

**COURSE DATA****Data Subject**

<b>Code</b>	36370
<b>Name</b>	Food safety
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	4.5
<b>Academic year</b>	2021 - 2022

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1212 - Degree in Gastronomic Sciences	Faculty of Pharmacy and Food Sciences	2	Second term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1212 - Degree in Gastronomic Sciences	12 - Food safety	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
BERRADA RAMDANI, HOUDA	265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med.
FERNÁNDEZ FRANZÓN, MÓNICA	265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med.
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**SUMMARY**

The subject of food safety (36370) is mandatory second year Bachelor of Gastronomic Sciences, taught at the Faculty of Pharmacy of the University of Valencia. In the current curriculum it consists of a total of 4.5 ECTS taught twice a year.

The main objectives are:



i) To provide students with the necessary knowledge on food safety to be able to know the principles and common responsibilities to achieve a high level of health protection.

ii) To acquire knowledge leading to the toxicological risk assessment and prevention thereof

For this knowledge is provided:

- Basic Toxicology
- Toxic substances in food
- Preventing food poisoning
- Risks evaluation

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

To study occupational hazards and environmental toxicology, the knowledge of a number of basic concepts that are part of the content of the subjects taught during the previous courses of grade is necessary.

## OUTCOMES

### 1212 - Degree in Gastronomic Sciences

- Know and know how to apply the hygienic and preventive measures against the main food alterations produced by biological and chemical components.
- Manage and handle food from a food safety perspective.

## LEARNING OUTCOMES

- To know the general aspects of toxins in food and poisonings.
- To handle food safety of raw materials, technological processes and cooked foods.
- To know the risks associated with food consumption.
- To know the main diseases caused by toxic food.



- To know how to use the toxicological information relating to food.
- To know the basics of food hygiene, processes and products

## **DESCRIPTION OF CONTENTS**

### **1. Introduction to Food Hygiene**

**Definition. Concepts of Food Codex Food security**

**2. . Cleaning and disinfection: Definitions. Types of dirt Cleaning process. Garbage Detergents and disinfectants.**

**3. Specific quality regulations in the food sector. Definitions contemplated in food legislation. General and specific principles.**

**4. Basis of toxicology. Toxicological concepts Phases of toxic action. Biotransformation reactions.**

**5. Toxic substances of natural origin. Marine foods. Antinutritive substances Mushrooms.**

**6. Biological contaminants present in food. The main foodborne pathogens. The main methods and procedures to prevent food poisoning and food poisoning**

**7. Fluorides, Nitrates and Nitrites.**

**8. Mycotoxins. Toxic effects. Prevention of contamination**

**9. Metals and other environmental and industrial pollutants**

**10. Pesticides. Toxic effects. Maximum residue limit****11. Veterinary residues. Toxic effects. Legislation.****12. Food additives. Classification, legislation and toxicological aspects.****13. Food allergies and intolerances****14. Toxics derived from food processing, preparation and storage.****15. Food alerts. Procedures to follow in food poisoning. Food Alert Statement Risk assessment. Alerts and Food Crisis Management. SCIRI Management of food notifications.****WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Study and independent work	67,50	0
<b>TOTAL</b>	<b>112,50</b>	

**TEACHING METHODOLOGY**

The development of the course will be structured as follows:

Theoretical classes aimed at the presentation by the teacher of the most important concepts and contents of each issue in order that the students acquire the knowledge related to the subject, encouraging participation.

Classroom multidisciplinary activities: problem solving and cases.- In these classes will take place the specific application of knowledge that the students have acquired in the theory classes solving case studies, management of scientific literature, discussion of current issues.

Study Preparation of activities, Classes and Individual Work Hours Exams.- intended for reading and preparing lessons, exam preparation



During the activities, both theoretical and practical, examples of the applications of the contents of the subject in relation to the Sustainable Development Goals (SDG) will be indicated, as well as in the proposals of topics for the coordinated seminars. This is intended to provide students with knowledge, skills and motivation to understand and address these SDGs, while promoting reflection and criticism. Of the 17 Sustainable Development Goals, particular emphasis will be placed on the following goals related to food security:

- 1- Goal 1: End poverty in all its forms everywhere
- 2- Objective 2: Zero Hunger
- 3- Objective 3: Guarantee a healthy life and promote well-being for all at all ages.
- 4- Objective 13: Take urgent measures to combat climate change and its impacts

## EVALUATION

Compulsory examination of all the contents taught. The possibility of carrying out written tests throughout the course is contemplated. (80%)

Continuous evaluation by the teaching staff of the subject, the result of contact with students in any of the sections of the learning process. (20%)

## REFERENCES

### Basic

- T Repetto M, Repetto G. Toxicología Fundamental. 4 ed, Díaz de Santos, Madrid, 2009.
- Klaassen CD, Watkins JB. Casarett y Doull fundamentos de Toxicología. Mc Graw-Hill Interamericana, Madrid (2005).
- Ballantyne B, Marrs TC, Syversen T. general and Applied Toxicology. 3rd ed. Wyley & Sons, West Sussex, 2009.
- Armendáriz Sanz, J.L. (2017). Seguridad e higiene en la manipulación de alimentos. 3<sup>ra</sup> ed.

### Additional

- Cameán A, M Repetto. Toxicología Alimentaria. Díaz de Santos, Madrid 2006.
- T Ballantyne B, Marrs TC, Syversen T (2009) General & Applied Toxicology. 3rd ed. Wyley & Sons, West Sussex exto referencia
- Hayes AW (2009) Principles and Methods of Toxicology. Taylor & Francis, London.



## **ADDENDUM COVID-19**

**This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council**

### **1. Contents**

All the contents initially included in the teaching guide are maintained

### **2. Volume of work and temporal planning of teaching**

The workload for the student body is maintained, changing the methodology of the activities with respect to the conventional teaching guide to adopt the hybrid teaching model.

### **3. Teaching methodology**

Theoretical teaching: If the usual presence is not feasible, it will be carried out through synchronous sessions (videoconferences). If the presence could be only partial, the students will be divided into groups, so that one group will be in the classroom of the Faculty while the other will connect online, alternating their attendance for weeks. In any case, the schedule (date and time) approved by the CAT and published on the web will be followed.

- Tutorials and consultations: If the presence is not feasible, they will be attended by videoconference (agreeing the time) or by Email with the commitment of 48h response on working days.

If a state of total confinement were to occur, all face-to-face teaching would be carried out online.

### **4. Evaluation**

If the evolution of the current pandemic allows it, it will be face-to-face and in the terms indicated in the teaching guide. Only in case this is not possible, the evaluation will be carried out through the virtual classroom with tasks or online questionnaires with single or multiple choice questions, which can be complemented with short questions and/or on certain occasions through an oral exam by videoconference.

The relative weight in the evaluation of the theory contents and continuous evaluation activities will be maintained as it is indicated in the teaching guide.

### **5. Bibliography**

It is not modified