Universidad Zaragoza

Academic Year/course: 2024/25

68767 - Advances and quality control of meat and fish

Syllabus Information

Academic year: 2024/25
Subject: 68767 - Advances and quality control of meat and fish
Faculty / School: 105 - Facultad de Veterinaria
Degree: 631 - Master's Degree in Food Quality, Safety and Technology
ECTS: 3.0
Year: 1
Semester: Second semester
Subject type: Optional
Module:

1. General information

Theoretical sessions cover the main advances in the preparation and processing of meat- and fish-based foods, as well as the most modern methods of quality control in the industries related to the aforementioned foods. In the practical sessions different quality control techniques used in the food industry are applied. Students must draw up a monographic work on a topic related to the subject and present it in a seminar. They must also prove that they are able to analyse in depth the chosen topic, as well as to present and defend it in public.

These objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (https://www.un.org/sustainabledevelopment/es/),

-Objective 3: Health and Well-being

-Objective 4: Quality education

-Objective 5: Gender Equality

-Objective 9: Industry, innovation and infrastructures

-Objective 12: Responsible production and consumption

This subject develops the topics that are specifically related to meat and fish industries.

2. Learning results

- To know the main advances in the technology of muscle-based foods (meat and fish and their by-products), the improvements in their analysis with special emphasis on on-line methods and the most relevant intrinsic and extrinsic factors that influence their quality. -To collaborate with other professionals in the selection of the most appropriate equipment, production lines and facilities for each type of food processing. A special result to be obtained by the student is to know the possible combinations and adaptations of the equipment to obtain innovative products that are attractive and demanded by consumers.

-To analyse the quality and establish the shelf life of each of these foods according to their properties, preservation conditions and applicable legislation in force.

-To know all the stages that make up the quality control of these foods from the different perspectives of hygienic, technological, nutritional and commercial quality.

-To develop new processes and products in response to consumer expectations and wishes.

-To develop a work or project on a topic of special interest for the industry and/or to solve a technological problem that has a special impact on the meat and fish production and/or commercialization sector, using information sources in Spanish or English, coordinated with other subjects, and present it orally.

3. Syllabus

Main quality parameters of meat and fish. Most important factors influencing quality (4 theory hours).

Measurement of meat and fish quality parameters. Non-destructive methods. On-line methods (3 theoretical hours). Practice 1.-. Measurement of meat and fish quality parameters (4 laboratory hours)

Innovations in the preparation of meat products: fresh, cured and cooked. Quality control (3 theoretical hours).

Innovations in the elaboration of fish-based products. Quality control (2 theoretical hours).

New trends in the packaging and preservation of meat, fish and by-products (3 theoretical hours). Visit to a meat industry and a fish industry (4 hours)

Development of new products in the meat and fish sectors (3 theoretical hours).

4. Academic activities

The program offers the students help to achieve the expected results and comprises the following activities:

Theoretical sessions: 18 h (1 and 2 h sessions) face-to-face.

Practical sessions: 8 h (2 face-to-face sessions of 4 h). Practical work in laboratory and pilot plant of food technology as well as meetings on the contents previously seen in the theoretical sessions.

Individual work (case study): monographic on a real or fictitious topic related to the content of the subject or also. It can also be a research project proposed by the student and related to the subject that will comprise a total of 45 h. The work will be presented in two seminars of 2h each and discussed with both teachers and classmates. The presentation time will be 15 min, plus 15 min for defence and discussion.

5. Assessment system

Continuous assessment

The student must demonstrate achievement of the intended learning results through the following assessment activities.

Student participation and contribution to the development of all theoretical and practical sessions. The critical capacity demonstrated by the student in the seminars for the presentation of case studies will also be assessed. This assessment method equals to 10% of the final grade.

Objective test of short questions where the student's global knowledge of the subject will be assessed. This assessment method equals to 40% of the final grade.

Assessment of a monographic work on a real or fictitious case study chosen by the student and related to the contents of the subject. The work must be presented in a seminar for 15 min, and will be defended and discussed with the teachers and classmates for 15 additional minutes This assessment method equals to 50% of the final grade.

Overall test

Students who have not chosen the continuous assessment may be evaluated by means of a global test with the next activities:

Objective test of short questions where the student's global knowledge of the subject will be assessed. This assessment method equals to 50% of the final grade.

Assessment of a monographic work on a real or fictitious case study chosen by the student and related to the contents of the subject. The work must be presented in a seminar for 15 min, and will be defended and discussed with the teachers for 15 additional minutes This assessment method equals to 50% of the final grade.

6. Sustainable Development Goals

3 - Good Health & Well-Being
9 - Industry, Innovation and Infrastructure
12 - Responsible Production and Consumption