

28440 - Food Hygiene, Inspection and Control

Syllabus Information

Academic year: 2024/25

Subject: 28440 - Food Hygiene, Inspection and Control

Faculty / School: 105 - Facultad de Veterinaria

Degree: 451 - Degree in Veterinary Science

ECTS: 14.0

Year: 5

Semester: Annual

Subject type: Compulsory

Module:

1. General information

Included in the Food Hygiene, Technology and Safety module, its general objectives are aimed at students acquiring the necessary skills and abilities to: apply measures that guarantee food safety for human consumption throughout the food chain, carry out food and food industry inspections with special focus on food of animal origin, traditionally inspected by veterinary professionals, know and apply the self-control tools of food companies and the official food control system at any of the food safety management levels.

These approaches and objectives are aligned with the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda 3, 4, 6, 9 and 12.

In the professional context, the competencies acquired with this subject constitute one of the areas of the veterinary profession in food hygiene, inspection and control.

2. Learning results

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

1. Is able to recognize the characters that bromatologically identify foods in order to support their edibility and suitability for consumption.
2. Is able to know and know how to identify the causes of food contamination and food spoilage and to propose measures to prevent and control them.
3. Knows the prerequisites and good hygienic practices applicable in the food chain and is capable of developing hygiene plans in the food chain.
4. Is capable of developing a Hazard Analysis and Critical Control Point (HACCP) model as the basis of the self-control system in the food industry.
5. Knows the basics of the risk analysis tool through the process of assessing the real risk, its management and communication, as a fundamental aspect in the process of food safety management, both at the industry level and at the level of the Administration.
6. Knows how to apply hygienic and sanitary control standards and measures throughout the food chain to ensure the production, processing and marketing of safe, nutritious and palatable food for the consumer.
7. Understands and knows the requirements of food safety, bromatological and commercial value of food in order to be able to inspect food and establish an opinion of its suitability for consumption.
8. Knows the hygienic requirements of food industries and processes in order to advise business operators or to inspect and/or control them.
9. Is capable of performing ante- and postmortem inspection of butchered species (mammals, birds and wild game) based on the knowledge acquired and in accordance with current legislation.
10. Knows the official control system in the food industry.
11. Assesses food quality in order to advise, provide and audit commercial and sanitary standards that protect consumers and prevent fraud.
12. Is able to manage food legislation (Spanish, EU and international), to interpret it and to apply it in the hygienic process, in food inspection and control.
13. Provides an in-depth knowledge of the basics of food safety management systems and the principles of food safety applicable to the improvement and prevention of public health.

3. Syllabus

1. Theoretical program

33 lessons divided into two blocks:

Block 1 (13 lessons). It defines the general concepts of the subject and its objectives, and provides the fundamentals of food safety prevention and control activities, food inspection and food control:

Lesson 1.- Concept and Content of Food Hygiene, Inspection and Control

Lesson 2.- Concept and current status of Food Safety

Lesson 3.- Risk analysis of food hazards: assessment, management and communication. The precautionary principle.

Lesson 4.- Food legislation

Lesson 5.- General Aspects of Food Contamination

Lesson 6.- Food hazards of biological origin

Lesson 7.- Food Hazards of Abiotic Origin

Lesson 8.- Hygiene in the Food Industry

Lesson 9.- Self-control system: hygiene pre-requisites

Lesson 10.- Self-control system: HACCP

Lesson 11.- Self-monitoring system: shelf life

Lesson 12.- Self-control system: traceability and management of food alerts

Lesson 13.- Food sampling, inspection and official food control

Block 2 (20 lessons). It is made up of the specific modules dedicated to Hygiene, Inspection and Food Control of those foods of direct responsibility in the veterinary professional practice. Several lessons are also devoted to the study of foods traditionally inspected by veterinary professionals. The Block is subdivided into modules related to each type of food:

1st module: Hygiene, Inspection and Control of Meat and Meat By-Products

Lesson 14.- Criteria of aptitude for meat consumption

Lesson 15.- Hygiene in the meat production chain

Lesson 16.- Meat traceability

Lesson 17.- Official Veterinary Inspection and Control in meat production

Lesson 18.- Hygiene, inspection and control in the meat processing chain

2nd module: Hygiene, Inspection and Control of Milk and Milk Derivatives

Lesson 19.- Criteria of aptitude for milk consumption

Lesson 20.- Hygiene in the milk production chain

Lesson 21.- Risk management tools in milk production and processing

Inspection and Official Control in the production and processing of milk

Hygiene, Inspection and Official Control in the milk processing chain (dairy products)

3rd Module: Hygiene, Inspection and Control of Fish and Fishery Products. Hygiene, Inspection and Control of Mollusks and crustaceans

Lesson 24.- Criteria of aptitude for fish consumption

Lesson 25.- Hygiene in the fish production and marketing chain

Inspection and Official Control of fresh and frozen fish

Hygiene, Inspection and Official Control of processed fishery products

Hygiene, Inspection and Official Control of mollusks and crustaceans

4th module: Hygiene, Inspection and Control of Eggs for consumption and egg products

Lesson 29.- Criteria for the suitability of eggs for consumption

Lesson 30.- Hygiene, Inspection and Official Control of Eggs for Consumption

Hygiene, Inspection and Official Control of egg products.

5th module: Hygiene, Inspection and Control in collective and/or deferred catering. Food preserved by heat treatment. Prepared food processing industries.

Lesson 32.- Hygiene, Inspection and Official Control in Collective and/or Deferred Catering

Lesson 33.- Hygiene, Inspection and Official Control of canned and preserved foods

2. Practical program

Practice PL-1 (Problem solving and case studies) - Search and interpretation of food legislation.

Practice PL-2 (Problem solving and case studies) - Standards applicable to the exercise of food inspection and control:

Inspection of Labelling. Sampling and official sampling.

Practice PL-3 (Laboratory) - Hygiene control in the food industry: analysis of surfaces in the industry. Water control in the food industry.

Practical PL-4 and PL-5 (Laboratory): Food microbiological analysis: process hygiene criteria and food safety criteria in different foods.

Practice PL-6 (Problem solving and case studies) - Life cycle studies. Study of outbreaks of food poisoning and infections.

Practical PL-7 (Laboratory) - Fish, mollusks and crustaceans. Identification of fish species and assessment of the degree of freshness. Fish inspection. Identification of mollusk and crustacean species.

Practical PL-8 and PL-9 (Problem solving and case studies) - Methodology for the development of a self-control plan (HACCP) in the food industry. Development of an applied self-monitoring model.

Practice PL-10 (Presentation of work): Presentation, defence and discussion of a HACCP self-control model in the food industry. Evaluation of the work.

3. Practicum of the subject

3.1.- Slaughterhouse Practicum

Slaughterhouse Seminars (3 seminars of 3 hours each)

Seminar S-M1.- Contextualization of the practicum: Organization of the official meat inspection and control system in domestic ungulate slaughterhouses.

Seminar S-M2.- Official control in poultry and rabbit slaughterhouses. Official control in game-handling establishments and in establishments that receive bled fighting bulls.

Seminar S-M3.- "Special" case studies.

Slaughterhouse practices (5 practices to be carried out at the MERCAZARAGOZA slaughterhouse)

PR-M1.- Documentation and laboratory control in slaughterhouse. (3 hours)

Practice PR-M2.- Hygiene control in the slaughterhouse. (2.5 hours)

PR-M3.- Responsibilities regarding animal protection in the slaughterhouse (3 hours)

Practice PR-M4. Official antemortem and postmortem inspection at the slaughterhouse (3.5 hours)

Practice PR-MM5.- Practical exercise of application of the official audit procedure of the slaughterhouse self-control system. (3 hours)

3.2.- Practicum at the Food Science and Technology Pilot Plant (2 practices of three hours each)

Practices PP1 and PP2

Design, implementation and maintenance of good hygienic practices and a HACCP system in the food manufacturing process. Considering the facilities available in the pilot plant, different processes related to the main food sectors will be proposed.

4. Academic activities

- Participative master class: Presentation and discussion of the thematic block in the classroom.
- Problem solving and case studies: Practical problems of food legislation research, sampling, labelling inspection, official sampling, shelf life and food poisoning and food infection outbreak studies, practical application of the self-control system (HACCP) in the Pilot Plant and explanation, discussion and evaluation of classroom teaching work, and practicum seminars in the Slaughterhouse.
- Laboratory practices: Practical application of hygiene control in the food industry, inspection and control of fishery products.
- Special practices in facilities: practical sessions of the practicum in a slaughterhouse for domestic ungulates
- Teaching assignments. Development and design of specific self-monitoring plans for food safety management in different food sectors.
- Personal study.
- Assessment
- Individual/group tutoring. Face-to-face or virtual sessions to resolve doubts.

5. Assessment system

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Global assessment.

It consists of several evaluation tests. In order to pass the subject it is necessary to achieve the minimum grade required in each of the tests. Otherwise, the subject will be considered as not passed and the final grade will be the lowest of those obtained.

In all the tests, approaches that demonstrate a profound and/or conceptual ignorance of the subject will be negatively evaluated.

1) Assessment tests of the theoretical program (65% of the final grade):

These evaluation tests will take place on the dates determined by the academic regime of the Centre and will consist of short and developmental questions.

1.1) Midterm test of the theoretical program (written test)

The midterm exam will be held at the end of the first four-month period during the exam period and will evaluate the contents of Block 1 of the theoretical program. This exam will be considered eliminatory for those students who obtain a grade equal to or higher than 6 points out of 10. This grade is valid for the two calls of the same academic year.

1.2) Final evaluation test of the theoretical program

Written test to be taken during the exam periods established by the centre. This test will evaluate the contents of the entire theoretical program. Minimum grade required: 5 points out of 10, valid in the same academic year.

For those students who have passed and eliminated the midterm exam, this final exam may be on the part of the subject that has not been evaluated (block 2 of the theoretical program). In order for it to average with the eliminated midterm exam, it will be necessary to obtain a minimum grade of 4 points out of 10 and it will be valid in the same academic year.

Option of final evaluation of the theoretical program by oral examination: students who so wish may opt for the oral modality. In this case, they must request it to the teacher coordinating the subject within the established period. The oral examination will be held on the dates determined by the academic regime of the Centre.

2) Practical knowledge evaluation tests (35% of the final grade)

2.1) Evaluation of the Practicum in the slaughterhouse (15% of the final grade):

For those students who have completed the slaughterhouse practicum, the evaluation will consist of a written test of short and/or multiple-choice questions. This test will take place on the same date as the final evaluation test of the theoretical content. Minimum grade required: 5 points out of 10, valid in the same academic year. Students who, due to participation in a mobility program (Erasmus, Americampus, etc.) or other causes, have excused absences to the slaughterhouse practical sessions must attend the slaughterhouse make-up practices that are organized and take this written test.

For those students who have not completed the slaughterhouse practicum, the evaluation will consist of accrediting a minimum stay of 10 hours in the slaughterhouse supervised by official veterinarians, as well as taking a specific written test consisting of the resolution of practical cases, which will be held on the same date as the final evaluation test of the theoretical content. Minimum grade required: 5 points out of 10, valid in the same academic year.

2.2) Evaluation of Practicum in Pilot Plant and practices 1 to 10 (20% of the final grade):

It will consist of the following evaluation tests:

- Oral test: it will take place on the date scheduled for practice 10 and will consist of a presentation and group discussion of the work developed. The grade will assess the presentation and the subsequent correction and delivery of the work within the deadline indicated by the teacher. The grade obtained will be valid for two academic years.
- Written test, coinciding with the final evaluation test of the theoretical content, of short questions and/or multiple-choice questions on the teaching and practical work. Minimum grade required: 5 points out of 10, valid in the same academic year.

Assessment criteria: the ability to solve problems, the ability to search, analyse and process information, and the capacity for critical reasoning will be evaluated. The grade for this evaluation will be the arithmetic mean of the grades obtained in the oral and written tests. Minimum grade required: 5 points out of 10, valid in the same academic year.

Students who, due to their participation in a mobility program (Erasmus, Americampus, etc.) or for other reasons, have not done the group work, should contact the teacher so that they can assign a topic for individual work. The student must take an oral test in which they will present and defend the assigned work and answer questions about the practices of the subject. Minimum grade required: 5 points out of 10, valid in the same academic year.

Students who wish to improve the group grade obtained must pass a test, on the dates determined by the academic regime of the Centre, consisting of the written delivery of the corrected work. Minimum grade required: 5 points out of 10, valid in the same academic year.

6. Sustainable Development Goals

3 - Good Health & Well-Being

6 - Clean Water and Sanitation

12 - Responsible Production and Consumption