Universitat de Lleida

DEGREE CURRICULUM

QUALITY MANAGEMENT AND FOOD SAFETY

Coordination: MARIN SILLUE, SONIA

Academic year 2022-23

QUALITY MANAGEMENT AND FOOD SAFETY 2022-23

Subject's general information

<table>
<tr><td>Subject name</td><td>QUALITY MANAGEMENT AND FOOD SAFETY</td></tr>
<tr><td>Code</td><td>102592</td></tr>
<tr><td>Semester</td><td>2nd Q(SEMESTER) CONTINUED EVALUATION</td></tr>
<tr><td>Typology</td><td>
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<tr><th>Degree</th><th>Course</th><th>Character</th><th>Modality</th></tr>
<tr><td>Bachelor's Degree in Agricultural and Food Engineering</td><td>4</td><td>COMPULSORY</td><td>Attendance-based</td></tr>
<tr><td>Bachelor's Degree in Agricultural and Food Engineering</td><td>4</td><td>OPTIONAL</td><td>Attendance-based</td></tr>
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<tr><td>Course number of credits (ECTS)</td><td>6</td></tr>
<tr><td>Type of activity, credits, and groups</td><td>
<table>
<tr><th>Activity type</th><th>PRALAB</th><th>PRAULA</th><th>TEORIA</th></tr>
<tr><td>Number of credits</td><td>1</td><td>1</td><td>4</td></tr>
<tr><td>Number of groups</td><td>1</td><td>1</td><td>1</td></tr>
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<tr><td>Coordination</td><td>MARIN SILLUE, SONIA</td></tr>
<tr><td>Department</td><td>FOOD TECHNOLOGY, ENGINEERING AND SCIENCE</td></tr>
<tr><td>Teaching load distribution between lectures and independent student work</td><td>On-site hours: 60
Off-site hours: 90</td></tr>
<tr><td>Important information on data processing</td><td>Consult this link for more information.</td></tr>
<tr><td>Language</td><td>Catalan: 50
Spanish: 50</td></tr>
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QUALITY MANAGEMENT AND FOOD SAFETY 2022-23

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
ARANTEGUI JIMENEZ, JAVIER	javier.arantegui@udl.cat	3	
MARIN SILLUE, SONIA	sonia.marin@udl.cat	1,5	
TEIXIDO JOVE, AURORA	aurora.teixido@udl.cat	1,5	

Subject's extra information

Subject / Subject throughout the curriculum

The food quality and safety management systems area is one of the fastest developed worldwide since its impact in public health and public costs and international trade. For the student management of the quality and safety of products and processes is a necessary complement to the courses of engineering and food technology. Students specializing in agricultural and food industries, at the moment to start this subject are supposed to have completed "Food industry", "Technology of food processing plant and II", "Technology of processed foods animal "and" Designing food processing plants "so that this final stage will consider the implementation of management systems for quality and safety in these industries. The subject of food microbiology will provide some basic knowledge to work in food safety.

Learning objectives

The student who passes the subject must:

- Know the quality management systems, as well as the legislation and food safety management systems.

- Know the hygiene prerequisites and the Hazard Analysis and Critical Control Points (HACCP) system.

- Know the terminology associated with management systems and the necessary documentation.

- Know the traceability management systems in the food industry.

The student who passes the subject must be able to:

- Explain the importance of quality in the business world.

- Describe the quality management model of a company.

- Analyze quality plans.

- Prepare the process control sheets and analyze the information obtained.

- Design a sampling plan in a food industry.

- Identify, develop and interpret the food safety management plan in a food company.

- Take the necessary actions to implement the quality and safety management systems and defend them before an audit.

Competences

Basic skills

CB1. That students have demonstrated to possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that imply knowledge from the cutting edge of your field of study
CB2. That students know how to apply their knowledge to their work or vocation in a professional way and possess the competencies that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.
CB3. That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include reflection on relevant issues of a social, scientific or ethical nature
CB4. That students can transmit information, ideas, problems and solutions to both specialized and non-specialized audiences
CB5. That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy

General competences

CG6. Ability to direct and manage all kinds of agri-food industries, agricultural and livestock farms, urban and / or rural green spaces, and public or private sports areas, with knowledge of new technologies, quality processes, traceability and certification and the marketing techniques and commercialization of food products and cultivated plants.
CG8. Ability to solve problems with creativity, initiative, methodology and critical reasoning.
CG9. Leadership, communication and transmission of knowledge, abilities and skills in the social fields of action.
CG10. Ability to search and use the rules and regulations related to its scope of action.

Transversal competences
CT1. Correction in oral and written expression

Specific skills

CEIAA1. Ability to know, understand and use the principles of: Food engineering and technology. Engineering and basic food operations. Food Technology. Processes in the agri-food industries. Modeling and optimization. Quality and food safety management. Food analysis. Traceability.

Subject contents

Item 1. What is quality? How to manage quality?

Item 2. Classic tools of quality control.

Item 3. Sampling in the food industry .

Item 4. Statistical process control .

Item 5. Quality assurance and management

Item 6. Food Safety Legislation .

Item 7. Biological, chemical and physical hazards.

Item 8. Risk Analysis .

Item 9. Traceability systems .

Item 10. Prerequisites of hygiene .

Item 11. The system of Hazard Analysis and Critical Control Points . Application cases .

Practical activities

Practice 1. Preparation of sampling plans .

Practice 2. Statistical process control .

Practice 3. Case Studies to develop a plan of hazard analysis and critical control points .

Methodology

Training activity	On-site/Off-site		Off-site		Assessment	Total time/ECTS
	Objective	Hours	Student work	Hours	Hours	Hours/ECTS
Lecture	Description of the basics	36	Study time	50	4	**90/3.6**
Problem solving	Solving practical cases	8	Problem solving	10		**18/0,7**
Interactive lecture	Discussion	10	Reports			**10/0,4**
Guided work			Producing report	30	2	**32/1,3**
Total		**54**		**90**	6	**150/6**

Evaluation

Written tests	Case studies and problem solving	Other activities
60	20	20

Type of activity	Assessment		Weight
	Procedure	Number	
Lecture	Written tests	2	**60**
Problem solving	Written report	-	**20**
Guided work	Report	1	**20**
Total		5	**100**

A mark over 4 in both written tests is required prior average is calculated with all activities.

Bibliography

Web contents

Agencia Española de Seguridad Alimentaria.

Agència Catalana de Seguretat Alimentària

Literature

Briz J. 2003, Internet, trazabilidad y seguridad alimentaria. Ed. MundiPrensa.

De las Cuevas, V. 2006. APPCC Avanzado. Guía para la aplicación de un Sistema de Peligros

y Puntos de Control Críticos en una empresa alimentaria. Ed. Ideaspropias. Vigo.

De las Cuevas, V. 2006. Trazabilidad Avanzado. Guía práctica para la aplicación de un

Sistema de Trazabilidad en una empresa alimentaria. Ed. Ideaspropias. Vigo.

Serra, J.A., Bugueño, G. 2004. Gestión de calidad en las pymes agroalimentarias. Editorial de la UPV.

VV.AA. Especial Sistema de gestión integral: Gestión de calidad. http://www.fecyt.es/especiales/calidad/1.htm

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Wallace C.A., Sperber W.H., Mortimore S.E. 2011. Food safety for the 21st century. Managing HACCP and food safety throughout the global supply chain. Wiley-Blackwell, 315 pp.

Other literature

Juran, J.M., Godfrey, A.B. (eds.) (2001), Manual de calidad de Juran**.** McGraw Hill.