work in small groups and Presentations.

Related competencies :
CG01. Recognize the characteristics of sustainable systems, the impacts of the solutions of science and technology in sustainability, and be able to identify and incorporate elements of innovation and continuous improvement.

Full-or-part-time: 9h
Theory classes: 6h
Guided activities: 3h

Corporate social responsibility in companies and organizations.

Description:
The concept of business ethics (Business ethics)
Business ethics.
Case study
Corporate social responsibility.
Concept and practice.
Corporate reports on sustainability, social responsibility and/or communication.
Standards, evaluation entities, audits.

Specific objectives:
Know and understand the ethical dimension in the company and social and corporate responsibility in general, as well as the possibilities and limitations of environmental and sustainability management systems. Critical analysis of cases based on company documentation and other sources.

Related activities:
Theoretical classes, debates, work in small groups and presentations.

Related competencies :
CE05. The ability to critically analyse the features and work, business and environmental management methods and strategies of organisations, institutions and key agents for promoting sustainable human development, sustainability and environmental protection, particularly against climate change, by understanding and applying the concepts and theories of business ethics and social responsibility in the fields of engineering and scientific and technical innovation.
CE06. The capacity to apply the methods and tools used in the identification, information management, planning, management, execution and evaluation of programmes and projects in the fields of sustainability and environmental management to specific problems in a collaborative manner.

Full-or-part-time: 15h
Theory classes: 9h
Guided activities: 6h

The environmental company. Concept. Business plan

Description:
The environmental company
Typology and areas of action
Concept and preparation of a Business Plan (Business Plan)
Critical analysis

Specific objectives:
Analysis of the business reality related to sustainability and the environment.
Business potential of environmental activities.

Related activities:
Theoretical Classes, Debates, Work in small groups and Presentations.

Related competencies :
CE05. The ability to critically analyse the features and work, business and environmental management methods and strategies of organisations, institutions and key agents for promoting sustainable human development, sustainability and environmental protection, particularly against climate change, by understanding and applying the concepts and theories of business ethics and social responsibility in the fields of engineering and scientific and technical innovation.

Full-or-part-time: 12h
Theory classes: 9h
Guided activities: 3h

Innovation in today's society

Description:
Innovation in the consumer society
True and False Innovation: Planned Obsolescence.
Concepts and theories about innovation
Innovation and competitiveness
The ecosystem of the entrepreneur
Capitalist development and the need for innovation

Specific objectives:
Critical analysis of innovation processes.

Related activities:
Theoretical Classes, Debates, Working in small groups and Presentations.

Related competencies :
CG01. Recognize the characteristics of sustainable systems, the impacts of the solutions of science and technology in sustainability, and be able to identify and incorporate elements of innovation and continuous improvement.

Full-or-part-time: 9h
Theory classes: 6h
Guided activities: 3h

ACTIVITIES

WORK IN SMALL GROUPS ON THE CORPORATE SOCIAL RESPONSIBILITY OF A SPECIFIC COMPANY

Description:
Small group work of students outside of class with tutoring by the teacher.

Specific objectives:
Group work, reflection and critical analysis, oral presentation skills.

Material:
Specific for each company

Delivery:
Class presentation

Full-or-part-time: 3h
Theory classes: 3h

GRADING SYSTEM

. Work on an applied ethics topic. 25%
. Works on a subject of corporate social responsibility. 25%
. Works on a case of ethics and innovation. 25%
. Written test on topics discussed in class. 25%

EXAMINATION RULES.

BIBLIOGRAPHY

Complementary:
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- Hottois, G. El paradigma bioético : una ética para la tecnociencia. Barcelona: Anthropos ; Leoia : Universidad del País Vasco, 1991. ISBN 8476583087.
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RESOURCES

Other resources:
Specific material will be prepared for each section.