

30831 - Meat and Fish Technology

Syllabus Information

Academic year: 2023/24

Subject: 30831 - Meat and Fish Technology

Faculty / School: 105 - Facultad de Veterinaria

Degree: 568 - Degree in Food Science and Technology

ECTS: 6.0

Year: 4

Semester: First semester

Subject type: Compulsory

Module:

1. General information

Generically, the objectives of the subject are the following: to provide the student with comprehensive and profound global, complete and deep competences in the properties, production, processing, preservation and quality control of meat and fish, , as well as in the characteristics, processing technology, preservation, quality control and development of all its products and by-products.

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

Goal 3: Health and Wellness

Goal 4: Quality Education.

Goal 5: Gender Equality.

Goal 9: Industry, Innovation and Infrastructure

Goal 12. Responsible Production and Consumption

2. Learning results

The student, in order to pass this subject, must demonstrate that:

Knows and knows how to analyse the properties of muscle-based foods (meat and fish and their by-products), and identifies the most relevant intrinsic and extrinsic factors that influence their quality.

Is capable of selecting and applying the most appropriate raw materials, ingredients, additives and technologies for processing, preserving or transforming these foods, according to the desired quality and safety.

Is able to collaborate with other professionals in the selection of the most appropriate equipment, production lines and facilities for each type of food processing

Is capable of analysing the quality and estimating the shelf life of each of these foods according to their properties, preservation conditions and applicable legislation in force

Is able to contribute to the development of new processes and products in the field of meat, fish and by-products.

Is able to produce a work or project on a topic relevant to the subject, from sources of information in Spanish or English, coordinated with other subjects, and present it orally

3. Syllabus

BLOCK 1.- FRESH MEAT: BASICS, QUALITY AND TECHNOLOGY (12 theory hours)

Topic 1.- Introduction.

Transformation of muscle into meat.

Abnormal processes of transformation of muscle into meat.

Meat quality. Sensory parameters that determine it. Colour, texture, odour, flavour and water holding capacity of the meat; ante- and post-mortem factors that influence them.

Meat quality; methods for measuring and evaluating quality.

Industrial meat production.

Refrigeration of meat.

Packaging and sale of meat.

BLOCK 2.- FISH AND SEAFOOD: FRESHNESS, QUALITY AND TECHNOLOGY (4 hours of theory and 2 hours of practice)

Topic 9.- Introduction.

Stunning and slaughtering methods: effects on quality.

Fishing and quality.

Refrigeration and freezing of fish.

Packaging and preservation of fish and seafood.

BLOCK 3.- GENERAL TECHNOLOGY OF MEAT DERIVATIVES (4 theory hours)

Classification of meat derivatives according to their technological processing. Operations of preparation, preservation and processing used in the preparation of meat derivatives

Additives and other ingredients used in the meat industry.

BLOCK 4.- TECHNOLOGY OF FRESH MEAT PREPARATIONS (4 theory hours)

Fresh meat preparations; differential characteristics. Sausages.

Precooked and cooked meat products.

BLOCK 5.- TECHNOLOGY OF RAW CURED PRODUCTS (4 hours of theory and 6 hours of practical theory and 6 hours of practice)

Whole cured meat products.

Raw cured sausages.

BLOCK 6.- TECHNOLOGY OF COOKED CURED PRODUCTS (4 hours of theory and 4 hours of practice)

Whole cooked meat products.

Cooked minced meat products.

FISH AND FISH PRODUCTS TECHNOLOGY (8 hours of theory and 2 hours of practice)

Preservation of fish by salting.

Smoking of fish.

Canned tuna and sardine. Semi-preserved fish.

Surimi and derived products.

4. Academic activities

The learning activities programmed for this subject include: 40 theoretical hours distributed in 7 blocks of content (see program), 14 practical hours distributed in 7 sessions of 2 hours each (see program) and the realization of a work on a subject related to the subject that will be presented and defended publicly in front of all the students enrolled in the subject in three sessions of 2 hours each.

5. Assessment system

Written test (Test 1). This part will evaluate the acquisition of theoretical knowledge and its integration within the context of the meat and fish industries. Therefore, the questions will have an applied sense, trying to simulate real situations. Passing this test will accredit the achievement of learning results 1, 2, 3, 4 and 5. To be held at the end of the semester. The result will account for 60% of the student's overall grade for the subject.

Evaluation of practices (Test 2). The competencies, skills and abilities acquired in the laboratory practices (learning results 2, 3 and 4) will be assessed by means of a report of practices. The report will be individual. Value in the final grade 20%.

Evaluation of individual tutored work (Test 3). The oral presentation in public of the academically tutored activities will be evaluated (learning result 6; up to 20% of the final grade).

The three tests will be held on the dates established in the examination calendar prepared by the centre. Alternatively, tests 2 and 3 will be held during the teaching period, test 2 after completion of laboratory practices and test 3 during the presentation of the tutored work scheduled throughout the term.