UAB
Universitat Autònoma de Barcelona

2020/2021

Management of Food Safety and Public Health

Code: 103262
ECTS Credits: 6

Degree	Type	Year	Semester
2501925 Food Science and Technology	OB	3	1

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

Principal working language: catalan (cat)

Some groups entirely in English: No

Some groups entirely in Catalan: Yes

Some groups entirely in Spanish: No

Other comments on languages

Classes could be taught partially in catalan

Teachers

Artur Xavier Roig Sagués

Ferran Torres

Prerequisites

Although there are no official prerequisites, it is convenient for the student to review the knowledge acquired in the subjects of first, second and third courses:

- Microbiology and Parasitology
- Statistics
- Food Toxicology
- Food Microbiology

Objectives and Contextualisation

The subject of Management of Food Safety and Public Health integrates knowledge as much of food safety risk analysis as of public health. risk analysis as the cornerstone of food safety policy and consisting of three components: risk assessment, risk management and risk communication.

General objetive

The purpose is introduce the student to food safety risk analysis as a tool for the protection of public Health. This tool is the cornerstone for selecting and implementing appropriate measures to control food safety risks, both by the administration and the food industry. Moreover, research methodology and interpretation of epidemiological studies will be evaluated in aspects related to food safety, the prevention of diseases and the evaluation of Health.

Specific Objetives

- Know the basis of food safety risk analysis
- Apply tools for the scientific risk assessment
- Know the policies for risk management applied to food safety both by the administration and the food industry
- Know the strategies in risk communication applied to food safety
- Know the basis of Public Health and its determinants
- Know the principles of the methodology in clinical research and its implications

Competences

- Analyse, summarise, resolve problems and make professional decisions.
- Apply the processes of evaluation, management and communication of food risk to all agrofood sectors.
- Apply the scientific method to resolving problems.
- Appreciate the human population's need for food and avoid its deterioration and loss.
- Communicate effectively with both professional and non-professional audiences, orally and in writing, in the first language and/or in English.
- Design experiments and interpret the results.
- Develop individual learning strategies and planning and organisation skills.
- Identify food hazards, their nature (physical, chemical, biological and nutritional), their origin or causes, their effects, and suitable methods for controlling them throughout the food supply chain so as to reduce risks to consumers.
- Intervene in policies, programmes and projects on food safety in the public or private sector, and differentiate appropriately between real and perceived risk.
- Search for, manage and interpret information from different sources.
- Show sensitivity to environmental, sanitary and social issues.
- Use IT resources for communication, the search for information within the field of study, data processing and calculations.
- Work individually or in unidisciplinary and multidisciplinary teams and in international contexts.

Learning Outcomes

1. Analyse, summarise, resolve problems and make professional decisions.
2. Apply suitable methods for monitoring the entire food supply chain in order to prevent the presence of biotic and abiotic agents in food.
3. Apply the mechanisms necessary for irrigation assessment.
4. Apply the scientific method to resolving problems.
5. Communicate effectively with both professional and non-professional audiences, orally and in writing, in the first language and/or in English.
6. Describe national and international nutritional risk prevention strategies.
7. Describe the food safety policies of the European Union and apply their principles.
8. Design and audit a self-control system in a food company.
9. Design experiments and interpret the results.
10. Determine the nutritional risk factors related to obesity, cancer, cardiovascular diseases and other diseases of nutritional origin.
11. Develop individual learning strategies and planning and organisation skills.
12. Evaluate the nutritional state of the population.
13. Identify and describe the properties of the principal biotic hazards in foods and determine their origin and the factors that determine their presence.
14. Identify consumers' needs for information and training on matters of food safety.
15. Recognise the health and hygiene requirements of food businesses.
16. Relate exposition to a toxic to the appearance of a particular symptomatology or pathology, in particular with the aim of establishing the origin and the agent of a particular contamination or food poisoning case.
17. Search for, manage and interpret information from different sources.

18. Show sensitivity to environmental, sanitary and social issues.
19. Spread appropriate information on food risks and how to prevent and control them.
20. Use IT resources for communication, the search for information within the field of study, data processing and calculations.
21. Work individually or in unidisciplinary and multidisciplinary teams and in international contexts.

Content

Part 1. Public Health

- Concept and functions of Public Health.
- Types of errors. Basic applied statistic.
- Concept and applications of Epidemiology.
- Measures of frequency, association and impact.
- Types of epidemiological studies.
- Diseases and nutrition. Exposure to environmental toxicity.
- Prevention. Health Management

Part 2: Management of Food Safety

- The risk analysis. Definition. Municipal, autonomous, state and European authorities involved in the analysis risk, and their relationship with other international organizations.
- The risk assessment: Hazard identification, hazard characterization, determination of the exposure assessment and risk characterization. Tools for risk assessment.
- Food safety management: Food Safety Policies in Catalonia and Spain. The official control as a tool for protecting public Health: municipal, autonomous, European and International competencies.
- Risk communication. Network of food alerts.

"*Unless the requirements enforced by the health authorities demand a prioritization or reduction of these contents."

Methodology

The course development of the course is based on the next activities, following a blended learning format

1) Classroom theoretical sessions: the fundamental concepts of the basic topics of the subject will be explained, using asynchronous channels such as the CV forum and synchronous channels as sessions via Teams on fixed dates and times

2) Computer classroom sessions: Computer tools to carry out the risk assessment, using synchronous channels such as sessions via Teams on a fixed date and time

3) Classroom practises sessions for group self-learning activities: Sessions will be held at the end of Public health part and Management of Food Safety part. Different sessions will be scheduled for their presentation and defence, using synchronous channels as sessions via Teams on a fixed date and time

4) Tutorials: tutorials will be done throughout the course to monitor self-learning work, and other aspects related to the subject. The tutorials have the aim to guide and resolve the doubts of students. Tutorials can be done individually or in groups, depending on the objectives, using email or via TEAMS on a fixed date and time.

5) Group Self-learning activities: students will have to do two tasks on a topic proposed by the professor, following formal guidelines and contents common to all groups. Tasks will be delivered by Moodle

"*The proposed teaching methodology may experience some modifications depending on the restrictions to face-to-face activities enforced by health authorities."

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Classroom practice sessions	12	0.48	1, 4, 3, 2, 17, 5, 18, 6, 7, 10, 9, 13, 14, 16, 19, 21, 20, 12
Classroom theoretical sessions	34	1.36	1, 4, 3, 2, 17, 18, 6, 7, 10, 9, 8, 13, 14, 15, 16, 19, 20, 12
Computer classroom	2	0.08	4, 3, 20
Type: Supervised			
Tutorials	4	0.16	1, 4, 3, 10, 13, 14, 16, 19, 12
Type: Autonomous			
Self-learning activities	44	1.76	1, 4, 3, 2, 17, 5, 11, 10, 9, 13, 14, 16, 19, 21, 20, 12
Shelf-study	50	2	3, 2, 17, 5, 6, 7, 11, 10, 9, 8, 13, 14, 15, 16, 20, 12

Assessment

The skills of this subject will be evaluated by:

a) First Control (Public Health part): Theory and activities related to individual or group self-learning will be evaluated Weight of the final mark: 20%.

b) Second Control (food Safety management): Theory and activities related to individual or group-based self-learning will be evaluated Weight of the final mark: 20%.

c) Individual self-learning activities online: It will have a 10% weight of the final mark, only of the participation has been at least a 80%

d) Attendance to the computer classroom session: It will have a 5% weight of the final mark

e) Group-based self-learning activities. Both written work and oral presentation will be valued. Public health activity will weight in the final mark of 25% and Food Safety Management activity will weight of 25%. If the student does not attend to the six sessions of the discussion of the work, the note will be only of a 70% of a weighted average of both task

The student will be graded as "Not Evaluable" if the weighting of all conducted evaluation activities is less than ≤ 15% of the final score.

To pass the course is required:

1. A minimum of 5 points (over 10) in each of the two controls. If this mark is not reached, the student must present to the recovery exam of control not overcome.

2. A minimum of 5 points (out of 10) in each the group self-learning activity performed

*"*Student's assessment may experience some modifications depending on the restrictions to face-to-face activities enforced by health authorities."*

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes

Attendance to the computer classroom session	5%	0	0	3, 20
First control (Part 1)	20%	2	0.08	4, 5, 10, 9, 19, 12
Group-based self-learning activities (document, presentation and defense): part 2	25%	0	0	1, 4, 3, 2, 17, 5, 7, 11, 9, 13, 14, 16, 19, 21, 20
Group-based self-learning activities (document, presentation and defense): part 2	25%	0	0	1, 4, 3, 17, 5, 18, 6, 11, 10, 9, 14, 19, 21, 20, 12
Individual self-learning activities on line:	5%	0	0	1, 4, 3, 17, 6, 11, 9, 19, 21, 20, 12
Second Control (part 2)	20%	2	0.08	3, 2, 7, 8, 13, 15, 16

Bibliography

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Management of food safety

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WEB Management of food safety

- OMS Food Safety: http://www.who.int/foodsafety/en/
- USDA American Food Safety and Inspection Service: http://www.fsis.usda.gov/
- International Food Safety Council: http://www.foodsafetycouncil.org/Food Safety Agency: http://www.food.gov.uk

- FDA (Food and Drug Administration) : http://www.fda.gov/Food/default.htm Codex Alimentarius: http://www.codexalimentarius.ne
- Codex Alimentarius: http://www.codexalimentarius.net
- European Food Safety Authority: http://www.efsa.europa.eu/
- Spanish Agency for Food Safety and Nutrition: http://www.aecosan.msssi.gob.es/AECOSAN/web/home/aecosan_inicio.htm
- Catalan Agency fod food Safety: http://acsa.gencat.cat/ca/inici/
- Food Safety Agency: http://www.food.gov.uk/
- Food Safety in Europe: http://ec.europa.eu/food/food/index_es.htm