

## COURSE OUTLINE

### 1. GENERAL INFORMATION

<b>FACULTY/SCHOOL</b>	SCHOOL OF PLANT SCIENCES		
<b>DEPARTMENT</b>	DEPARTMENT OF CROP SCIENCE		
<b>LEVEL OF STUDY</b>	Undergraduate		
<b>COURSE UNIT CODE</b>	1005	<b>Semester:</b>	9 <sup>th</sup> (Winter semester)
<b>COURSE TITLE</b>	VITICULTURE II (SPECIAL ISSUES)		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <i>in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours, and the total credits</i>		<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
Lectures		3	5
Laboratory Exercises		2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4.			
<b>COURSE TYPE</b> <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	Scientific expertise		
<b>PREREQUISITE COURSES:</b>			
<b>LANGUAGE OF INSTRUCTION and EXAMS:</b>	Greek		
<b>THE COURSE IS OFFERED TO ERASMUS STUDENTS</b>	YES		
<b>COURSE WEBSITE (URL)</b>	<a href="https://oeclass.aua.gr/eclass/courses/697/">https://oeclass.aua.gr/eclass/courses/697/</a>		
<b>TEACHERS</b> <b>(Theory lectures &amp; Laboratory exercises)</b>	Theory Lectures <ul style="list-style-type: none"> <li>Biniari Katerina, Associate Professor Academic field: Viticulture-Ampelography</li> <li>Stavrakaki Maritina, Assistant Professor Academic field: Viticulture-Ampelography</li> </ul> Laboratory Exercises <ul style="list-style-type: none"> <li>Biniari Katerina, Associate Professor Academic field: Viticulture-Ampelography</li> <li>Stavrakaki Maritina, Assistant Professor Academic field: Viticulture-Ampelography</li> <li>Bouza Despoina, Teaching assistant Academic field: Viticulture-Ampelography</li> </ul>		

### 2. LEARNING OUTCOMES

#### Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult.

#### Appendix A

- Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework
- Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning

#### And Appendix B

- Guidelines for writing Learning Outcomes

The objective of the course is to introduce students of the Department of Crop Science and the Section of Pomology and Viticulture in the methods and techniques of grapevine breeding, in the directions of breeding of phylloxera-resistant rootstocks and in the creation of new varieties of the European grapevine.

The course is offered to the students of:

- 9<sup>th</sup> semester of the Department of Crop Science (compulsory)

Upon the successful completion of the course (theory and laboratory part of the course), students will have (Descriptive indicators for Levels 6 of the European Qualifications Framework for Lifelong Learning):

- Understood the methods and techniques of grapevine breeding.
- Understood the importance and significance of creating rootstocks resistant to the rhizobia form of phylloxera.
- Understood the difficulties in creating new European grape varieties (*Vitis vinifera* L.)

### General Competences

*Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?*

*Search for, analysis and synthesis of data and information by the use of appropriate technologies,  
Adapting to new situations  
Decision-making  
Individual/Independent work  
Group/Team work  
Working in an international environment  
Working in an interdisciplinary environment  
Introduction of innovative research*

*Project planning and management  
Respect for diversity and multiculturalism  
Environmental awareness  
Social, professional and ethical responsibility and sensitivity to gender issues  
Critical thinking  
Development of free, creative and inductive thinking  
(Other.....citizenship, spiritual freedom, social awareness, altruism etc.)*

- Individual/independent and team/group work
- Decision-making
- Working in an international
- Project planning and management
- Environmental awareness
- Development of free, creative and inductive thinking

## 3. COURSE CONTENT

Introduction

On mutations and variability in the grapevine

Grapevine breeding methods and techniques.

1 Breeding by the method of Selection

a. Mass Selection

b. Clonal Selection

c. Clonal Selection Programs

Breeding with the method of Crossing (methods and techniques)

Breeding by biotechnological methods

Direction of breeding of rootstocks resistant to the rhizobia form of phylloxera.

1 Resistance to phylloxera

a On the grapevine's resistance to phylloxera

b. Scales of resistance to phylloxera

c. Creation of rootstocks resistant to the rhizobia phylloxera

Downy mildew resistance

Powdery mildew resistance

Resistance to nematodes

Drought resistance

Resistance to excessive soil moisture Tolerance to soil calcium carbonate Resistance to acidic soils Resistance to soil salinity Interactions between Rootstock-Environment-Graft Directions for the creation of new varieties of the European Vine ( <i>Vitis vinifera</i> L). a. Functional flower type b. Productivity c. Shape and size of grape d. Shape and size of berry. e. Color of skin of the berry f. Color of must g. Taste h. seedliness
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#### 4. TEACHING METHODS--ASSESSMENT

<b>MODES OF TEACHING</b> <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i>	Face-to-Face.  In-class lecturing for the theory/lectures of the course.  In-class lecturing for the laboratory exercises of the course as well as in the Vineyard of the Laboratory of Viticulture.	
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</b> <i>Use of ICT in teaching, Laboratory Education, Communication with students</i>	Use of slide presentation and blackboard, video. Learning process support by access to e-class asynchronous distance learning platform, on-line databases etc. Communication with students via e-mail.	
<b>COURSE DESIGN</b> <i>Description of teaching techniques, practices and methods:  Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc..   The study hours for each learning activity as well as the hours of self- directed study are given following the principles of the ECTS</i>	<b>Activity / Method</b>	<b>Semester Workload</b>
	Lectures	20x3=60
	Practice exercises focusing on the implementation of methodologies in smaller group of students in the vineyard (Laboratory exercises)	15x2=30
	Laboratory practice – Practice in the vineyard	10
	Personal study	25
	<b>Total of Course (25 hours of workload per ECTS)</b>	<b>125</b>
<b>STUDENT PERFORMANCE EVALUATION / ASSESSMENT METHODS</b> <i>Detailed description of the evaluation procedures   Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other.....etc   Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students..</i>	I. The evaluation language is Greek.  II. The grade in the theory of the course is the outcome of the final written or oral exam.  III. The grade in the laboratory part of the course is the outcome of 80% from the written assignment and 20% from the evaluation of laboratory exercises.	

#### 5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography: M.N.Stavrakakis Viticulture, 2019, Embryo Publications.  
M.N.Stavrakakis Ampelography, 2021, Embryo Publications  
M.N.Stavrakakis Viticulture II (Special Issues), University Press, 1998  
- Related scientific journals: Vitis, American Journal of Enology and Viticulture, Scientia Horticulturae .