



## COURSE DATA

### Data Subject

<b>Code</b>	41026
<b>Name</b>	Food Safety
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	10.0
<b>Academic year</b>	2022 - 2023

### Study (s)

Degree	Center	Acad. Period year
2021 - Master's Degree in Food Quality and Safety	Faculty of Pharmacy and Food Sciences	1 Annual

### Subject-matter

Degree	Subject-matter	Character
2021 - Master's Degree in Food Quality and Safety	1 - Food safety	Obligatory

### Coordination

Name	Department
FONT PÉREZ, GUILLERMINA	265 - Prev. Medicine, Public Health, Food Sc., Toxic. and For. Med.

## SUMMARY

Food Safety module aims to provide knowledge to estimate the risks associated with exposure to natural or synthetic toxics in food based on consumption patterns and population subgroups.

It will address the toxics of concern, its sources and formation and its effects, action mechanisms and manifestations of these effects and prevention of the intoxications by establishing safe limits.

It will study the methods used for toxicological research that will link the dose with the effects and by extrapolation using uncertainty factors to establish the most appropriate safety margins.

This module will furnish the bases of the analytical methodologies more used in determining of the toxics present in food.

It will introduce in the process of assessment, management and communication of toxicological concern.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

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

### Other requirements

Not applicable

## COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

### 2021 - Master's Degree in Food Quality and Safety

- Adquirir habilidades en las técnicas y métodos de análisis que permiten evaluar distintos aspectos de la seguridad de los alimentos.
- Adquirir conocimientos sobre los procedimientos reglamentarios en la gestión de la calidad alimentaria
- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Conocimiento de los conceptos básicos de higiene de los alimentos. Medidas higiénicas y preventivas.
- Conocimiento y capacidad para estimar los riesgos asociados a la exposición de sustancias químicas y de tóxicos biológicos en productos de consumo.
- Conocimiento de los métodos más empleados para evaluar riesgos por la presencia productos químicos y tóxicos en alimentos y medidas para su control.
- Conocimiento de los compuestos tóxicos procedentes de la fabricación de alimentos.
- Capacidad para interpretar los datos obtenidos de la evaluación del riesgo y extrapolación al hombre. Establecimiento de límites de seguridad.
- Capacidad para adaptar los procesos relacionados con los alimentos a las normas vigentes de higiene de los alimentos y sistemas de gestión de calidad.



- Conocer la investigación que en alimentación, nutrición y tecnología alimentaria demanda nuestra región.
- Manejar la metodología estadística y saber analizar problemas y aplicar las herramientas estadísticas más apropiadas en cada caso.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Ser capaces de obtener y de seleccionar la información y las fuentes relevantes para la resolución de problemas, elaboración de estrategias y asesoramiento a clientes.
- Elaborar y manejar los escritos, informes y procedimientos de actuación más idóneos para los problemas suscitados.
- Contemplar en conjunto y tener en cuenta los distintos aspectos y las implicaciones en los distintos aspectos de las decisiones y opciones adoptadas, sabiendo elegir o aconsejar las más convenientes dentro de la ética, la legalidad y los valores de la convivencia social.
- Know how to work in multidisciplinary teams reproducing real contexts and contributing and coordinating their own knowledge with that of other branches and participants.
- Participate in, lead and coordinate debates and discussions, be able to summarize them and extract the most relevant conclusions accepted by the majority.
- Use different presentation formats (oral, written, slide presentations, boards, etc.) to communicate knowledge, proposals and positions.
- Proyectar sobre problemas concretos sus conocimientos y saber resumir y extraer los argumentos y las conclusiones más relevantes para su resolución.
- Planificar, ordenar y encauzar actividades de manera que se eviten en lo posible los imprevistos, se prevean y minimicen los eventuales problemas y se anticipen sus soluciones.
- Obtener la formación necesaria para incorporarse a Departamentos de Investigación, Desarrollo e Innovación dentro de las empresas del sector agroalimentario.

**LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)**

Knowledge of toxics in food.

Toxicological analysis procedures.

Toxicological assessment methodologies.

Toxicological risk assessment.



## DESCRIPTION OF CONTENTS

### 1. Food Safety

Quality in agro-food industries: Certification, management and audits.  
Food Risk Assessment.  
Microbiological safety of food.  
Control of chemical contaminants in food.  
Analysis of environmental contaminants of food interest.  
toxicological studies in vitro and in vivo.  
Technical and biological samples of toxicological concern in food safety.  
Techniques for detection and identification of pathogenic microorganisms in food.  
Evaluation of the risk of exposure to metals  
Importance of virus detection in food.  
Toxic effects of yeasts in food.  
Risk assessment of exposure to mycotoxins.  
Assessment of pesticides.  
Veterinary drug residues in food.  
Toxicological risks of food supplements.  
Food Safety Programs.  
Studies of total diet in Food Safety

## WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	85,00	100
Attendance at events and external activities	18,00	0
Development of group work	20,00	0
Study and independent work	18,00	0
Readings supplementary material	15,00	0
Preparation of evaluation activities	4,00	0
Preparing lectures	40,00	0
Preparation of practical classes and problem	50,00	0
<b>TOTAL</b>	<b>250,00</b>	

## TEACHING METHODOLOGY

Theoretical lectures  
Resolution of practical cases  
Seminars  
Development of projects  
Debate and led discussion



Conference of experts  
Working groups

## EVALUATION

It can include the following modalities

Theory exam

Practical exam

Continuous Assessment

Individual work

## REFERENCES

### Basic

- Lecturas recomendadas por los profesores y profesoras disponibles en bases de datos de la UV o accesibles por internet.