

30835 - Pilot Plant Practical Classes

Syllabus Information

Academic year: 2023/24

Subject: 30835 - Pilot Plant Practical Classes

Faculty / School: 105 - Facultad de Veterinaria

Degree: 568 - Degree in Food Science and Technology

ECTS: 6.0

Year: 4

Semester: Second semester

Subject type: Compulsory

Module:

1. General information

The objective of the subject is that the students, through the preparation and execution of a development and/or innovation project in a Pilot Plant, complement and apply in an autonomous and integrating way the knowledge acquired in their previous academic training. In this way, the aim is to promote the acquisition of technical, methodological, personal and participatory skills that will prepare them for the exercise of their professional activity and foster their capacity for entrepreneurship, creativity, teamwork and leadership.

These approaches and objectives are aligned with the Sustainable Development Goals (<https://www.un.org/sustainabledevelopment/es/>) and specific targets, such that the acquisition of the learning results will contribute to some extent to the achievement of Objectives 2.4 of Goal 2; 3.4 of Goal 3; 4.7 of Goal 4; and Objectives 12.3 and 12.5 of Goal 12.

2. Learning results

The student, in order to pass this subject, must demonstrate that:

1- Is capable of proposing a development and/or innovation project aimed at the design of a food processing line, taking into account technical, hygienic, legal, economic and/or environmental criteria and defend it publicly.

To do so, they are able to manage information, organize, estimate the necessary material, manipulations and equipment, choosing them on the basis of their advantages, disadvantages and limitations, foresee methodological difficulties and problems, and propose possible solutions.

2- Is able to learn autonomously.

3- Is able to handle efficiently and safely food processing equipment, modify processing conditions, and use the most appropriate control systems

4- Is capable of executing a pilot plant project working in a team; is capable of leading a work team and possesses interpersonal relationship skills in a collaborative environment.

5. Is able to interpret and analyse the results obtained and draw appropriate conclusions.

6- Is capable of preparing a report in which they presents a development and/or innovation project, the activities carried out, the results obtained and the conclusions of their work.

7- Is capable of preparing an audiovisual document for educational use showing the processing line of a new food.

3. Syllabus

The subject favours the integration of knowledge and competencies acquired up to the fourth year of the degree. It focuses on practical projects related to the development of new foods that respond to the current and future demands of society. It does not follow a standard program, but is adapted to the needs of each project through seminars on the scientific method, reporting, leadership, teamwork, etc. The students (in groups of 3-5 components), under the guidance of the teachers of the subject, prepare a development and innovation project, attend problem-solving sessions, execute the project in the Pilot Plant and prepare a final report and an audiovisual document that includes the results obtained.

4. Academic activities

- Attendance to 5 hours of seminars: scientific method, reporting, leadership and teamwork.
- Preparation of a development and innovation project during the first two months. Teamwork and autonomous work (20 hours).
- Attendance to preparation sessions, problem solving and evaluation of the initial report (30 hours).
- Execution of the Pilot Plant project during a 55-hour stay in the last three weeks of the term.
- Preparation of a report containing the analysis of the results obtained (30 hours).
- Creation of an audiovisual document describing the raw materials, processes and final product created by the group (4 hours hours).
- Performance of non-face-to-face evaluation activities (6 hours).

5. Assessment system

The subject has a continuous evaluation system that allows the student to demonstrate that they has achieved the learning results. The evaluation activities include the preparation and presentation of the project in group and individual evaluation, follow-up during project implementation, presentation of a written report and an audiovisual document.

The first test, the preparation of the project, is carried out before the start of the pilot plant project and consists of the evaluation of the preparation of the experimental phase in a group and individual manner. The group evaluation is based on a report and an oral presentation, while the individual evaluation focuses on questions about the experimental design and the ability to handle the necessary equipment. This test accounts for 30% of the final grade.

The follow-up test is carried out during the three weeks of project execution and evaluates the teamwork, the participation and leadership of the students, and their knowledge about the evolution of the project. This test accounts for 20% of the final grade.

The presentation of the written report on the work performed is evaluated according to specific criteria and represents 40% of the final grade. The report may be individual or group, in which case, the responsibility of each student in the execution and subsequent writing of the sections "Objectives", "Material and methods", "Results and discussion" and "Conclusions "must be indicated.

The working group will deliver an audiovisual document showing the processing of the food (10% of the final grade).