



COURSE DETAILS
OENOLOGY I
MODULE OF "WINEMAKING TECHNOLOGY"
SSD AGR15*

** In case of an integrated course, the SSD (scientific disciplinary sector) should be written above only if all modules of the course belong to the same SSD, otherwise the SSD is to be written alongside the MODULE (see below).*

DEGREE PROGRAMME: VITICULTURE AND ENOLOGY

ACADEMIC YEAR 2021 -2022

GENERAL INFORMATION – TEACHER REFERENCES

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE (IF APPLICABLE): OENOLOGY I
MODULE (IF APPLICABLE): WINEMAKING TECHNOLOGY
CHANNEL (IF APPLICABLE):
YEAR OF THE DEGREE PROGRAMME (I, II, III): II
SEMESTER (I, II): II
CFU: 6

REQUIRED PRELIMINARY COURSES (IF MENTIONED IN THE COURSE STRUCTURE “ORDINAMENTO”)

Fundamentals of general and inorganic chemistry and of organic chemistry

LEARNING GOALS

The learning goals are all the knowledges related to the chemical constituents of grapes and wine, the main winemaking technologies and the evolution of chemical compounds of enological significance during the production and aging of wine.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The student must be able to understand all issues related to wine chemistry and be able to discuss on the quality of the raw material and the oenological role of each of the components of grapes and wine

The student must demonstrate that he is able to evaluate the impact of the different grape compounds on the characteristics of the wine and to define winemaking protocols aimed at enhancing the quality of the raw material. The student must also be able to identify and apply the analytical methods and procedures for the quality control of the grapes and the optimization of the winemaking process.

Applying knowledge and understanding

The student must be able to independently evaluate the chemical and biochemical processes that regulate the transformation from grape to wine and critically evaluate any actions to be taken to achieve specific and predetermined production objectives.

The student must be able to explain the basic notions of oenological chemistry and winemaking technology to non-experts. He must be able to summarize in a complete but concise way the results achieved using the technical language correctly, familiarizing himself with the terms of the discipline and potentially transmitting to a non-technician the knowledge acquired on the chemical basis of the quality of grapes and wines and on the winemaking processes.

COURSE CONTENT/SYLLABUS

1. Oenological practices common to all winemaking practices (1,5 CFU).
2. Red winemaking (2 CFU) – Prefermentative operations; the management of maceration and alcoholic and malolactic fermentations; red winemaking protocols.
3. White winemaking (2 CFU) – prefermentative operations; the management of alcoholic fermentation; white winemaking protocols.
4. Seminars with other teachers of Agricultural Sciences Department (0,5 CFU).

READINGS/BIBLIOGRAPHY

Ribereau-Gayon P., Glories Y., Maujean A., Dubourdieu D. Trattato di enologia. 2003. Ed. Ed agricole. Luciano Usseglio Tomasset. Chimica Enologica. 1996. Ed. AEB Brescia. Metodi Ufficiali di Analisi. www.oiv.int. Waterhouse, A., Sacks, G., & Jeffery, D. (2016). Understanding Wine Chemistry. John Wiley & Sons.

TEACHING METHODS

Teacher/s will use: a) lectures for approx. 70 % of total hours; b) practical exercises for approx.10 % of total hours or CFU; c) laboratories to further elaborate on applied knowledge for approx.20 % of total hours or CFU.

EXAMINATION/EVALUATION CRITERIA

a) Exam type:

Exam type	
written and oral	x
only written	
only oral	
project discussion	
other	

In case of a written exam, questions refer to: (*)	Multiple choice answers	
	Open answers	X
	Numerical exercises	

(*) multiple options are possible

b) Evaluation pattern:

[this field needs to be filled in only when there are different weights among written and oral exams, or among modules if this refers to an integrated course]