

**COURSE DATA****Data Subject**

Code	33097
Name	Integrated management systems
Cycle	Grade
ECTS Credits	6.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
1104 - Degree in Environmental Sciences	Faculty of Biological Sciences	3	Second term

Subject-matter

Degree	Subject-matter	Character
1104 - Degree in Environmental Sciences	153 - Integrated management systems	Obligatory

Coordination

Name	Department
FRANCO VIÑUALES, CARLOS FRANCISCO	245 - Chemical Engineering

SUMMARY

Integrated Management Systems is a compulsory subject of 6.0 ECTS that is taught in the second semester of the third year of the Degree in Environmental Sciences. This subject is integrated into the module "Management and Environmental Quality" of 19.5 ECTS. This subject is related to the elective business environmental management module in the fourth year. It aims to introduce the knowledge and application of the different management systems (environmental, quality, safety and health, etc.) and their audits, in the different areas of business management. It will be extended especially in the development and implementation of the Environmental Management Systems, and in its integration with the other management systems of the company and in particular with those of Quality, and Health and Safety, to take advantage of their synergies and achieve an Integrated Management in companies and industrial organizations.

The general objective of this subject is to familiarize the student with the management concepts and tools in the company, especially with the environmental management systems and their audits. To achieve this general objective the student must be able to:



- Highlight the current importance of an appropriate environmental management in the company.
- Know the different tools of environmental management and quality management.
- Identify and evaluate the environmental aspects of any organization, especially the industrial ones, for their correction and adaptation to regulatory and legislative requirements.
- Operate with standards, regulations and legislation for the implementation of Environmental Management Systems (ISO 14001), Quality Management (ISO 9001) and Health and Safety Management (ISO 45001) and their respective audits (ISO 19011) and procedures for integration (UNE 66177).
- Be able to develop and implement an environmental management system.
- Be able to apply the procedures for the integration of the Environmental Management Systems with the other management systems of the company and in particular with those of Quality and Safety and Health, to take advantage of their synergies.

The contents of the subject are: Environmental management systems. Quality Management Systems. Health and Safety management systems. System integration. Joint audits.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

To have completed or be enrolled in all subjects of the modules " General Scientific Basis"and " Scientific bases of the natural environment "and the subject "Environmental Law and public administration ".

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1104 - Degree in Environmental Sciences

- Capacidad de desarrollar e implantar sistemas de gestión ambiental.
- Conocimiento de los procedimientos de integración de los sistemas de gestión de la calidad, de gestión ambiental y de prevención de los riesgos laborales.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

- Know the environmental management instruments used in companies.



- Identify and evaluate environmental aspects in an organization, company or industry.
- Know the different quality management tools used in companies.
- Develop an environmental management system, a quality management system and a health and safety system.
- Know and be able to apply the methodologies used in the integration of quality, environmental and safety and health management systems.
- Understand and be able to propose an integrated audit.

DESCRIPTION OF CONTENTS

1. Introduction to Management Systems

Management systems. Presentation of standards for the implementation of different management systems. The integrated management systems.

2. Quality Management Systems

Quality control and management tools. Quality management systems: the ISO 9001 standard. Implementation and certification of a quality management system.

3. Environmental Management Systems

Business environmental management instruments. Environmental Management Systems: ISO 14001. Elements of an environmental management system. Implementation and certification of an environmental management system.

4. Occupational health and safety management system

Introduction to the prevention of occupational risks and safety and health. Health and Safety Management System: the ISO 45001 standard.

5. Integrated Management Systems

Similarities and differences between the different management systems. Benefits of integration. Advantages and disadvantages of integrated systems. Development and implementation of the integration plan. Integrated audits. The UNE 66177 standard.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Classroom practices	12,00	100
Tutorials	3,00	100
Development of individual work	20,00	0
Study and independent work	24,00	0
Preparing lectures	21,00	0
Preparation of practical classes and problem	25,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

The development of the subject is structured around four axes: the theory sessions, the problems sessions, the tutorials and the realization of works.

Theoretical Classes: A global vision of the treated topic will be offered and will be focused on those key concepts for its understanding. Likewise, it will indicate the most recommendable resources for the subsequent preparation of the topic in depth.

Classes of problems / practices: Cases and practical examples will be analyzed and developed: Organization and distribution of functions and tasks, elaboration of the flow diagram of a procedure, development of a program of objectives, elaboration of questionnaires of audit and satisfaction of the client, etc.

Tutorials: The first ones will be devoted to the study of the subject by the students and in the last the teacher will try to clarify concepts and solve the doubts that may have arisen during the previous tutorials and theory classes.

Works and Seminars: They will have a variable content, depending on the progress of the classes and the options that arise. They can dedicate themselves to the presentation of the practices, to the emission of videos, to the visit of businessmen so that they share their experience with the systems of management in their company to the accomplishment of complementary works to those realized in classes of practices...

EVALUATION

- 50% of the overall mark will be obtained from the individual evaluation of the acquired knowledge, through the performance of an exam.



- An additional 30% will be obtained through the group evaluation for the completion and presentation of the obligatory work developed in the practical classes.

- 10% will be obtained through the note of the work carried out in the seminars. In the case of non-evaluative activities, this section will not score and the practices will represent 40% of the grade.

- A 10% will be obtained by the attendance and active participation to the theory sessions and problems / practices.

The subject will be considered passed when the weighted average grade is equal or superior to 5 (out of 10), as long as in the exam a grade equal to or greater than 4 (out of 10) is obtained.

To request the evaluation of this subject in advance, the student must have completed the mandatory activities indicated in this guide.

REFERENCES

Basic

- Normas ISO 14001, ISO 9001, ISO 45001, ISO 19011 y UNE 66177. AENOR.
- Gestión de la Calidad: conceptos, enfoques, modelos y sistemas. Camisón C., Cruz S. y González T. Pearson Educación, SA.
- Guía para la implantación y el desarrollo de un sistema de gestión medioambiental, A. Rodríguez. Generalitat de Catalunya, Dept. Medi Ambient.
- Desde ISO 9001 hasta más allá de los sistemas integrados de gestión. Cadrecha Nava, Juan. Cadrecha Nava, Juan.
- Manual para la Integración de Sistemas de Gestión. C. Abril, A. Enriquez, J. Sánchez. FC Editorial.

Additional

- Los siete instrumentos de la calidad total. Galgano, A. Díaz de Santos.
- La calidad en España: 9. Sistemas y modelos de gestión de calidad, Arthur Andersen Cons. (Ed. Cinco Días).
- Gestión de la calidad y gestión medioambiental. Claver Cortés, Enrique; Molina Azorín, José Francisco; Tarí Guilló, Juan José. Ed. Pirámide.
- Cómo implantar un sistema de gestión ambiental según la norma ISO 14001:2004, Granero Castro, Javier. Ed. Fundación Confemetal.