

## OENOLOGY

### 1. GENERAL

|   |   |                            |                  |
|---|---|----------------------------|------------------|
| <b>SCHOOL</b>   | AGRICULTURAL SCIENCES   |                            |                  |
| <b>DEPARTMENT</b>   | CROP SCIENCE  |                            |                  |
| <b>LEVEL OF COURSE</b>  | UNDERGRADUATE   |                            |                  |
| <b>COURSE CODE</b>  | CRS_1006  | <b>SEMESTER OF STUDIES</b> | 10 <sup>th</sup> |
| <b>COURSE TITLE</b>   | Oenology  |                            |                  |
| <b>INDEPENDENT TEACHING ACTIVITIES</b><br><i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i> | <b>TEACHING HOURS PER WEEK</b>  | <b>ECTS CREDITS</b>        |                  |
| Lectures  | 3   |                            |                  |
| Tutorial  | 1   |                            |                  |
| Total   | 4   | 5                          |                  |
| <i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>  |   |                            |                  |
| <b>COURSE TYPE</b><br><i>general background, special background, specialised general knowledge, skills development</i>  | Specialised general knowledge, skills development   |                            |                  |
| <b>PREREQUISITE COURSES:</b>  | Typically, there are not prerequisite courses.  |                            |                  |
| <b>TEACHING AND ASSESSMENT LANGUAGE:</b>  | Greek. teaching may be however performed in English in case foreign students attend the course. |                            |                  |
| <b>THE COURSE IS OFFERED TO ERASMUS STUDENTS</b>  | Yes   |                            |                  |
| <b>COURSE WEBPAGE (URL)</b>   |   |                            |                  |

### 2. LEARNING OUTCOMES

|   |   |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
|---|---|--|-----------------------------------|--|------------------------|--|------------------------------|---|------------------|-------------------------------------|--|--|--|--|---|--|
| <p><b>Learning outcomes</b></p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> <li><i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i></li> <li><i>Descriptors for Levels 6, 7 &amp; 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i></li> <li><i>Guidelines for writing Learning Outcomes</i></li> </ul>   |   |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <p>This course aims to train students on quality characteristics and properties of main grape varieties for wine production. To deal with the chemical composition of grapes: Sugars. Organic acids. Phenolic compounds. Volatile compounds. Alcoholic degree. Nutritional value. To organize programs offering certified viticultural products and to direct groups of producers.</p>  |   |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <p><b>General Abilities</b></p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table border="0"> <tr> <td><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td><i>Project planning and management</i></td> </tr> <tr> <td><i>Adapting to new situations</i></td> <td><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td><i>Decision-making</i></td> <td><i>Respect for the natural environment</i></td> </tr> <tr> <td><i>Working independently</i></td> <td><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td><i>Team work</i></td> <td><i>Criticism and self-criticism</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td></td> </tr> </table> | <i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> | <i>Project planning and management</i> | <i>Adapting to new situations</i> | <i>Respect for difference and multiculturalism</i> | <i>Decision-making</i> | <i>Respect for the natural environment</i> | <i>Working independently</i> | <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> | <i>Team work</i> | <i>Criticism and self-criticism</i> | <i>Working in an international environment</i> | <i>Production of free, creative and inductive thinking</i> | <i>Working in an interdisciplinary environment</i> |  | <i>Production of new research ideas</i> |  |
| <i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>   | <i>Project planning and management</i>  |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <i>Adapting to new situations</i>   | <i>Respect for difference and multiculturalism</i>  |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <i>Decision-making</i>  | <i>Respect for the natural environment</i>  |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <i>Working independently</i>  | <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>             |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <i>Team work</i>  | <i>Criticism and self-criticism</i>   |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <i>Working in an international environment</i>  | <i>Production of free, creative and inductive thinking</i>  |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <i>Working in an interdisciplinary environment</i>  |   |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <i>Production of new research ideas</i>   |   |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |
| <p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p>  |   |  |                                   |  |                        |  |                              |   |                  |                                     |  |  |  |  |   |  |

Adapting to new situations  
 Decision-making  
 Working independently  
 Production of free, creative and inductive thinking  
 Respect for the natural environment

### 3. SYLLABUS

1. Quality characteristics and properties of wine, table and raisin varieties
2. Wine production: legislation, global wine geographical distribution.
3. Varieties characteristics and cultivation practices of table grapes.
4. Grape harvest, postharvest technology
5. Production and quality of raisin
6. Oenological Treatments and Practices: grape harvest, crushing, stem removing, draining and pressing.
7. Vinification, pasteurization, filtration and wine bottling. Wine preservation technology
8. Winemaking yeast species.
9. Alcoholic fermentation
10. Common winemaking problems
11. Wine tasting.
12. Vinegar production.
13. Alcoholic beverages and Spirits

### 4. TEACHING AND LEARNING METHODS - EVALUATION

|  |   |  |
|--|---|--|
| <b>TEACHING METHOD</b><br><i>Face-to-face, Distance learning, etc.</i>   | Lectures in the class and in the laboratory (face to face)  |  |
| <b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b><br><i>Use of ICT in teaching, laboratory education, communication with students</i>   | Use of Information and Communication Technologies (ICTs) (e.g. PowerPoint) in teaching. Direct communication with the students (face to face and by e-mail), Support of the learning process and uploading of the educational material to the electronic platform (e-class): <a href="https://eclass.upatras.gr">https://eclass.upatras.gr</a>  |  |
| <b>TEACHING METHODS</b><br><i>The manner and methods of teaching are described in detail.<br/>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.<br/><br/>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i> | <b>Activity</b>   | <b>Semester workload</b>                   |
|  | Lectures (3 conduct hours per week x 13 weeks)  | 39   |
|  | Tutorial (1 conduct hours per week x 12 weeks)  | 12   |
|  | Mid term examinations   | 4  |
|  | Hours for private study of the student and preparation for mid-term or/and final examination / Final examination  | 69   |
|  | <b>Total number of hours for the Course (25 hours of work-load per ECTS credit)</b>   | <b>125 hours (total student work-load)</b> |
| <b>STUDENT PERFORMANCE EVALUATION</b><br><i>Description of the evaluation procedure<br/><br/>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i>   | <ol style="list-style-type: none"> <li>1. Two mid-term examinations with the final examination grade to be the mean mark. It is mandatory to obtain pass grade (<math>\geq 5</math>) in each examination.</li> <li>2. Written examination after the end of the semester. Minimum passing grade: 5.</li> </ol> <p><b>Evaluation of theoretical part (60%)</b><br/>Written examination. It is mandatory to obtain pass grade (<math>\geq 5</math>).</p> <p><b>Evaluation of the mid term exams (40%)</b><br/>Written examination. It is mandatory to obtain pass grade (<math>\geq 5</math>).</p> |  |

*Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*

## **5. ATTACHED BIBLIOGRAPHY**

*Suggested bibliography:*

1. A. Κουτίνας, Μ. Κανελλάκη. 2007. «Χημεία Τροφίμων», Εκδόσεις Τζιόλα.
2. Τσακίρης, 2006. Ελληνική Οινογνωσία, Εκδ. Ψύχαλος, Αθήνα.
3. P. Ribéreau-Gayon, D. Dubourdieu, B. Donèche, A. Lonvaud 2006. Handbook of Enology, Vol. 1: The Microbiology of Wine and Vinifications, Wiley, 2nd edition.

*Related academic journals:*

Australian Journal of Grape and Wine research  
Vitis Journal of the Science of Food and Agricu  
American Journal of Enology and Viticulture  
Australian Journal of Grape and Wine Research