University of Zagreb Faculty of Agriculture
Svetošimunska cesta 25, 10000 Zagreb
Phone: +385 (0)1 2393 777
E-mail: dekanat@agr.hr
Web: www.agr.unizg.hr

Wine technology (159812)

Course coordinator

Prof. Ana Jeromel, PhD

Course description

The module Wine Technology will provide students with modern knowledges relating to the technology of the production of white and red wines, with detailed description of all operations from the moment of grapes harvesting to wine bottling. Besides acquiring theoretical knowledge, students will take an active part in field work to get familiar with the operation of the machinery for harvesting, decanting, filtering and bottling of wines, and through the application of clarifiers and finishing procedures they will master the basics of chemical and physical analyses for checking wine stability.

ECTS: **3.00**

E-learning: **L1**

Teaching hours: 30
Lectures: 20
Practicum: 10

Lecturer

- Prof. Ana Jeromel, PhD

Associate teacher for exercises

- Assoc. Prof. Marin Mihaljević Žulj, PhD
- Assoc. Prof. Ana-Marija Jagatić Korenika, PhD
- Ivana Puhelek, PhD

Grading

Sufficient (2): 60-69 %
Good (3): 70-79 %
Very good (4): 80-89 %
Excellent (5): >90%

Type of course

- Graduate studies / MS Courses taught in English (Elective course, 1 semester, 1 year)

General competencies

The course enables the understanding of the various technological processes applicable to wine production and the possibilite to solve the accurate problem by making independent conclusions based on acquired theoretical and practical knowledge.

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Types of instruction

- Lectures
- Practicum
- Field work

Learning outcomes

Learning outcome	Evaluation methods
To plan and analyze the entire technological production process, depending on the cultivar and the type of wine to be prepared	Oral or written exam
To identify the reasons for the application of enological substances permitted in the process of wine	Oral or written exam
To recommend and explain the technology of white, pink and red wines production, depending on the conditions of production and the specifics of the production year	Oral or written exam
Select and present the appropriate technological process of finishing wine before bottling, depending on its chemical composition and organoleptic properties	Oral or written exam

Working methods

Teachers' obligations

Participation in all the forms of teaching as lectures and consultation; helping in writing graduate works, provide teaching materials and assure active communication with the student throughout the semester

Students' obligations

Regular attendance and active participation in lectures and exercises

Methods of grading

Evaluation elements	Maximum points or Share in evaluation	Grade rating scale	Grade	Direct teaching hours	Total number of average student workload	ECTS
Final exam	100 %	0-59% 60-69 % 70-79 % 80-89 % 90-100 %	Insufficient (1) Sufficient (2) Good (3) Very good (4) Excellent (5)	2	30	1
Total	100 %			30	1	3

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Weekly class schedule

1. Biological de-acidification of wines
2. Malolactic fermentation
3. The use of enzymes in winemaking
4. Extraction methods and their influence on wine quality
5. Carbon maceration
6. Maceration of the grapes
7. Sur lie technology
8. The technological possibilities of correction of the chemical composition of must and wine
9. Inert gases in winemaking
10. Barrique in winemaking
11. Chemical and physical methods of checking the stability of wine
12. Nephelometry
13. Flotation, micro oxidation
14. Filtration of wine
15. Stabilization of wines

Obligatory literature

1. Lectures and PowerPoint presentation (Merlin e-learning)
2. Margalit, Y. (2004). Concepts in wine technology, The wine app.guild, San Francisco
3. Jackson, R (2000) „Wine science“, Academic press, San Francisco

Recommended literature

1. Riberau-Gayon, P., D., Dubourdieu, B., Doneche, A., Lonvaud (2006): Handbook of enology-The microbiology of Wine and Vinification, Volume 1, Paris
2. Riberau-Gayon, P., D., Dubourdieu, B., Doneche, A., Lonvaud (2006): Handbook of enology-The Chemistry of Wine, Stabilization and Treatments, second edition Volume 2, Paris