

Course Unit	Wine Cellar Practices	Field of study	Food Industries
Bachelor in	Oenology	School	School of Agriculture
Academic Year	2023/2024	Year of study	3
Type	Semestral	Semester	1
Level	1-3	ECTS credits	6.0
Code	9998-705-3104-00-23		
Workload (hours)	162	Contact hours	T - TP - PL 60 TC - S - E - OT 4 O -

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) António Castro Ribeiro

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Use the products and techniques to implement a winery and equipment cleaning and sanitation program
2. Apply the methodologies of berry sampling and must analysis to control the maturation and harvest planning according to the desired wine profile.
3. Plan and execute the reception and winemaking operations of different types of wine (white, red and rose wines).
4. Monitor alcoholic and malolactic fermentations
5. Perform clarification, stabilization, conservation and bottling practices
6. Perform physicochemical analysis of musts and wines. Interpret the results and carry out the necessary interventions and corrections.

Prerequisites

Not applicable

Course contents

Sanitation and disinfection of the winery and equipment. Berries sampling in the vineyard. Determining the timing of the harvest. Organization of the harvest, transport and reception of the grapes. Analytical determinations and quality assessment. Winemaking operations of different types of wine. Clarification and stabilization operations. Physico-chemical analysis of musts and wines. Interpretation of the analytical results

Course contents (extended version)

1. Sanitation and disinfection of winerie (cellar, warehouse, bottling line) and equipment
2. Selection of grapes before harvest according to several methods
3. Sensory and physicochemical analysis of grapes: determination of harvest date
4. Organization of the harvest, transport and reception of the grapes
5. Analytical determinations and evaluation of the quality of the grapes.
6. Winemaking process for white, red and rose wines
7. Clarification and stabilization operations of different types of wine.
8. Physicochemical analysis of musts and wines. Interpretation of results.

Recommended reading

1. Cardoso, A. D. 2020. O vinho da Uva à Garrafa. 2ª Edição, AgroBook Editora, Portugal
2. Curvelo-Garcia, A. S. ; Barros, P. F. 2015. Química Enológica - Métodos analíticos. Publindústria. Porto.
3. Ribéreau Gayon, P. ; Glories Y. ; Maujean A. ; Dubourdieu D. (2006). Handbook of enology. The Chemistry of Wine Stabilization and Treatments, Second Edition, Vol. I e II, John Wiley & Sons; New York.
4. Morata, A. (ed.). 2019. Red Wine Technology. Academic Press, United Kingdom
5. Morata, A. (ed.). 2022. White Wine Technology. Academic Press, United Kingdom

Teaching and learning methods

The practices in the winery will take place in the ESA winery and laboratory and in wine companies. The practices will be outlined by the teacher of the curricular unit, through protocols of practical work specific to each syllabus and objective.

Assessment methods

1. Alternative 1 - (Regular, Student Worker) (Final, Supplementary, Special)
 - Practical Work - 40% (Technical report on the practices carried out at the winery and laboratory)
 - Final Written Exam - 60%
2. Alternative 2 - Final exam - (Regular, Student Worker) (Final, Supplementary, Special)
 - Final Written Exam - 100%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

António Castro Ribeiro	João Luís Verdial Andrade	António Castro Ribeiro	José Carlos Batista Couto Barbosa
17-01-2024	22-01-2024	27-01-2024	28-01-2024