

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

<b>Code</b>	41027
<b>Name</b>	Nutrition and Bromatology
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	10.0
<b>Academic year</b>	2023 - 2024

**Study (s)**

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

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
2021 - Master's Degree in Food Quality and Safety	2 - Nutrition and bromatology	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
BARBERA SAEZ, REYES	265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med.
RUIZ LEAL, MARIA JOSE	265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med.

**SUMMARY**

The Nutrition and Bromatology module will provide knowledge on design, formulation and functionality of bioactive components in food.

Food related processes and their adaptation to current quality standards in the food industry will be studied. The latest developments and trends in this field will be considered.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

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

### Other requirements

There are no enrollment restrictions for other subjects in the curriculum

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

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

- Saber evaluar la influencia de los componentes de los alimentos en la calidad de los mismos.
- 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.
- Conocer bases científicas de la nutrición y en relación con los últimos desarrollos y tendencias en este campo.
- Manejar con destreza las herramientas necesarias para evaluar los hábitos alimentarios.
- Proponer técnicas, estrategias y modelos de intervención nutricional en las situaciones fisiológicas especiales, así como en las patologías más prevalentes o relacionadas con la alimentación
- Reconocer las necesidades nutricionales de determinadas colectividades.
- 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.
- Obtener la cualificación necesaria para incorporarse a Departamentos de Investigación, Desarrollo e Innovación dentro de las empresas del sector agroalimentario.
- 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)**

- To know the scientific bases of Nutrition and Bromatology in relation to the latest developments and trends in this field.
- To know how to evaluate the effect of food components on the quality and functionality of food.
- Propose techniques, strategies and models of nutritional intervention in different situations.
- Know and be able to adapt food-related processes to current standards and quality management systems in the agri-food sector

## **DESCRIPTION OF CONTENTS**

### **1. Nutrition and Food Science**



- Job orientation and entrepreneurship in the agri-food sector.
- Documentation and management of scientific information.
- National and European agencies in nutrition and food safety.
- Validation of methods in food analysis.
- Nutritional quality: protein, nutritional profile improvement and intervention strategies.
- Tools for the design of healthier diets: microbiota, nutrigenomics and nutrigenetics.
- Quality in the agri-food sector: food information, management, certification, audits and sustainability.
- Biological activity of ingredients and/or bioactive components of food: in vivo and in vitro methods.
- Conferences related to food quality

## 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 classes: the lecturer, an expert in the subject to be covered, will provide the student with information on the subject to be studied (basic and/or complementary) previously in the virtual classroom. In order to follow the class, the student is recommended to review the material beforehand.

Group work activities: The lecturer may propose individual and/or group activities to the master students.

Workshops will be held on specific topics of interest such as entrepreneurship, food safety, industrial doctorate and food innovation.

During the theoretical classes and activities, the applications of the contents of the subject in relation to the Sustainable Development Goals (SDGs) will be indicated. This is intended to provide knowledge, skills and motivation to understand and address these SDGs, while promoting reflection and critique.



## EVALUATION

In order to evaluate the theory, tests will be given throughout the period of the course. These tests may be written and/or on-line. The exam will consist of multiple choice questions. It is necessary to have a grade  $\geq 5$  to pass the course.

There may be individual and/or group evaluable activities that will contribute a maximum of 10% to the final grade.

## REFERENCES

### Basic

- Lectures recomanades pels professors i professores disponibles en bases de dades de la UV o accessibles per internet.

### Additional

- [https://www.aesan.gob.es/AECOSAN/web/home/aecosan\\_inicio.htm](https://www.aesan.gob.es/AECOSAN/web/home/aecosan_inicio.htm)
- <http://www.efsa.europa.eu/es>
- <https://www.mapa.gob.es/es/alimentacion/temas/default.aspx>
- <https://www.fao.org/home/es>