

30823 - Integrated Quality Management in the Food Industry

Syllabus Information

Academic year: 2024/25

Subject: 30823 - Integrated Quality Management in the Food Industry

Faculty / School: 105 - Facultad de Veterinaria

Degree: 568 - Degree in Food Science and Technology

ECTS: 6.0

Year: 3

Semester: First semester

Subject type: Compulsory

Module:

1. General information

The main objective of this subject is to train professionals capable of innovating processes and products, managing the control and quality of processes and products, managing food safety, as well as processing and transforming raw materials, increasing their added value.

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/>), in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement:

Goal 3: Health and wellness.

Goal 12: Responsible Production and Consumption

2. Learning results

1. Is able to explain the concept of quality and related terms and their management, while analyzing the peculiarities of quality in the food sector. Likewise, Is able to explain clearly the business context in which quality has been developing since its beginnings and the reasons why it is currently considered a competitive strategy for food companies.

2. Is able to define the elements of a strategic quality plan, plan its implementation and calculate the costs of quality as part of the total cost of a product.

3. Is able to explain and apply the principles of quality management in food industry organizations. Furthermore, is able to explain the context in which food safety and quality management systems are developed at the European level, and is able to typify the different certification systems.

4. Is able to apply techniques for control, assurance and quality management of products and processes throughout their life cycle, including: implementation of methodologies to translate customer needs into the final product minimizing as much as possible the possible failures, design and implementation of design of experiments tests that help to set the characteristics of the product in its development phase, design and application of techniques for statistical process control, application of quality tools for the analysis of cause-effect relationships and consequent decision making.

5. Is able to carry out, express and interpret adequately the measurements and calibrations necessary to control the food quality in all phases of the development of a product or food process according to validated and accredited methods in the laboratories in charge of the control.

6. Is capable of documenting a quality management system applicable to a company in the food industry standardized according to ISO 9001 or other international systems, as well as documenting quality management systems of testing / calibration laboratories.

3. Syllabus

Topic 1. Quality in the food sector and its management.

Topic 2. Quality as a competitive strategy in the food sector.

Topic 3. Quality management systems in the food sector.

Topic 4. Quality infrastructure.

Topic 5. Quality in the design of a food product.

Topic 6. Quality in the production processes of a food product.

Topic 7. Calibration and measurement. Expression of the result.

4. Academic activities

Master classes: 33 hours.

Theoretical sessions in which the contents of the subject are explained.

Computerized practices: 27 hours.

Sessions to solve practical cases presented by the teachers.

Personal study: 84 hours.

Assessment tests. 6 hours.

5. Assessment system

The subject will be assessed in the global assessment modality by means of the following activities:

Test 1. Resolution of practical cases (25% of the grade, minimum 5 out of 10). It will consist of the resolution of practical cases presented by the teachers. These will be delivered to the teacher. Students who have not submitted the resolutions of the practical cases, must take an exam of short questions, about the contents developed in the practical sessions, which will take place on the same date as the final evaluation test.

Test 2. Final evaluation of theoretical contents (75% of the grade, minimum 5 out of 10). Theoretical knowledge will be assessed through short questions .

In the resolution of practical cases, three fundamental aspects will be valued: the approach, the development and interpretation of the results, as well as the realization and delivery of the corresponding reports. Each aspect will be worth approximately one third of the case study grade on a scale of 0 to 10. In the short answer questions of the final evaluation of theoretical contents, the clarity and conciseness of the answers will be valued.

In relation to the second call, those students who have passed any of the tests in the first call, may not take the same and will keep the grade obtained. The results of the resolution of the case studies will be kept for two academic years, for those students who have not passed the subject.

6. Sustainable Development Goals

3 - Good Health & Well-Being

12 - Responsible Production and Consumption