



EQAS-Food Award

Accreditation Report

Bachelor's Degree Programme
Food Science and Technology

Provided by
University of Castilla-La Mancha

Version: 27 June 2025

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A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Label applied for	Current accreditation (issuing agency, validity)
Grado en Ciencia y Tecnología de los Alimentos	Bachelor Degree in Food Science and Technology	EQAS-Food Award	ANECA, as of 24.02.2022

Type of procedure: EQAS-Food top-up accreditation
Date of the contract: 31.05.2024 Submission of the documentation: 25.03.2025 Date of the review meeting: 15.04.2025 online
Expert panel: Prof. Dr. Montserrat Mor-Mur Francensch, Autonomous University of Barcelona Dr. Carmen de Vega, Asociación de Ciencia y Tecnología de los Alimentos de Euskadi
Representative of the ASIIN headquarter: Johann Jakob Winter
Responsible decision-making committee: ASIIN Accreditation Commission for Degree Programmes
Criteria used: European Standards and Guidelines as of May 15, 2015 EQAS Food Science and Technology Procedures, Criteria and Standards as of February 18, 2019

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF ¹	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Bachelor Degree in Food Science and Technology	B.Sc.	-	6	Full-time	-	4 years / 8 semesters	240 ECTS credits	

¹ EQF = The European Qualifications Framework for lifelong learning

C Expert Report for the EQAS-Food Award

1. General Criteria

Based on the analyses and assessment recorded in the ANECA accreditation report of 24.02.2025, the experts consider the general criteria for the award of the EQAS-Food Award to be fully met.

The report can be accessed here: https://srv.aneca.es/ListadoTitulos/sites/default/files/informes/acreditacion/InformeFinal_1_2502459_2021.pdf

2. Subject-Specific Criteria: Learning outcomes and competence profile of graduates

The central basis for the present evaluation of the Bachelor's degree programme mentioned is a comparison of the curriculum and the actual learning outcomes with the ideal-type qualification profiles of the applicable subject-specific criteria.

IFA	Reflected in the programme?	Contained in which courses?	Fulfilled
Food Safety and Microbiology - Describe the properties of common food spoilage organisms. Experimentally determine their presence and numbers - Describe the properties of common food poisoning organisms, their toxins and means of detection. - Recognize and describe the principles and limitations of food preservation. Exercise appropriate judgement on the suitability of different preservation methods to particular foods: give some practical examples.	☒ yes ☐ no	Microbiology (1st Course) Food Biotechnology (3rd Course) Food Hygiene I (3rd Course) Food Hygiene II (3rd Course) Food Hygiene I (3rd Course) Food Hygiene II (3rd Course) Food Toxicology (4th Course) Food Technology I (2nd Course) Raw Materials in the food industries (2nd Course) Food Biotechnology (3rd Course) Food Technology II (3rd Course)	☒
Food Chemistry and Analysis Demonstrate understanding of the basic concepts of organic chemistry, physical chemistry and	☒ yes ☐ no	General Chemistry (1st Course) Principles of Food Science and Technology (1st Course) Biochemistry (2nd Course)	☒

biochemistry related to food. Demonstrate an understanding of the structure and function of major food components. Describe the physical and chemical properties of foods in production and supply chains. • Describe the effects of at least two different food process operations on the physicochemical properties of foods • Demonstrate a practical understanding of health and safety in the laboratory. • Carry out an analysis of the proximate composition of foods and of basic sensory properties. • Describe the main constituents of foods and their role in nutrition and health.		Organic compounds and their characterization (2nd Course) Structure Properties of Food Components (2nd Course) Food Analysis and Composition (2nd Course) Advanced Chemistry (2nd Course) Chemical Analysis (2nd Course) Principles of Food Science and Technology (1st Course) Food Technology I (2nd Course) Food Technology II (3rd Course) General Chemistry (1st Course) Microbiology (1st Course) Structure Properties of Food Components (2nd Course) Food Analysis and Composition (2nd Course) Chemical Analysis (2nd Course) Sensory Analysis (3rd Course) Principles of Food Science and Technology (1st Course) Structure Properties of Food Components (2nd Course) Food Analysis and Composition I (2nd Course) Human Nutrition (3rd Course) Food Analysis and Composition II (3rd Course)	
Food Processing and Engineering • Identify sources of raw material, explain the variability and the impact on food processing operations.	☒ yes ☐ no	Food Technology I (2nd Course) Raw Materials in the Food Industries (2nd Course) Food Biotechnology (3rd Course) Food Technology II (3rd Course) Food Industries I & II (4th Course)	☒

• Understand the fundamental concepts of mass, heat, and momentum transfer required in food unit operations. Calculate mass and energy balances for a general food process. • Explain the principles and current practices of major food processing operations, and understand the effect of processing parameters on product quality. • Explain characteristics and properties of packaging materials for food products and identify appropriate packaging systems. • Understand the basic principles and practices used for cleaning and sanitation of food process equipment, including the use of water, cleaning chemicals and waste management.		Food Technology I (2nd Course) Food Technology I (2nd Course) Food Technology II (3rd Course) Food Technology II (3rd Course) Food packaging (OP) (4th Course) Food Technology I (2nd Course) Characterisation and Management of Waste in the Food Industry (OP) (4th Course)	
Quality Management and Food Law • Describe how quality management systems are applied in the food industry with examples. • Describe the main organisations responsible for overseeing quality management systems at a national and European level. • Describe the principles of food legislation and how it is applied in the food industry. • Describe the principles of authentication of food provenance and quality. Give an example of at least one well known scheme.	☒ yes ☐ no	Quality Management and Food Legislation (3rd Course)	☒
Generic Competences • Carry out a basic experimental work under close supervision and write a summary report using a word processing application and spreadsheet as appropriate.	☒ yes ☐ no	Undergraduate dissertation (4th Course) laboratory practices	☐

Communicate scientific ideas through written, oral and visual means in their native language. • Work in a team, with an understanding of the different roles, time management and meetings coordination. Demonstrate self-planning in order to prioritise and manage time and resources effectively. • Demonstrate problem solving skills, showing ability to solve practical interdisciplinary problems, showing ability to separate relevant and irrelevant information and working towards a successful solution.		Organic Compounds and their Characterisation (2nd Course) Food Hygiene and Food Safety (2nd Course) Laboratory practices	
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Based on the **module descriptions**, the experts confirm that the learning outcomes and curricular contents are appropriately aligned with the subject-specific EQAS-Food criteria.

The **final theses** submitted show that the students achieve the intended learning outcomes and are able to implement them independently at an appropriate Bachelor's level within the ISEKI/ EQAS framework. However, the experts notice that one of the presented theses deals with a topic that is related to nutrition rather than food science and technology. Although the experts acknowledge certain overlaps, they nevertheless recommend that the topics of the students' final theses should be core topics of food science and technology.

D Summary: Expert recommendations (22.04.2025)

The experts summarize their analysis and **final assessment** for the award of the label as follows:

Degree Programme	EQAS-Food Award	Maximum duration of accreditation
Ba Food Science and Technology	Without requirements	30.09.2030

Recommendation

- E 1. It is recommended that the topics of the students' final theses should represent core topics of food science and technology.

E Comment of the Technical Committees 08 - Agriculture Forestry and Food Sciences (03.06.2025)

Assessment and analysis for the award of the EQAS-Food Award:

The Technical Committee discusses the procedure including the recommendation proposed by the expert group. The Technical Committee accepts the expert proposal without making any changes.

The Technical Committee deems that the intended learning outcomes of the degree programme do comply with the EQAS-Food framework and the Subject-Specific Criteria of the Technical Committee 08 – Agriculture, Forestry and Food Sciences.

The Technical Committee 08 – Agriculture, Forestry and Food Sciences recommends the award of the seals as follows:

Degree Programme	EQAS-Food Award	Maximum duration of accreditation
Ba Food Science and Technology	Without requirements	30.09.2030

F Decision of the Accreditation Commission (27.06.2025)

Assessment and analysis for the award of the EQAS-Food Label:

The Accreditation Commission discusses and deems that the intended learning outcomes of the degree programme do comply with the EQAS-Food framework and the Subject-Specific Criteria of the Technical Committee 08 – Agriculture, Forestry, Food Sciences, and Landscape Architecture. The recommendation is only of minor concern but considered still a valid point.

The Accreditation Commission decides to award the following seals:

Degree Programme	EQAS-Food Award	Maximum duration of accreditation
Ba Food Science and Technology	Without requirements	30.09.2030

Recommendation

- E 1. It is recommended that the topics of the students' final theses should represent core topics of food science and technology.

Appendix: Learning Outcomes

For the Bachelor's degree programme in Food Science and Technology, University of Castilla-La Mancha specifies the following programme learning outcomes in the EQAS-Food Alignment matrix:

Food Safety and Microbiology

1. Acquire the basic knowledge of biology, biochemistry, Human physiology and microbiology to study the nature of food, the causes of its deterioration and the fundamentals of its preparation, as well as its role in human nutrition and dietetics.
2. Have knowledge of food microbiology and biotechnology and their applications in food processing. Have knowledge of food microbiology, parasitology and food toxicology.
3. Analyse and assess food risks. Manage food safety. Know and control the guidelines on personnel hygiene, food handling and hygienic control of manufacturing processes.
4. Know, optimise and control food processing systems and preservation processes.

Food Chemistry and Analysis

1. Acquire the basic knowledge of chemistry, mathematics, physics, enabling the study of the nature of foodstuffs, the causes of their deterioration and the fundamentals of their preparation.
2. Acquire the basic knowledge of biology, biochemistry, Human physiology and microbiology to study the nature of food, the causes of its deterioration and the fundamentals of its preparation, as well as its role in human nutrition and dietetics.
3. Know and know how to apply the fundamentals of chemical disciplines, as well as their methodologies and specific applications of analytical chemistry, organic chemistry, physical chemistry and inorganic chemistry in the field of Food Science and Technology.
4. To enable the student to evaluate the effects of processing on food components and properties.
5. Arouse and encourage in the student all those values and attitudes inherent to scientific activity.
6. Learn to work autonomously in a laboratory and know how to interpret the experimental results obtained. Be able to carry out basic work with simple biological systems in the laboratory and interpret experimental results. Learn to work in a microbiology laboratory and interpret the experimental results obtained.

7. To acquire skills for practical laboratory work. Acquiring the ability to experimentally develop analytical processes that include planning of sampling, treatment, and analysis. To acquire skills regarding the physical-chemical analysis in the food (edible fats, grape and wine, dairy and meat products).
8. Know the composition, physico-chemical properties, nutritional value, functional and sensory properties of foods. Know and handle food analysis techniques. Knowing the organoleptic properties of food and knowing how to apply sensory analysis methodologies and techniques.
9. Ensure and improve the nutritional quality and health properties of ingredients and foods.

Food Processing and Engineering

1. Know the production systems of raw materials used in food.
2. Acquire knowledge of equipment and systems for the automation and control of food processing.
3. To know the basic fundamentals of instrumentation and process control in the food industry. Acquire knowledge of equipment and systems for the automation and control of food processing. To enable the student to evaluate the effects of processing on food components and properties. Have knowledge of food microbiology and biotechnology and their applications in food processing.
4. Acquire knowledge of equipment and systems for the automation and control of food processing. To enable the student to evaluate the effects of processing on food components and properties.
5. Acquire knowledge of equipment and systems for the automation and control of food processing. Know and control the guidelines on personnel hygiene, food handling and hygienic control of manufacturing processes. To know the abiotic contaminants affecting food, methods of evaluation and prevention guidelines. Manage by-products and waste from the food industry according to an effective environmental management programme.

Quality Management and the Law

1. Possess knowledge of food standardisation and legislation. Provide legal, scientific and technical advice to the food industry and consumers. Know the fundamentals of quality and traceability systems, carry out their implementation, as well as evaluate and control food quality. Have knowledge of economics, marketing and market techniques of food products.
2. Possess knowledge of food standardisation and legislation. Provide legal, scientific and technical advice to the food industry and consumers. Know the fundamentals

- of quality and traceability systems, carry out their implementation, as well as evaluate and control food quality. Manage by-products and waste from the food industry according to an effective environmental management programme.
3. Possess knowledge of food standardisation and legislation. Provide legal, scientific and technical advice to the food industry and consumers. Know the fundamentals of quality and traceability systems, carry out their implementation, as well as evaluate and control food quality. Manage by-products and waste from the food industry according to an effective environmental management programme.
 4. Possess knowledge of food standardisation and legislation. Provide legal, scientific and technical advice to the food industry and consumers. Know the fundamentals of quality and traceability systems, carry out their implementation, as well as evaluate and control food quality.

Generic Competences

1. Students have demonstrated knowledge and understanding of an area of study that builds on the foundation of general secondary education, and is usually at a level that, while relying on advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.
2. Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and problem solving within their field of study.
3. Students have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgements that include reflection on relevant social, scientific or ethical issues.
4. Students are able to convey information, ideas, problems and solutions to both specialist and non-specialist audiences.
5. Students have developed the learning skills necessary to undertake further studies with a high degree of autonomy.
6. Develop the ability to gather and interpret data in order to make judgements that include reflection on relevant social, scientific or ethical issues.
7. Possess correct oral and written communication skills. Convey information, ideas, problems and solutions to both specialised and non-specialised audiences.
8. Develop habits of excellence and quality in professional practice, applying fundamental human rights, the principles of equal opportunities and the values of a culture of peace and democracy. Acquiring an ethical commitment and acting in accordance with professional ethics and respect for the environment.

9. Develop the learning skills necessary to undertake further studies with a high degree of autonomy.
10. Understand and use the English language, both written and spoken, used in the field of Food Science and Technology. (In order to acquire this competence, a series of actions will be carried out which are specified in each module).
11. Master Information and Communication Technologies (ICT) at user level, enabling work in virtual spaces, Internet, electronic databases, as well as with common computer packages (Microsoft Office).
12. Possess organisational and planning skills, initiative, entrepreneurial spirit and the ability to work in a team. Possess problem-solving skills specific to the field of work and develop critical reasoning and decision-making.
13. Know the principles and theories of basic science as well as the methodologies and applications characteristic of chemistry, physics, biology and mathematics that are necessary to acquire the knowledge required for the degree.
14. Develop motivation for quality, the ability to adapt to new situations and creativity.