

## 27119 - Introduction to Management Systems

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 27119 - Introduction to Management Systems

**Faculty / School:** 100 - Facultad de Ciencias

**Degree:** 446 - Degree in Biotechnology

**ECTS:** 6.0

**Year:** 3

**Semester:** First semester

**Subject type:** Compulsory

**Module:**

### 1. General information

The main objective of this subject is to give an overview of the requirements of the different standardized management systems used in the business world and the methodology to be followed for their documentation, implementation and subsequent certification, as well as the tools used by companies to ensure compliance with applicable legal requirements and ensure the application of continuous improvement.

It has a transversal character and also proposes a vision of the scientific-entrepreneurial world from an entrepreneurial perspective.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), such that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to the achievement of goals 3, 9 y 12.

### 2. Learning results

- To acquire basic knowledge of the requirements demanded in the different standardized management systems used in biotechnology-related companies and institutions and the methodology to follow for their documentation, implementation and subsequent certification.
- To understand and be able to apply the tools used by the company to ensure compliance with the legal requirements demanded in the business management systems, as well as the norms that establish the requirements of such systems.
- To know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study.
- To know how to communicate knowledge, arguments and conclusions of aspects related to management systems to specialized and non-specialized audiences in a clear and unambiguous way.
- To be able to analyse the different regulations applicable at international, European and national level.
- To manage, discriminate and select basic bibliographic information sources.

### 3. Syllabus

#### **Thematic Block 1: INTRODUCTION**

Topic 1: Introduction to Management Systems

#### **Thematic Block 2: QUALITY MANAGEMENT SYSTEMS**

Topic 2: Fundamentals of industrial quality

Topic 3: Quality management systems according to the UNE-EN/ISO 9001 standard

Topic 4: Quality Tools

#### **Thematic Block 3: R&D&I MANAGEMENT SYSTEMS**

Topic 5: R&D&I management systems

Topic 6: Documentation management and bibliographic references

Topic 7: Planning and management of R&D&I projects

#### **Thematic Block 4: ENVIRONMENTAL MANAGEMENT SYSTEMS**

Topic 8: Introduction to environmental management and circular economy

Topic 9: Environmental management systems according to UNE-EN/ISO 14001 standard

#### **Thematic Block 5: LABORATORY MANAGEMENT SYSTEMS**

Topic 10: Test laboratory management systems

Topic 11: Fundamentals of metrology

## **Thematic Block 6: OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS**

Topic 12: Introduction to occupational safety and occupational risk prevention.

Topic 13: Occupational health and safety management systems according to ISO 45001 standard

### **4. Academic activities**

The following learning activities are proposed for the development of this subject:

- Master classes (30 hours)
- Problem solving classes and case studies (10 hours).
- Practices and individualized and/or small group work (20 hours)
- Student's personal study (theoretical/practical part) (60 hours)
- Practical application or research work to be carried out by the student (25 hours)
- Assessment tests (5 hours)

### **5. Assessment system**

Students may opt for continuous assessment. Thus, during the course of the subject, the student should demonstrate that they have achieved the theoretical and practical learning results. The continuous assessment is divided into two blocks:

#### **A) Practices and case studies (60%)**

1. Theoretical and practical cases throughout the term.
2. Practices and supervised work.

Practical exercises account for 80% of the grade for block A and case studies for 20% of the grade for block A.

#### **B) Exam (40%)**

The evaluation will consist of a written test or exam of the main theoretical contents of the subject

A grade equal to or higher than 5.0 in each part (A and B) must be obtained to compensate and pass the subject.

In order to pass the subject and average with the evaluation of the written test (exam), a minimum grade of 5 out of 10 must be obtained in all practices and practical cases of the subject.

Grade: Following the regulations of the University of Zaragoza in this regard, in the subjects that have continuous or gradual evaluation systems, a global evaluation test will also be scheduled for those students who decide to opt for this second system. The global evaluation will consist of a written test with the following parts:

Part 1.- Resolution of theoretical-practical questions related to the topics taught. It accounts for 40% of the final grade ( ) and a grade higher than 5.0 must be obtained to average with the other part (Part 2).

Part 2.- Assessment of practices by means of questions related to the contents of the practices and practical cases . It accounts for 60% of the final grade and a grade higher than 5.0 must be obtained to average with the other part (Part 1)

### **6. Sustainable Development Goals**

3 - Good Health & Well-Being

9 - Industry, Innovation and Infrastructure

12 - Responsible Production and Consumption