

30833 - Oenology

Syllabus Information

Academic year: 2023/24

Subject: 30833 - Oenology

Faculty / School: 105 - Facultad de Veterinaria

Degree: 568 - Degree in Food Science and Technology

ECTS: 6.0

Year: 4

Semester: First semester

Subject type: Compulsory

Module:

1. General information

The objective of this subject is to provide training in the knowledge of wine and its properties, including its industrial process, control and analysis. Students should finish the subject knowing how wine is produced, which technologies should be used for its production, the chemical and biochemical transformations that take place during the winemaking process and which are the critical parameters that need to be controlled in order to obtain the best possible product.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), so that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement: Goal 4: Quality Education; Goal 9: Industry, innovation and infrastructure, Goal 12: Responsible production and consumption

2. Learning results

In order to pass this subject, the students shall demonstrate they have acquired the following results:

- Knows the main groups of compounds synthesized in grapes in order to explain the composition of must and wine, taking into account their origin.
- Identifies the microorganisms responsible for the transformations that take place from grape to finished wine.
- Knows the chemical and biochemical transformations that take place during the winemaking process and how to take advantage of them.
- Is able to assess the technology required to obtain white, rosé and red wines.
- Is capable of performing descriptive sensory analysis of different wines.
- Is capable of analysing the parameters by which wine quality can be controlled.
- Is able to elaborate a team work on a topic relevant to the subject, from information sources in English and Spanish, and present it orally.

3. Syllabus

Theoretical classes

1. Introduction to oenology.
2. Grapes. Origin and evolution of the vine.
3. Chemical composition of the grape berry, its ripening.
4. Wine components.
5. SO₂ in oenology.
6. Alcoholic fermentation and yeasts.
7. Malolactic fermentation and lactic acid bacteria.
8. The grape harvest. Factors that can affect the quality of the harvest.
9. General outline of the production of white wines.
10. General scheme of red wine production.

11. Factors affecting the aging and ageing of wines.

12: Notions of cleanliness, clarification and stabilization.

13: Bottling

The program is completed with laboratory practices, a visit to a winery and the preparation of a paper

4. Academic activities

- Training Activity 1: Acquisition of basic knowledge of the subject (3 ECTS). Participatory master classes in large groups.
- Training Activity 2: Tasting practices (0.8 ECTS in 2h sessions) and laboratory-plant (1.2 ECTS in 3h sessions). Case-based learning. Team and individual work.
- Training Activity 3: Tutorial work (0.5 ECTS). Learning based on seminars and case studies related to the subject. Oral presentation in class. Team and individual work.
- Training Activity 4: Special practices (0.5 ECTS). Visit to a winery during the harvest season.

Supporting material: Tutorials (individual or in small groups) and complementary material via web.

5. Assessment system

Completion of a written objective test with questions on the **theoretical contents** of the subject. It will be held on the dates established in the examination calendar prepared by the centre. To pass the subject it will be necessary to obtain a grade equal or higher than 4 points out of 10. (65% of the final grade)

Practices: Attendance will be mandatory to pass the subject. The evaluation will be based on the numerical results obtained in the laboratory practices-pilot plant and on the previous and final questions that will be carried out at the end of the semester. (20% of the final grade)

Individual tutored work. The public oral presentation will be compulsory, and its valuation will be worth half of the grade of this activity. The other half will come from questions related to the seminars prepared by the students, which will appear in the written test at the end of the semester. (10% of the final grade)

Visits to companies in the sector. Attendance is mandatory. The evaluation will be through a questionnaire. (5% of the final grade).

It will be assessed in the different tests:

1. The degree of structuring and coherence of the response,
2. Understanding and handling of the concepts discussed in the subject
3. Precision and conciseness in language and response.

Global test. For students who have not followed the above continuous assessment process, a three-part global test will be provided : 1.- theory questions (60% of the final grade); 2.- explanation of the elaboration of a type of wine, previous bibliographic search (20% of the final grade); 3.- semi-practical test in the laboratory (20% of the final grade). The assessment criteria described above will be applied.