

Información del Plan Docente

Academic Year	2018/19
Subject	25231 - Environmental audit
Faculty / School	201 - Escuela Politécnica Superior
Degree	277 - Degree in Environmental Sciences
ECTS	6.0
Year	4
Semester	First Four-month period
Subject Type	Compulsory
Module	---

1.General information**1.1.Aims of the course****1.2.Context and importance of this course in the degree****1.3.Recommendations to take this course**

This subject is offered in the [English Friendly](#) form

2.Learning goals**2.1.Competences****2.2.Learning goals****2.3.Importance of learning goals****3.Assessment (1st and 2nd call)****3.1.Assessment tasks (description of tasks, marking system and assessment criteria)****4.Methodology, learning tasks, syllabus and resources****4.1.Methodological overview**

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures and practice sessions.

4.2.Learning tasks

This course is organized as follows:

- **Theory sessions:** Lectures introduce the main concepts and lines of the subject. In addition, most difficult issues will be reviewed thoroughly. Bibliography and auto-evaluation tools are provided. Readings and instructions for all practical exercises will be provided on the course website (Moodle). Theory sessions in which external expert communications are also included and participation is encouraged.
- **Practice sessions:** Practice sessions form part of the required activities for this course. The course involves two practical sections designed to teach students how to develop an Environmental Management System and an Environmental Audit following the regulation une-en-iso-14001:2015. If you miss a lecture or tutorial because of illness or some other serious reason, it is your responsibility to attend an equivalent class. Some content and activities will not be available except by face-to-face attending classes, and missing material will disadvantage you in the course assessment.

4.3. Syllabus

This course will address the following topics:

Lectures

Section 1: Environmental management systems

- Topic 1. Introduction to environmental management. Definitions. Sustainable development and life cycle analysis. Benefits and purposes of an Environmental Management System (SGA).
- Topic 2. Environmental Management Systems. EMAS Regulation. ISO 14001: 2015 standard.
- Topic 3. ISO 14001: 2015 Standard: Object, field of application and context of the organization
- Topic 4. Standard ISO 14001: 2015: Leadership and planning
- Topic 5. ISO 14001: 2015 standard: Support and operation
- Topic 6. Standard ISO 14001: 2015: Evaluation of performance and improvement

Section 2: Environmental audits

- Topic 1. Introduction. What is an audit? Objectives. Characteristics. Participants. Types of audit.
- Topic 2. Regulations applicable to the audit process. History and evaluation of audits. Current focus: applicable legislation.
- Topic 3. Auditor profile. Knowledge, competence and attributes. Experience in the workplace and of carrying out audits. Importance of maintaining and updating knowledge and expertise. Evaluation. Registers. Responsibilities.
- Topic 4. Audit planning and preparation.. Planning. Revision of documentation. Audit preparation.
- Topic 5. Audit process. Opening meeting. Communication during the audit. Audit execution. Closing meeting.
- Topic 6. Audit report and follow-up. Preparation of the audit report. Corrective action. Approval and distribution of report. Finalisation of the audit. Follow-up.

Practice sessions

- System of Environmental Management: Elaborating an Environmental Management manual according to the regulation une-en-iso-14001. Presentation and defense.
- Environmental audits: External audit of the environmental management system of a company that wishes to obtain certification according to the law une-en-isi-14001. Oral presentation and defense.

4.4. Course planning and calendar

Lectures	2	2	2	2	2	2	2	2	2	2	2
Practice sessions		2	2	2	2	4		2	4	2	2
Evaluation											
Non face-to-face activity											
Autonomous work		3	3	3	3	2	4	3	2	3	3
Group work		1	1	1	1	1	2	1	1	1	2
TOTAL	6	8	8	8	8	9	8	8	9	8	8

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Sciences website and Moodle.

4.5.Bibliography and recommended resources

BB Auditorías ambientales / [autores, Bureau Business Scholl [sic] ...et al.] . 3^a ed. Madrid : Fundación Confemetal, D.L. 2011

BB Directrices para la auditoría de los sistemas de gestión de la calidad y/o ambiental : ISO 19011:2002 . - [1a ed.] Madrid : AENOR, 2002

BB Granero Castro, Javier. Cómo implantar un sistema de gestión ambiental según la norma ISO 14001:2004 / Javier Granero Castro, Miguel Ferrando Sánchez . Madrid : Fundación Confemetal, D.L. 2005

BB Guía para la aplicación de la norma UNE-EN ISO 14001:2015 / José Luis Valdés Fernández ... [et al.] Madrid : AENOR, D.L. 2016

BB Roberts, Hewitt. ISO 14001 EMS : manual de sistema de gestión medioambiental / Hewitt Roberts, Gary Robinson . 1^a ed., 3^a reimp. Madrid : Paraninfo, 1999 (reimp. 2008)

BC Dentch, M.P. (2016). The ISO 14001:2015 Implementation Handbook: Using the process approach to build and environmental management system (English Edition). ASQ Quality Press

The updated recommended bibliography can be consulted in:

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?id=2184>