

Course:	L025 - Food Quality and Nutrition
Degree:	Bachelor
Curriculum Unit:	9025011 - Quality and Production of Wines and Derivatives
Scientific field:	Food Science and Technology
ECTS^(*):	4
Curriculum year:	3rd
Curriculum semester:	1st
Frequency Regime:	Mandatory
Teacher(s):	António Manuel Santos Tomás Jordão
Contact hours ^(**):	T - 30; P - 30
Total work time (hours):	132

(*) - ECTS - European Credit Transfer and Accumulation System

(**) – T- Theoretical; TP- Theoretical/Practical; LP- Lab Practice; S- Seminars; I- Internships; TU - Tutorials; O- Other (Evaluations)

Objectives / Competences

- Apply knowledge associated with the evaluation of the quality of the grapes and all raw materials used in the production of wines and related products;
- Understand the key technologies involved in winemaking and its derivatives and their impact on the quality characteristics of the products produced.
- Identify the most common problems that occur during winemaking and derivatives and their impact on product quality.
- Understand and apply the most important methodologies for the qualitative analysis of wine products.

Syllabus

Theoretical: Characterization of the wine sector. Components bunch of grapes. Evolution of grape berry during maturation. The harvest of grapes and qualitative assessment. The alcoholic fermentation (implications for the quality of the wines produced). The use of oenological products in the production of quality wines. Malolactic fermentation. Major technological and mechanical operations involved in the winemaking process (red and white wines). New methods of vinification. Stabilization and conservation of wines and their influence on the characteristics of the wines. Production of liqueur wines, sparkling generous. Vinegar production. New products made from wine products.

Practical component: Analysis of the processes of maturation process. Control fermentations. Realization of the main technological steps of the winemaking process. Physico-chemical and sensory wine and related products. Analysis and commentary from wine analysis reports. Visits to companies in the wine sector.

Teaching methodologies and evaluation criteria

This course will be taught in e-learning system mixed with classroom and online support. The classes include classroom lectures and laboratory practice. The theoretical instruction is based on the exposure of the material in lectures. The practical

component will be conducted in situations that will aim to make the production of wines and related products at pilot scale. The evaluation of the course consists of a written exam final, encompassing the acquired knowledge in both theoretical and theoretical-practical and written work done in group and stating the work in practical laboratory component.

Short bibliography

Curvelo-Garcia, A.S. (1988) - Controlo de Qualidade dos Vinhos. Química Enológica. Métodos Analíticos, I.V.V., Lisboa.

Jackson, R. S. (1994) - Wine Science: Principles and Applications. Academic Press.

Jordão, A.M. (2011) - Apontamentos de apoio às aulas práticas de tecnologia dos vinhos. Edição do Instituto Politécnico de Viseu.

Navarre, C. (1997) - Enologia: Técnicas de produção do vinho. Publicações Europa-América. pp:305.

Ribéreau-Gayon, J.; Glories, Y.; Maujean, A.; Dubourdieu, D. (1998) - Traité d'Oenologie - Chimie du vin, Stabilisation et Traitements, Tome 1 et 2, Dunod (ed.), Paris.

Vine, R. P.; Harkness, E.M.; Browning, T.; Wagner, C. (1997) - Winemaking: From grape growing to marketplace. Chapman & Hall, Internacional Thomson Publishing.

Zoecklein, B.W.; Fugelsang, K.C.; Gump, B.H.; Nury, F.S. (1994) - Wine analysis and production, Chapman & Hall.