

**COURSE DATA****DATA SUBJECT****Code:** 33983**Name:** Bromatology**Cycle:** Undergraduate Studies**ECTS Credits:** 10.5**Academic year:** 2025-26**STUDY (S)**

Degree	Center	Acad. year	Period
1103 - Degree in Food Science and Technology	Facultat de Farmàcia i Ciències de L'alimentació	2	Annual

**SUBJECT-MATTER**

Degree	Subject-matter	Character
1103 - Degree in Food Science and Technology	Bromatology	COMPULSORY

**COORDINATION**

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**SUMMARY**

This subject has two blocks:

-Basic concepts related to: a) Terminology of the subject: Bromatology, food-nutrient, feeding-nutrition, nutritional value; b) Types of foods: functional, new foods and food supplements; c) Quality of foods and legislative aspects

-Study of the different food groups (animal and plant origin, beverages and others) regarding the following aspects: composition, properties and quality parameters.

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## PREVIOUS KNOWLEDGE

### RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

### OTHER REQUIREMENTS

Biology, General and Organic Chemistry and Biochemistry

To enrol simultaneously other subject of module of Food Sciences such as Food Chemistry and Food Technology.

## COMPETENCES / LEARNING OUTCOMES

### 1103 - Degree in Food Science and Technology

Acquire capacity to assess the impact of the consumption of food on the health of the population.

Adquirir capacidad de utilizar adecuadamente las fuentes de información y comunicación disponibles.

Be familiar with discipline-specific terminology.

Capacidad de interpretar datos relevantes.

Develop skills to undertake further study.

Know how to apply that knowledge to the professional world contributing to the development of human rights, democratic principles, the principles of equality between women and men, solidarity, protection of the environment and promotion of the culture of peace, from a gender perspective.

Know the composition of the different food groups.

Know the definition and classification of different food products according to national, European and international legal standards.

Know the general and specific parameters of quality for each food group.

Know the technological, nutritional and health properties of foodstuffs.

Poseer y comprender los conocimientos en el área de Ciencia y Tecnología de los Alimentos.

The ability to transmit ideas, problems and solutions within this study area and to communicate the knowledge acquired.



## DESCRIPTION OF CONTENTS

### 1. GENERAL

Subject 1.-Food Science. Concept .Academic guidelines

Subject 2.-Concept of food and nutrient. Nutrition value of foods. Food groups.Food legislation

Subject 3.-Functional foods. Novel foods. Food complements.

Subject 4.- Books and food composition date bases

Subject 5.- Food information: food labeling

Subject 6.-Quality of foods.Criteria of quality.Alteration of foods

### 2. Animal foods

Subject 7- Meat and meats products. Classification. Composition and nutritional value. Characteristics of quality

Subject 8.- Fish, products of the fish and derivatives. Classification. Composition and nutritional value. Characteristics of quality

Subject 9.-Eggs and derivatives. Composition and nutritional value. Characteristics of quality

Subject 10.-Milk and dairy products. Classification. Composition and nutritional value. Characteristics of quality

### 3. Vegetal foods

Subject 11.-Fats of vegetal origin. Modified fats.Fat substitutes. Quality parameters

Subject 12.-Cereals and derivatives.Classifications .Wheat and rice:structure and grain composition.Flour: composition. Bread. Bakery products.Composition and nutritional value. Breakfast cereals.Quality parameters

Subject 13.-Vegetables.Classification.Composition and nutritional value.Criteria of quality

Subject 14.-Tubercles. Composition and nutritional value

Subject 15.- Vegetables and derivatives .Classification. Composition and nutritional value. Commercial presentations. Criteria of quality

Subject 16.-Fruits and derivatives. Classification.Composition and nutritional value. Commercial presentations.Criteria of quality



## 4. Beverages

Subject 17.-Water.Potable water. Packaged drink waters. Parameters of quality

Subject 18.-Alcoholic beverages .Classification. Composition and nutritional value. Parameters of quality

Subject 19.-Non- Alcoholic beverages .Classification. Composition and nutritional. value.Parameters of quality

## 5. Others

Subject 20.- Coffee, tea, cacao and derivates .Composition and nutritional value

Subject 21.- Natural sweeteners: Sugar and honey.Composition and nutritional value. Parameters of quality

## 6. Laboratory and informatic sessions

Five laboratory sessions(4h/sesión)

1.- Oils: Degree of acidity, peroxide index, UV absorption

2.-Fruit juices : vitamin C, density, Brix degree. Milk: Dry extract, ashes,humidity

3.-Vegetal caned foods: net and slipped weigth, pH, acidity, chlorides

4.- Coffee: cafein determination. Non-alcoholic beverages: Quinine determination

5.-Eggs:Traceability.Quality parameters. Cholesterol determination

Two informatic sessions (2x 2,5 h):

Foods comparisons: Composition and nutritional values. Uses of food composition base dates

Evaluation and food labeling

## WORKLOAD

### PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	4,00
Theory	65,00
Seminar	5,00
Laboratory	25,00
<b>Total hours</b>	<b>99,00</b>

### NON PRESENCIAL ACTIVITIES



Activity	Hours
Attendance at other activities	0,00
Individual or group project	25,00
Independent study and work	100,00
Preparation of lessons	12,50
Preparation for assessment activities	20,00
Resolution of case studies	0,00
<b>Total hours</b>	<b>157,50</b>

## TEACHING METHODOLOGY

**Theoretical classes:** 65 hours / course. The classes are imparted with the support of technical audiovisual material. This material will be previously made available to the student through the virtual platform. The teacher will be able to use TIC tools to achieve the most relevant concepts. It will be contemplated to relate the issues with aspects of the Sustainable Development Goals (SDG) more related to the matter.

**Seminars:** four coordinated seminars on topics provided by the teacher or proposed by the students (some of them related to the SDGs most aligned with the subject). The seminars will be supervised through tutorships, arranged between the teacher and students. The seminars will be developed in writing and will be presented by the students. Following the verbal presentation, the rest of the students will have the opportunity to intervene, moderated by the teacher.

A seminar did not coordinate the activities to bid for a tasca to the virtual classroom.

**Practical classes (laboratory and software):** 25 hours/course. Five practical laboratory classes with a duration of four hours, and two computer room sessions (5 hours). The teacher will previously distribute a booklet with the procedures, which will be available through the virtual platform.

The students will have to elaborate a memorandum, in the format that will facilitate him previously, of each of the practices of laboratory that it will include: objective, sample description, experimental data, calculation, interpretation of results and references used. They must elaborate and deliver the corresponding memorandum on having finished every practice.

In the case of the two practical computer sessions, the students will carry out a work involving comparison of the composition and nutritional value of specifically foods, to be presented in writing. The memoranda are to be presented during the one week following conclusion of the practical classes.

**Tutoring:** Four tutorships are contemplated, each with a duration of one hour, per group of students. The students will establish the doubts on the subject, with short questions and/or previously supplied problems through the virtual platform.



During the classes, 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

## EVALUATION

**1.- Theoretical exam:** The exam material will include the subjects presented during the theoretical classes involving open and short questions or alternative response questions (true-false), with due reasoning and short questions as well as online questionnaires.

Continuous evaluation will be carried out in both semesters with various tests representing **60%** of the final mark. It is required to obtain a minimum of 5 points out of 10 in the sum of all the tests carried out per semester. The mark of the test of the first semester only will be saved for the official examination sessions. If the student does not take part in the continuous evaluation, they will take the officially scheduled tests

**2.- Seminars:** The seminars coordinated (one each semester) will contribute 10% to the final grade, and the aspects relating to evaluation will be those agreed for coordinated seminars (to be made public through the virtual platform of the Center, Grau de Ciència i Tecnologia dels aliments). The student must write a report in relation to the seminary about food science matter. Evaluation will be made on the level of understanding of the contents and of the skills in his/her presentation and discussion. Not attending without justifiable cause coordinated seminars sessions, involve a zero mark corresponding to the seminar evaluation.

**3.- Tutoring:** Evaluation will be made of student reply to the questions presented in writing as homework in the virtual platform. Tutoring will contribute 10% to the final grade.

**4.- Practical sessions:** Evaluation will be made of the drafting of memoranda (this test will represent 10% of the final grade).

In addition, a written test will be taken that will contribute **10%** to the final grade.

Students which did not pass the theoretical and practical examination, their marks from the practical session will be saved during the next two years. After this period, students must repeat again the practical



session.

**Participation in the tutorships, seminars and practical sessions is obligatory in order to pass the subject.**

**Call advanced exam:** To request advancement of call for review of this subject, the students must have all the mandatory of the course carried out (seminars, tutorials and Practices).

**Remember:**

**-Two seminars (one for each semester) are required to pass the matter.**

**Students who are repeating the subject, marks from the tutorials and seminars will be maintained. Marks corresponding to the lab report will be maintained for the following two years after their performing. After this period, lab sessions will have to be repeated.**

-If the student pass tutories and seminars, but he/she do not perform the theoretical-practical proofs , the mark will be Non presented

-The subject will not be considered approved, although a mark of 5 is achieved by the sum of the grades for seminars, tutorials, theoretical-practical proofs, if marks do not met the minimum requirements described in the evaluation section.

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