School of Agriculture
Course Unit Syllabus

Level of qualification:
First cycle (EQF level 6) - Bachelor
Study cycle:
Food Science and Technology

# Course Unit: **935029** – **Wine technology**

**Year 3** **Semester 5** **ISCED Code: 721** **ECTS: 6**

**Tipe of Course Unit:** Compulsory **Delivery Mode:** Face-to-face **Language of Instruction:** Portuguese

**COURSE COORDINATOR: Anabela Reis Pacheco de Amaral**

## HOURS OF WORK

| TOTAL HOURS | Contact Hours | | | | | | | | Hours in autonomous work |
|---|---|---|---|---|---|---|---|---|---|
| | Theory | Theory and practice | Practical and laboratory work | Field work | Seminar | Internship | Tutorial guidance | Other | |
| **150** | **30** | | **45** | | | | | | **75** |

Prerequisites (if applicable): Not applicable.

## LEARNING OUTCOMES (knowledge, skills and competence)

Being able to define how important is Portugal in Europe and the world for the production, export and consumption of wine,

Identify the major wine producing areas in the world and Portugal.

Acquiring basics of viticulture.

Understanding the phenomenon of grape maturation and learning how to control it.

Explain the various phenomena and sequences of operations involved in the elaboration, conservation, clarification and stabilization, bottling stage or white wines, red wines, rosé or obtained by special vinifications

Learn to control the quality physicochemical and sensory of wines preventing the occurrence of any unfavorable changes

## CONTENTS

The vineyard and the wine in the world Portugal's position in relation to the world and the European Union.

Wine production in Portugal: official designations

Introduction to viticulture

The raw grape: formation, maturation.

Biochemical transformations in winemaking: by alcoholic and malo lactic fermentation.

vinifications: white wines, rosé wines and red wines.

Conservation, stabilization and clarification of wines. Bottling.

Wines alterations.

Special vinifications: fortified and generous wines, sparkling wines, Sherry and botrytized wines and late harvest

Physico- chemical and sensorial quality control of musts and wines

## DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

Statistics as well as the sources of this information prepares students to be able to present the importance of Portugal regarding the production, export and consumption of wine.

Are presented the main quality wine producing regions in Portugal drawing attention and showing the changes that these regions often suffer.

Firstly by discussing viticulture conditions that influence the quality of the grapes (raw material) throughout maturation

Are presented and illustrated the various methods, operations, and equipment used in the production, preservation, stabilization and clarification of the various types of wines

We describe the various types wine alterations for students to seize the best way to avoid, prevent or treat any

The quality control of wines in its various aspects is presented and implemented in practical classes, discussing the various proposed solutions or alternatives in terms of technology in light of the results found

## TEACHING METHODOLOGIES

Exposure of matter together with the projection of images Projection of films Practical lessons in the laboratory for implementation of analytical techniques that are used in quality control of wines.

Sensory evaluation of aromas, flavors and wines. Making wine in the technological pavilion of the ESAB

Field trips.

## DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

This course despite being divided into theoretical and practical is intended to be essentially practical

In all lectures is resorted to projection of images illustrating the concepts to grasp and presentation of films

The practice of effective preparation of wine to have students follow closely the development process thereby contributing to better learning, preparing the report of winemaking requires students to reflect on what has been done and present a critical view

The laboratory classes in which they apply the techniques of analysis of wines and musts with analysis and interpretation of results will enable students to learn to make decisions to ensure that the wines are not going to develop alterations.

The classes of sensory analysis of wine prepare students for using this means of quality control essential for producing wines with the most suitable profile for consumers and the markets they serve.

A field trip to wineries in the region they will effect near the end of the semester aims to consolidate knowledge, answer questions and facilitate contact with the real practice

## EVALUATION METHODS

The assessment will consist of a written examination, a practical examination in the laboratory, presenting a team work on a topic of viticulture, a report of winemaking which will describe the process of making wine accompanied with criticism and suggestions.

## MAIN BIBLIOGRAPHY

BOULTON, R. (2002) – Teoría y prática de la elaboración del vino. Acribia, Zaragoza.

CURVELO-GARCIA, A.S. (1988) Controlo de Qualidade dos Vinhos. Química Enológica. Métodos analíticos.

Instituto da Vinha e do Vinho. Lisboa.

FLANZY, C. Coord. (1998) OENOLOGIE fondements scientifiques et technologiques Lavoisier TEC&DOC. Paris.

NAVARRE, C. (1997). Enologia Técnicas de Produção de Vinho. Publicações Europa América. Mem Martins

RATTI, R. (1995) – Como degustar los vinos: manual del catador. Mundi-Prensa, Madrid.

SCHUSTER, M. (2001) – O essencial sobre a prova. Livros Cotovia, Lisboa

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