

63012 - Methodology for evaluation of food risks

Syllabus Information

Academic Year: 2019/20

Subject: 63012 - Methodology for evaluation of food risks

Faculty / School: 105 - Facultad de Veterinaria

Degree: 566 - Master's in Food Quality, Safety and Technology

ECTS: 3.0

Year: 1

Semester: Second semester

Subject Type: Optional

Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. Lectures present theoretical contents for food risk assessment. Different information sources will be used in the practical sessions where students will work with case applied studies in order to assess biological and chemical hazards, guided by the teacher.

In the practical sessions students will be encouraged to participate actively and interpret in a critical way during the oral presentations.

4.2.Learning tasks

The course is offered to help students achieving expected results and includes the following learning tasks:

1. **Lectures.** Explanation of the fundamental concepts of risk analysis and methodology for assessment of biotic and abiotic hazard associated with food consumption, and databases and sources of information for the development of models of food risk assessment.
2. **Practical sessions.** Students apply the theoretical knowledge and search for information to solve cases and problems under the direct supervision of teachers, and they present an evaluation model of a food hazard related to biotic and abiotic origin.
3. **Paper preparation.** Students, based on specialized literature and under the teacher guidance, prepare a paper on a risk assessment model applied to different real scenarios to facilitate decision-making in the food hazard

management.

4. **Seminars.** Students, individually or in pairs, present their papers. In these sessions, the students participation will be encouraged, them to make a critical interpretation of the findings derived from each exercise.
5. **Individual or group tutorials** through an individual interview but no attendance based tutorial should be done for the work preparation related to risk assessment. Clarification of the methodology for the development of risk assessment, mentoring the students, and, if it is necessary, the solving of any doubts on the course contents.

4.3. Syllabus

The course will address the following topics:

Lectures (4 hours of two-hour sessions). Brief description of the contents

- Introduction to Risk Analysis. Assessment, management and communication of risk. Current status of risk assessment systems. Databases and information sources for the development of models of food risk assessment.
- Biological hazard assessment methodology associated with food consumption. Application of epidemiology. Qualitative, semiquantitative and quantitative assessments. Scientific information for the identification and hazard characterization. Predictive microbiology. Risk calculation models. Risk characterization models.
- Abiotic hazard assessment methodology associated with food consumption. Qualitative and quantitative evaluation. Collecting information to identify and characterize hazards. Dose-response characterization. Methods for the exposure quantification. Factor which determine the estimation of exposure dose. Risk characterization for non cancer effect. Risk characterization for cancer effect. Uncertainty characterization and variability.

Practical sessions (16 hours of 2-4 hours sessions). Brief description of the contents

- Problems and cases resolution with the risk assessment procedure.
- Theoretical and practical presentation of a model risk assessment related to biotic and abiotic hazard
- Exercises identification and hazard characterization.
- Exercises of exposure calculation related to hazards in food.
- Exercises of risk calculation associated with food consumption.

Paper preparation

The teacher will propose a work, which can be done individually or in pairs, on risk assessment. Besides, the students can choose or suggest a topic of interest. The work will be supervised by teachers of the course and submitted following the appropriate format and in the set date.

Seminars (10 hours of sessions lasting 2 or 4 hours each)

Work preparation through attendance-based tutorials (students and teacher)

Presentation of their paper work individually or in groups during 20 minutes.

Analysis and group discussion with other students and teachers related to the results and conclusions of each risk assessment exercise.

4.4. Course planning and calendar

Further information concerning the timetable and lectures and work presentations concerning to dates and important events related to the subject are in details described in the Faculty of Veterinary Science website: (<http://veterinaria.unizar.es/>) . This website is updated at the beginning of the academic course and will follow this temporal sequence:

1. Lectures in classrooms.
2. Practical sessions in a computer classroom (Zootecnia building).
3. Practical sessions devoted to the preparation and development of the works in a computer classroom (Zootecnia building). The work is given and worked and must be presented in the following 30 days individually or in groups (2 people) in one of the practical lessons.
4. Presentation and discussion seminars to present the works and discuss the results in class.

Office hours will be in the mornings (11- 14 hours a.m.) and will be agreed with the teacher responsible for the subject

4.5. Bibliography and recommended resources

Bibliography of the academic year is updated and looked up by the Library webpage. Recommended bibliography at: <https://biblioteca.unizar.es/>