

Degree programme	Type	Course
Food Science and Technology	OB	2

Contact lecturer

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Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

It is necessary to know Catalan because the classes are in this language.

Mathematics (algebraic operations, derivative, integral and simple differential equations resolution) and basic concepts of chemistry and physics.

Objectives

Understand the basic principles that characterize an industrial process. Know how to solve mass and energy balance (without chemical reaction) in order to know how to design simple processes in the food industry.

Learning outcomes

1. Analyse, summarise, resolve problems and make professional decisions.
2. Apply the scientific method to resolving problems.
3. Develop individual learning strategies and planning and organisation skills.
4. Apply the fundamental principles of matter and energy balances.
5. Apply the fundamental principles of phase equilibrium.
6. Apply the fundamental principles of interface transport.

Contents

Students will have access to the teaching material of the subject through the Moodle platform (Virtual Campus).

Topic 1. Introduction

Topic 2.- Macroscopic mass balance in systems without chemical reaction

Topic 3.-Macroscopic energy balance

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Theory lectures	26	1.04	1, 2, 3, 4, 5, 6
Concepts study and solving problems set	92	3.68	1, 2, 3, 4, 5, 6
Tutoring	6	0.24	1, 2, 3, 4, 5, 6
Seminars	5	0.2	1, 2, 3, 4, 5, 6
Problems set	15	0.6	1, 2, 3, 4, 5, 6

The development of the course is based on the following activities:

Theory lectures. Students take the scientific knowledge of subject in the presential lectures which should be complemented with personal study.

Problem sets. The scientific knowledge of the theory material is worked through problem sets.

Seminars. Cooperative activities working the scientific knowledge of the theory lectures and problems sets.

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.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Cooperative avaluation activity	10%	0	0	1, 2, 3, 4, 5, 6

Partial 2 (Topic 3)	45%	3	0.12	1, 2, 3, 4, 5, 6
Partial 1 Exam (Topic 1 and 2)	45%	3	0.12	1, 2, 3, 4, 5, 6

The competences of this subject will be evaluated by means of:

Partial 1: topics 1 and 2

Partial 2: topic 3

Cooperative activity carried out in required attendance seminars.

To participate in the retake exam, the students must have previously been evaluated in a set of activities whose weight equals to a minimum of two thirds of the total grade of the subject.

Students will obtain the "Not Evaluable" qualification when the assessment activities carried out have a weighting of less than 15% in the final grade.

Retake exam: If the final qualification (weighted average) of the tests carried out of the subject is less than 5/10, students can do a second exam of partial tests that have not been passed. It is mandatory to have a minimum grade of 3,5/10 in the second partial to calculate a valid weighted average final qualification (if this minimum is not exceeded, the resulting grade will be at most 4/10).

A special distinction (MH) can be given from the 9/10 qualification with the limitation of up to 5% of MH of the total number of students enrolled.

Without prejudice to other disciplinary measures that may be considered appropriate, the irregularities (copy, plagiarism, deception, letting copy, etc.) committed by the students that may lead to a variation of the qualification of an evaluation activity will lead to suspend them with a zero. Also this may lead to the initiation of a disciplinary process.

The repeating students will have the same system of continuous evaluation.

For each evaluation activity, a place, date and time of review will be indicated. If the student does not appear, it will not be reviewed later.

Single evaluation:

Students who follow this kind of evaluation will have an unic exam, to evaluate all the subject contents, at day and hour scheduled for the partial 2.

The same retake exam system used in continued evaluation will be applied

The same grade of "Not Evaluable" used in continued evaluation will be applied

The same review qualification procedure used in continued evaluation will be applied

In the assessment activities of this subject, the use of Artificial Intelligence (AI) technologies is not allowed and will be considered a lack of academic honesty, leading to a partial or total penalty in the grade of the activity.

Bibliography

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Felder, Richard M and Rousseau Ronald W (2003). Principios elementales de los procesos químicos. 3ª edició, Limusa Wiley, México.

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Singh, R. Paul and Heldman, Dennis R (2009). Introduction to food engineering. 4ta edició, Academic Press, Amsterdam. (recurs electrònic Biblioteques UAB:
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Valentas, K.J., Rotstein, E., Singh R.P. (eds.) (1997). Handbook of Food Engineering Practice. CRC Press, New York.

Software

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Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TE) Theory	1	Catalan	first semester	afternoon
(PAUL) Classroom practices	1	Catalan	first semester	morning-mixed
(PAUL) Classroom practices	2	Catalan	first semester	morning-mixed