COURSE DATA

DATA SUBJECT

Code: 33986
Name: Quality Management
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1103 - Degree in Food Science and Technology	Facultat de Farmácia i Ciències de L'alimentació	3	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1103 - Degree in Food Science and Technology	Quality management	COMPULSORY

COORDINATION

MECA DE CARO GIUSEPPE

MECA DE CARO GIUSEPPE

SUMMARY

Quality Management is a compulsory course of 4.5 ECTS, taught in the second semester of the third degree year in Food Science and Technology. This course is integrated into the module \"Management and Quality in the Food Industry\" of 13.5 ECTS. Aims to introduce the knowledge and application of the main tools of quality management related to the food industry. Quality figures, quality management systems and environmental quality control and statistical techniques will be developed.

The overall objective of this course is to acquaint students with the concepts and tools of quality management in the food industry. To achieve this overall objective the student should be able to:

• Highlight the ongoing importance of proper quality and environmental management.

• Know the different quality management tools.

• Standards, Rules, regulations and legislation for the implementation of Quality Management Systems (ISO9001: 2015, ISO22000: 2018 and ISO17025: 2017, BRC, IFS, Globalgap) Environmental Management (ISO14001: 2015) their audits (ISO 19011) and integration procedures (UNE 66177:2005).

• Develop tools of a quality and/or environmental management system.

- To implement statistical tools for the description and control of the natural variability of processes

• Develop and interpret control charts for variables and attributes.

• Understand the sampling procedures.

• Application of the HAPPC criteria in food industry

• Know the different food quality designations in force in the European Union as well as quality brands: concept, requirements, applications and control structures.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

Basic knowledge of statistics, and food chemistry is suggested

COMPETENCES / LEARNING OUTCOMES

-

Apply tools and indicators for quality control.

Be able to document and implement an environmental management system according to UNE-EN-ISO standards.

Be able to document and implement a quality management system according to UNE-EN-ISO standards.

Be able to prepare a written report in a correct, understandable and organised manner.

Capacidad de interpretar datos relevantes.

Evaluar, controlar y gestionar la calidad alimentaria.

Implantar sistemas de calidad.

Know and understand the fundamental concepts associated with environmental management.

Know and understand the fundamentals and the components of quality systems.

Know the procedures for planning and conducting quality audits.

DESCRIPTION OF CONTENTS

1. Statistical Process Control

Quality statistical tools.
Statistical processes control.
Natural variability and capacity of the processes.
Total and conditioned probability.
Inspection, sampling and acceptance.
Quality control charts.

2. Total Quality: Phylosophy, Politics and Tools

Definition of quality. Quality management. Quality costs. Quality management levels Management systems in the company. Quality systems.
Quality management systems: ISO9001 and EFQM. Documentation control. Requirements of the standard. Implementation and certification. Quality audits
Business environmental management instruments. Approved Environmental Management Systems: The European regulation EMAS and ISO 14001. Elements of an environmental management system. Implementation and certification of an environmental management system based on the ISO14001: 2004 standard

3. Quality in Food

Quality standards. BRC (British Retail Council). IFS (International Food Standard). GLOBALGAP. FSSC2000 (Food Safety System Certification).
Quality names in the European Union. Differentiated quality: Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), Guaranteed Traditional Specialty (ETG)
Quality marks. Trademark Law. Collective and quality guarantee marks.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours

Tutorials	2,00
Theory	38,00
Seminar	2,00
Total hours	**42,00**

NON PRESENCIAL ACTIVITIES

Activity	**Hours**
Attendance at other activities	0,00
Individual or group project	27,00
Independent study and work	30,50
Preparation of lessons	10,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**67,50**

TEACHING METHODOLOGY

The course is structured around four items: Lecture sessions, practical sessions, tutorial and work / seminars.

Lecture classes: it will give an overview of the topic and have an impact on those key concepts for understanding it. The student will have additional information in the virtual platform.

Problems / practices: analyze and develop cases and practical examples. Students solve the assumptions made and prepare a report.

Tutorials: Two tutorials, one hour each for group of students. In them, the lecturer will clarify the concepts and solve any doubts related to the proposed problems.

Seminars: Two seminars on topics provided by the teacher or proposed by students and related to the subject of the course. A report and an oral defense of the work developed in the seminars will be presented.

EVALUATION

The final grade will take into account the following aspects:

SEM - Seminars: Making presentation and discussion of collective reports on topics related to the contents explained in the classroom. The level of understanding of the contents as well as the skills for its presentation and discussion will be assessed. Attendance at the coordinated seminars of the subject is compulsory. Failure to attend them may imply a rating of 0.0 (zero) in this section of the evaluation.

EX-Written test: The exam subject includes the topics presented in the classes with problems and theoretical questions both open and short answers and alternative answer (true-false) with reasoning or test type. It is mandatory to obtain a minimum score of 5 at the Quality Management Theory (QMT) and Statistical Quality Control (SQC), and a 5 in the HAPPC section to average the final qualification of the course.

TR- Problems / Classroom practices and tutorials: The memories of the works presented and the student's participation in the different activities / problems carried out in the face-to-face classes will be valued. This section also includes attendance and active participation in the tutoring sessions, the lack of which may imply a grade of 0.0 (zero) in this section of the evaluation.

The qualification will be calculated as follows:

EX (75%) + TR (15%) + SEM (10%)
Deliveries of sections TR and SEM are not recoverable between calls.

The minimum score at QMT and SQC will be a 5, and the HAPPC block will be 5 as well. Once this score is reached, the average qualification will be calculated as:

Final qualification: 35% QMT + 35 % SQC + 30% HAPPC

The evaluation methodology is valid for the first and second call.

In any case, the evaluation system will be governed by the provisions of the Evaluation and Qualification Regulations of the University of Valencia for Degrees and Masters.

REFERENCES

- - Gestión de la Calidad, Editorial AENOR. 2006 - Gestión ambiental, Editorial AENOR. 2006 - Comprender, documentar, implantar y mantener ISO 9000, G. Gallego Laborda (Ed. AENOR). 1998 - Control estadístico de la calidad. D.C. Montgomery (Ed. Limusa Wiley). 2004. - Cómo implantar un sistema de gestión ambiental según la norma ISO 14001:2004, Granero Castro, Javier. Ed. Fundación Confemetal. 2011. - http://www.marm.es/es/alimentacion/temas/calidad-agroalimentaria/calidad-diferenciada/ (último acceso mayo 2015).

- Manual de control de calidad, J.M. Juran y F. Gryma (Ed. Mc Graw-Hill). 1993 - Gestión de la calidad y gestión medioambiental. Claver Cortés, Enrique; Molina Azorín, José Francisco; Tarí Guilló, Juan José. Ed. Pirámide. 2005. - Desde ISO 9001 hasta más allá de los sistemas integrados de gestión. Cadrecha Nava, Juan. Editorial : CADRECHA NAVA, Juan. 2003 - Guía para la implantación y el desarrollo de un sistema de gestión medioambiental, A. Rodríguez. (Generalitat de Cataluña, Dept. Medi Ambient). 1997