

Course Unit	Sanitation and Safety	Field of study	Food Industries
Bachelor in	Oenology	School	School of Agriculture
Academic Year	2022/2023	Year of study	2
Type	Semestral	Semester	2
Level	1-2	ECTS credits	3.0
Code	9998-705-2203-00-22		
Workload (hours)	81	Contact hours	T - TP 30 PL - TC - S - E - OT 2 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) Ermelinda Lopes Pereira, Maria Fátima Alves Pinto Lopes da Silva

### Learning outcomes and competences

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

1. Be able to identify potential sources of risk for Occupational Safety and Health in viticulture and winemaking operations
2. Understand and know to apply the general prevention principles of occupational risks, including the prevention practices in the vineyard and in the wine cellar
3. Know several types of signaling and use correctly the individual and collective protection equipment
4. To know the basic principles of cleaning and disinfection
5. To know the steps of hygiene in the phases of winemaking and the factors that determine their effectiveness
6. To know the main active compounds used in cleaning and disinfection activities in the wine sector and to know how to choose the most appropriate in specific situations
7. To know the techniques and equipment used in hygiene activities in the oenological area
8. Be able to implement and verify compliance with a Prerequisite Program, especially the Hygiene Plan and associated records

### Prerequisites

Before the course unit the learner is expected to be able to:

1. Have basic knowledge in general microbiology and oenological chemistry.
2. Have basic knowledge in mechanization and equipment of the vineyard and winery.

### Course contents

General concepts of hygiene, disinfection and sterilization. Sanitation control and hygiene plans. General Fundamentals of Occupational Safety and Hygiene. Scratches. Risk assessment and control in viticulture, in the field and in the winery. Confined space hazards. Specific prevention practices.

### Course contents (extended version)

1. Hygiene in oenology
  - General concepts of hygiene, disinfection and sterilization. Types of dirt in oenology.
  - Hygiene in the winery. Contact materials and other surfaces.
  - Cleaning. Detergents and other cleaning agents.
  - Disinfection and disinfecting agents
  - Sanitization steps. Specific techniques and equipment.
  - Microbiological control and hygiene processes.
  - Hygiene plans and associated records.
2. General fundamentals of Safety and Hygiene at Work
  - Concepts and general principles of prevention. Physical, chemical, biological and ergonomic hazards.
  - Safety signage and individual and collective safety equipment.
3. Risk assessment and control in viticulture, in the vineyard and in the winery
  - Good Practices in Agricultural Work: Prevention in the use of work and transport equipment.
  - Prevention in the use of pesticides - Good Practices and legal requirements.
  - Confined space hazards. Specific prevention practices.
  - Risk assessment in wineries: risk analysis; hazards at each step of the flowchart.

### Recommended reading

1. Associação Empresarial de Portugal, Manual de Formação: Higiene e Segurança no Trabalho, AEP, 2004.
2. Miguel, A. , Manual de Higiene e Segurança no Trabalho, Porto Editora, 2005.
3. Veiga, R. , Metodologias de Avaliação dos Riscos Profissionais. Verlag Dashöfer, 2006.
4. André, S. , Avaliação de riscos em adegas cooperativas: guia de apoio. (Segurança e Saúde no Trabalho. Divulgação; 21). Lisboa, Autoridade para as Condições do Trabalho, 2009. 65p.
5. Leveau, J. Y. ; Bouix M. (1999). Nettoyage, désinfection et hygiène dans les bio-industries. Collection Sciences & Techniques Agroalimentaires. Editions TEC.

### Teaching and learning methods

Theoretical-practical classes: based on expository, active and also interrogative methods. Case study of cleaning and disinfection situations. Hypothetical risk situations in vineyard and winery operations will be placed to solve, through practical exercises. Study visit.

### Assessment methods

1. Alternative 1 - (Regular, Student Worker) (Final)
  - Intermediate Written Test - 35% (Written exam on the subjects taught (Part I).)
  - Intermediate Written Test - 35% (Written exam on the subjects taught (Part I).)
  - Practical Work - 30% (Worksheets and laboratorial work and study visit reports made by the students)
2. Alternative 2 - (Regular, Student Worker) (Supplementary, Special)
  - Final Written Exam - 100% (Final exam on the subjects taught.)

### Language of instruction

Portuguese

## Electronic validation

Ermelinda Lopes Pereira, Maria Fátima Alves Pinto Lopes da Silva	Vitor Manuel Ramalheira Martins	António Castro Ribeiro	José Carlos Batista Couto Barbosa
09-12-2022	12-12-2022	19-12-2022	19-12-2022