# 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***

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|  | 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 an oral exam that will validate the differences in the production processes of white, red, rosé and sparkling wine.
* In the written exam, 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 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.

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=Eng or on the Faculty notice board.