# Oenology II (Processes)

## Prof. Mario Gabrielli

***Text under revision. Not yet approved by academic staff.***

COURSE AIMS AND INTENDED LEARNING OUTCOMES

The aim of the course is to provide students with the elements needed in the organisation of the oenological processes and the relationships between vinification technical operations and the final characteristics, defined as the oenological goal, of musts and wines.

The intended learning outcomes aim to assist the student in carrying out the operations common to the preparation of white and red wines, including the relative phases of grape harvesting, pressing, maceration and alcoholic fermentation.

In addition, students will possess the knowledge necessary to identify the most appropriate techniques for refining, stabilising and packaging wines.

Finally, with reference to the most recent co-adjuvant and technological solutions available on the market, students will possess the elements needed for conducting technical and economic assessments regarding the most efficient and sustainable wine-making choices.

***COURSE CONTENT***

|  |  |
| --- | --- |
|  | ECTS |
| Winemaking |  |
| Common operations for the preparation of white and red wines: harvesting of grapes, transport systems and reception of grapes in the cellar, crushing and pressing of grapes, obtaining of musts and crushed grapes. | 0.5 |
| White vinification: pre-fermentation treatments, operating conditions and the management of alcoholic and malolactic fermentation. Ageing of white wines, stabilisation, filtration and bottling. | 1.0 |
| Red vinification: pre-fermentation treatments, operating conditions and the management of alcoholic and malolactic fermentation. Ageing of red wines, stabilisation, filtration and bottling. | 1.0 |
| Reduction and oxidation vinification. | 0.25 |
| Conventional vinification, in an organic and biodynamic regime. | 0.25 |
| Co-adjuvants and Additives |  |
| Co-adjuvants and authorised additives, traditionally and innovatively used.Sulphur dioxide, its reduction and minimisation with relative substitutes. | 1.0 |
| Tutorials |  |
| Examples of the recovery of wine-making by-products and waste. | 1.0 |
| Colloidal, tartaric and phenolic stabilisation of wines.  | 1.0 |

READING LIST

P. Ribereau-Gayon D. Dubourdieu-B. Donèche-A. Lonvaud, *Trattato di Enologia,* vol. 1 and 2, Edagricole (Bologna) 2007.

## C. Navarre, *Enologia,* Hoepli. 1991.

## G. Sicheri, *Enologia,* Libreria Universitaria.it Edizioni. 2015.

TEACHING METHOD

* Frontal and dialogue-based theoretical lectures, where the key concepts underlying the processes of oenological transformation will be presented with a number of application examples.
* Frontal tutorials aimed at studying in depth some of the key aspects of winemaking with examples based on the discussion of case studies.
* Tutorials involving group work on issues related to the sustainability of the vine-wine supply chain and the recovery and re-use of winemaking by-products.
* Practical tutorials in the laboratory involving the application of small-scale tests to simulate the technical approach to identifying the most appropriate co-adjuvants and additives in each phase of winemaking.

ASSESSMENT METHOD AND CRITERIA

* At the end of the course, students will be able to take a non-exclusionary written test aimed at verifying their knowledge after attending all the lectures. The two-hour test will be based on twenty-five closed-ended questions and five open-ended questions. Each answer will be assigned a mark that will contribute to the overall mark expressed out of thirty.
* Passing the test exempts the student from preparing the corresponding part of the programme for the final exam. This will be in oral form. Students who do not wish to use the mark obtained in the written test and the relative exemption may still take the oral exam.
* In the written test, students will have to demonstrate their knowledge of the key concepts of the subject studied; in the oral exam, we will focus more on the in-depth aspects exemplified in class during lectures.
* In both the written and the oral exam, the relevance of the student's answers, their appropriate use of specific terminology, their argumentative and coherent structuring of the discourse, and their ability to identify conceptual links will contribute to the assessment.

NOTES AND PREREQUISITES

A basic knowledge of oenology-related chemistry and microbiology will help students to both benefit more fully from the course and pass the final exam.

Should the health situation relating to the Covid-19 pandemic not allow face-to-face teaching, remote teaching in synchronous or asynchronous mode will be guaranteed; this will be communicated in good time to students.

Information on office hours available on the teacher's personal page at http://docenti.unicatt.it/.