

Food Products

Code: 103239
ECTS Credits: 6

Degree	Type	Year	Semester
2501925 Food Science and Technology	OB	2	1

Contact

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Teaching groups languages

You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject. Please note that this information is provisional until 30 November 2023.

Teachers

Mireia Porta Oliva

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Prerequisites

Although there are no official prerequisites, it is convenient for the student to review the knowledge acquired in the first year subjects:

- 1) Chemistry I and II
- 2) Biochemistry I
- 3) Production of Raw Materials

Objectives and Contextualisation

The subject "Food Products" is a course that aims to introduce the student to the world of food, presenting in a general way all the aspects related to its importance in relation to its consumption in our society, its fundamental composition, properties nutritious and functional and commercial and regulatory aspects, as well as their technological skills.

overall objective

Identify and classify the different types of foods, determining their nutritional and technological aptitudes based on their composition and characteristics.

Training objectives:

- Evaluate the importance that different food groups have for our society,
- Classify foods in their fundamental groups, both commercially and in their composition, nutritional value and technological transformation,
- Identify the different nutritive, functional and anti-nutritive substances of the food,
- Determine your aptitudes for technological transformation,
- Evaluate the effects of the technological transformation in the seves propietats.

Competences

- Communicate effectively with both professional and non-professional audiences, orally and in writing, in the first language and/or in English.
- Display knowledge of nutrients, of their bioavailability and function in the organism, and the bases of nutritional balance.
- Display knowledge of the physical, chemical, biochemical and biological properties of raw materials and foods.
- Identify the sources and the variability of raw materials in order to predict their impact on processing and food.
- Search for, manage and interpret information from different sources.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Use IT resources for communication, the search for information within the field of study, data processing and calculations.

Learning Outcomes

1. Classify and describe foods in terms of their nature and composition, and know their principal structural and stability characteristics.
2. Communicate effectively with both professional and non-professional audiences, orally and in writing, in the first language and/or in English.
3. Comply with regulations on the composition and properties of foods.
4. Describe the nutritional and functional characteristics of the different groups of foods.
5. Determine functional and nutritional properties from their composition.
6. Evaluate aptitude for transformation with the aim of obtaining other food products.
7. Evaluate raw materials' technological value in food production and their consequences for nutrition in the light of changes in their composition or properties.
8. Identify the technologically-useful properties of food components.
9. Search for, manage and interpret information from different sources.
10. Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
11. Use IT resources for communication, the search for information within the field of study, data processing and calculations.

Content

Theory

Block I. GENERAL CONCEPTS

- Concepts of Food Science and Food Science,
- Concepts of edibility, alteration and quality,
- Nutritious and anti-nutritive components of food,
- Requirements of food for consumption: standardization,
- Consumer information: labeling,

- Introduction to the main sources of information.

Block II. FOOD OF ANIMAL ORIGIN

- Meats and derivatives
- Fish, shellfish and derivatives
- Eggs and egg products
- Milk and dairy products, including ice cream

Block III. VEGETARIAN FOOD

- Cereals, flours, bread and others derived from cereals,
- legumes,
- Vegetables, mushrooms and derivatives,
- Fruits and nuts, and derivatives.

Block IV. FOODS WITH SENSORY AND STIMULATING PROPERTIES

- Stimulant foods and derivatives: coffee, tea, cocoa and chocolate,
- Natural and synthetic sweeteners,
- Salt, spices and condiments,
- Edible oils and fats.

Block V. DRINKS

- Drinking water and packaged,
- Non-alcoholic beverages: juices and soft drinks,
- Alcoholic beverages: fermented and distilled.

Block VI. FOOD FOR SPECIAL FOODS

- Foods for infants and young children, dietetic foods and for special medical purposes,
- Food Complements.

Methodology

Teacher development will be based on the following activities:

Theoretical classes:

They will consist of master classes with ICT support. In this case the material will be located on the virtual campus. Each of the 6 thematic blocks will be developed, by each of the participating teachers, through recordings or commented PowerPoint presentations. These materials will explain the concepts and information relevant to learning the subject.

In the virtual campus the topics will be classified by thematic blocks, so that the monitoring is easier.

Practical classes:

The practical sessions will focus on the evaluation of the correct food labeling and on the development of the subject's competences, which will be the basis of the self-study work.

Tutorials:

the student will be able to carry out tutorials throughout the course to follow up on the self-study work and other aspects related to the subject. The tutorials will be mainly aimed at guiding and solving the doubts of the students. The tutorials can be done individually or in groups, depending on the objectives. Each student will be able to contact the teaching team by email to schedule the tutorials when they need it.

Self-learning:

Teachers will program directed self-learning activities, aimed at evaluating the subject's competences. Therefore, seminar sessions have been scheduled to address questions about individual work. In these works, each of the foods to be studied must be developed:

1. Classify and describe foods according to their nature and composition,
2. Describe the nutritional and functional characteristics of food,
3. Demonstrate that the nutrients are known, their bioavailability,
4. Identify the technological utility of food components.
5. Evaluate based on changes in the composition or properties of raw materials the technological utility in food processing and its consequences on food,
6. Assess the aptitude for transformation in order to obtain other food products,
7. Identify the sources and variability of raw materials to predict the impact on processing and feeding operations,
8. Apply the regulatory aspects regarding the composition and properties of food,
9. Search, manage and interpret information from various sources.
10. Use computer resources for communication and information search in the field of study, data processing and calculation.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Practical classes	13	0.52	3, 1
Theoretical classes (lectures or master classes of theory)	32	1.28	3, 1, 4, 5, 8, 6
Type: Supervised			
Tutorials	5	0.2	3, 1, 2, 4, 5, 8, 6
Type: Autonomous			
Preparation of case studies and continuous evaluation activities	45	1.8	3, 9, 1, 4, 5, 8, 11, 6
Self study	50	2	3, 9, 1, 4, 5, 8, 11, 6

Assessment

The evaluation will be based on the fulfillment of the described competences of the subject. To do this, we will be based on the cases, the seminars developed, the participation in the question sessions, in the correction of

the deliverables and in the theoretical exams. To facilitate learning the subject is divided into two parts. These two parts correspond to the partial examinations 1 and 2. However, the deliverables and the practical activities will be developed throughout the subject.

Deliverables:

Each student will have to be evaluated according to 10 competencies:

1. Classify and describe foods according to their nature and composition, and to describe the nutritional and functional characteristics of foods,
2. Demonstrate knowledge of nutrients, their bioavailability and identify the technological utility of food components.
3. Assess the technological utility of food processing and its effects on food in the light of changes in the composition or properties of raw materials, and to assess the suitability for processing in order to obtain other foodstuffs,
4. Identify the sources and variability of raw materials to predict the impact on processing operations and feeding,
5. Apply the normative aspects regarding the composition and properties of foods,
6. Search, manage and interpret information from various sources.
7. Use computer resources for communication and information retrieval in the field of study, data processing and computation.

Each of them will be evaluated with the deliverables that will be proposed to the students, which will give an overall evaluation of the degree of compliance with them. Deliverables 1, 2 i 3 will be evaluated from 0 to 20 points. Deliverables 4, 5, 6 and 7 will be evaluated from 0 to 10. Therefore, adding each of the deliverables will give rise to a global mark between 0 and 100. To pass the subject, a minimum of 70 points will be required. This part will only be counted if a minimum of 80% of the activities proposed throughout the course have been delivered..

This part will be evaluated with 50% of the final grade of the subject.

Theoretical exams:

- a) Control of blocks I and II, with a weight of 20% of the final grade. The theoretical exam will be a test type and will deduct 0.25 points for each incorrectly answered question.
- b) Control of blocks III to VI with a weight of 20% of the final grade. The theoretical exam will be a test type and will deduct 0.25 points for each incorrectly answered question.

Each of the exams will have 100 questions, corresponding to the theoretical training and the proposed deliverables. For the realization of the examination the students will have 60 minutes and will have to obtain a minimum of 40 points, that will be equivalent to a 5. The maximum note (10) will be the maximum note obtained by the students of the asignatura. The rest of the scores, from 0 to 10, will be calculated in proportion to the maximum mark obtained. To pass the course it will be necessary to pass each of the two exams.

Assistance:

Attendance at synchronous activities and tutorials will be valued at 10% of the final grade.

To pass the subject you are asked to have obtained:

A minimum of 5.0 points (out of 10) in a weighted average of the different evaluable elements: Attendance (10%), deliverables (50%) and theoretical exams (40%).

A student will be considered non-assessable if he has participated in assessment activities that represent que 15% of the final grade.

This subject does not provide for the single assessment system.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Assistance	10%	0	0	9, 11
Continuous evaluation activities of individual realization (self-learning)	50%	0	0	10, 3, 7, 9, 1, 2, 4, 5, 8, 11, 6
Control of blocks I to II (individual)	20%	2.5	0.1	3, 7, 1, 4, 5, 8, 6
Control of blocks III to VI (individual)	20%	2.5	0.1	3, 7, 1, 4, 5, 8, 6

Bibliography

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Software

The Professional Nutrition program will be used, to know the composition of different foods and to be able to develop the proposed works in the different competencies.