1. BASIC INFORMATION

Course	Quality systems and environmental management
Degree program	Bachelor's Degree in Industrial Systems Engineering
School	School of Architecture, Engineering, Science and Computing
Year	2
ECTS	6
Credit type	Mandatory
Language(s)	English
Delivery mode	Face to face
Semester	S2
Academic year	25-26
Coordinating professor	Juan Miguel Martínez Orozco

2. PRESENTATION

This subject complements the knowledge acquired in subjects such as fundamentals of business organization. At the end of this subject, the student will be able to:

- Characterize and implement environmental management systems according to the needs of an organization.
- Apply the legislation related to processes and products according to environmental requirements, at the international level.
- Understand the environmental problems and the technological solutions applicable for their treatment in general and, in particular, in the field of industry.
- Relate the tools of quality, modern and classic, and control stages with the management, control of the processes and improvement of quality. Determine the criteria of excellent quality companies (EFQM).

3. LEARNING OUTCOMES

Skills

SK5: Ability to analyze and assess the social and environmental impact of technical solutions.

- Propose environmental management systems based on the needs of an organization.
- Implement process and product legislation in accordance with environmental requirements.
- Estimate the equivalent carbon footprint of a product at different stages of the life cycle.

SK15: Ability to apply quality principles and methods.

- Apply quality management tools to different processes.
- Develop quality procedures according to regulations.
- Analyzing management from the point of view of quality.

Competences

CP5: Organizational and planning capacity in the field of business, and other institutions and organizations.

CP16: Show ethical behaviors and social commitment in the performance of the activities of a profession, as well as sensitivity to inequality and diversity.

4. CONTENT

- Historical evolution of Quality. Customer satisfaction process: customer vision and supplier vision
- Quality management tools. Statistics applied to quality control and management.
- Quality standards.
- Environmental impact basics.
- Environmental legislation and management.
- Environmental impact assessment.

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:
- Master class
- Problem based learning

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Master classes	10
Practical seminars	20
Problem solving	40
Written reports and essays	10
Autonomous study	60
Debates and panel discussions	5
Face-to-face assessment test	5
TOTAL	150

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight min. %	Weight max.%
Face-to-face assessment test	50	60
Written reports and essays	10	20
Case/problem	20	30
Performance evaluation	5	5

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Campus-based mode:

Assessable activities	Weeks
Quality for the customer	2-3
Focus on processes	4-5
Quality management tools	6
Assessment of traffic noise	7
Projects subject to EIA	8-9
Carbon footprint calculation	10-12
Polluting emissions from the industry	13-14
Project	15
Final exam	16

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAPHY

The main reference work for this subject is:

- Ansola. G. (2017) Gestión Medioambiental de Organizaciones.
- Cuatrecasas L. (2010). Gestión Integral de la Calidad. Implantación, control y certificación. Ed Profit.

The recommended Bibliography is:

- Arbulú, B. (2009). Lluvia ácida. El Cid Editor.
- Godoy, L. & Manresa, R. (2009). Gestión de residuos sólidos: un tema de vital importancia para la gestión ambiental empresarial. Memorias del taller por el Día Mundial del Medio Ambiente. Editorial Universitaria.
- James, P. (1997). Gestión de la Calidad Total. Un texto introductorio. Ed. Prentice Hall.
- Jensen, P.B. (2001). ISO 9000. Guía y comentarios". Ed. AENOR.
- Juran, J.M. & Blanton, A. (2001). Manual de Calidad. Volumen II. Ed Mc Graw Hill.
- Ishikawa, K. (1995). ¿Qué es el control total de la calidad? La modalidad japonesa. Ed. Norma.
- Martinez-Orozco, J.M. (coord.). Casos Prácticos en Evaluación Ambiental. Dextra Editorial (2020).
- Nemerow, N. & Dasgupta, A. (1998). Tratamiento de vertidos industriales y peligrosos. Díaz de Santos.
- Pérez-Fernández, J.A. (1999). Gestión de la calidad orientada a procesos. Ed. ESIC.

10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance, Diversity and Inclusion Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

 From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:

orientacioneducativa@universidadeuropea.es

11. ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the "surveys" section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.