

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Agricultural Sciences		
ACADEMIC UNIT	Biosystems & Agricultural Engineering		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	BAE_250	SEMESTER	2ND
COURSE TITLE	GENERAL ARBORICULTURE		
INDEPENDENT TEACHING ACTIVITIES <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>	WEEKLY TEACHING HOURS	CREDITS	
Lectures	3		
Tutorials	0		
Laboratory	2		
TOTAL	5	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Background and Scientific Area		
PREREQUISITE COURSES:	There are no prerequisite courses. it is desirable, however that they have obtained a pass grade in the course of "introduction to the science of biosystems"		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek .-For Erasmus students in English		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)			

(2) LEARNING OUTCOMES

<p>Learning outcomes</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"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> 		
<p>The student, at the end of the relevant Learning Process, must be familiar</p> <ul style="list-style-type: none"> • on a theoretical and practical level with the needs of the tree for vegetation and fruiting, • with the interactions of endogenous with exogenous factors, and the appropriate culture interventions. <p>Emphasis is placed on tree characteristics of the basic arboricultural species for the country</p>		
<p>General Competences</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 style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> </td> <td style="width: 50%; border: none;"> <i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> </td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i>
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i>	

<i>Production of new research ideas</i>	<i>Others...</i>
<p>At the end of this course the student will have further developed the following skills (general skills):</p> <ul style="list-style-type: none"> • Study skills needed for continuing professional development. • Ability to interact with others in problems of an interdisciplinary nature. <p>In general, upon completion of this course the student will have further developed the following general skills (from the list above):</p> <p>Search, analysis and synthesis of data and information, using the necessary technologies Adaptation to new situations, Decision making, Autonomous and team work, Respect for the natural environment, Promotion of free, creative and inductive thinking</p>	

(3) SYLLABUS

<p>The production of arboricultural products worldwide and nationally. The fruit tree and its organs. Propagation of fruit trees. Subjects of fruit trees. Way of fruiting of fruit trees. Lethargy. Fruiting. Fruit growth and ripening. Growth hormones and regulators. Nutrition of fruit trees. The use of water by fruit trees. Pruning. Productivity of fruit trees. Orchard installation. Frost protection.</p> <ol style="list-style-type: none"> 1. Introduction - Basic elements of fruit tree arboriculture 2. Fruit tree parts and their basic functions 3. Stem and roots of fruit trees 4. Vaccination of fruit trees 5. Leaf and bud of fruit trees, Leaf operation, cultivation techniques and productivity of fruit trees. 7. i. Pruning of fruit trees. Youth and productive life of fruit trees. Fruit tree bud lethargy 8. Pollination, fertilization and fruiting of fruit trees 9. Fruit growth in various species of fruit trees. Fruits ripening of fruit trees. Principles of fruit preservation of different species. 10. Hormones and application of growth regulators in fruit trees. Fruit tree propagation species (excluding grafting, section 4) 11. Design and installation of an orchard 12. Frost and Frost protection of fruit trees. Irrigation of fruit trees 13. Nutrition and fertilization of fruit trees. Exercises <p>The purpose of the lab work is to familiarize students with the recognition of the main cultivated species for the country, as well as the peculiarities in the way of their vegetation and fruiting .throughout the semester. They also include a demonstration of cultivation work with cultivation machinery in the field and attendance of laboratory exercises related to plant development and application of agricultural techniques. Finally, each group of students will deliver assignments based on laboratory exercises.</p>

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face to face deliveries.
<i>Face-to-face, Distance learning, etc.</i>	Laboratory exercises in General and Analytical Chemistry

<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> • Use of ICT (power point) in Teaching • Use of ICT (power point) in Laboratory Training • Use of ICT in Communication with students (Learning process support through the electronic platform e-class). 												
<p>TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>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.</i></p> <p><i>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></p>	<table border="1"> <thead> <tr> <th data-bbox="699 369 1029 398">Activity</th> <th data-bbox="1029 369 1355 398">Semester workload</th> </tr> </thead> <tbody> <tr> <td data-bbox="699 398 1029 427">Lectures</td> <td data-bbox="1029 398 1355 427">39</td> </tr> <tr> <td data-bbox="699 427 1029 456">Laboratory</td> <td data-bbox="1029 427 1355 456">26</td> </tr> <tr> <td data-bbox="699 456 1029 555">Writing short reports of laboratory exercises- Exams</td> <td data-bbox="1029 456 1355 555">40</td> </tr> <tr> <td data-bbox="699 555 1029 678">Study hours and preparation for the laboratory exercises and the final examination</td> <td data-bbox="1029 555 1355 678">20</td> </tr> <tr> <td data-bbox="699 678 1029 707">Course total</td> <td data-bbox="1029 678 1355 707">125</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	39	Laboratory	26	Writing short reports of laboratory exercises- Exams	40	Study hours and preparation for the laboratory exercises and the final examination	20	Course total	125
Activity	Semester workload												
Lectures	39												
Laboratory	26												
Writing short reports of laboratory exercises- Exams	40												
Study hours and preparation for the laboratory exercises and the final examination	20												
Course total	125												
<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i></p> <p><i>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></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<ol style="list-style-type: none"> 1. The laboratories participate by 30% in the final grade. In order to be examined in theory, the student must have completed all the laboratories and have been successfully examined in them. 2. The main assessment criteria focus on understanding and correlating the knowledge that students gain from the course with other knowledge. Particular emphasis is placed on whether they have developed the ability to apply this knowledge to crop selection and to assess the impact of these changes on the environment. Emphasis is also placed on demonstrating critical ability and justifying the choices they make in each problem. 3. Evaluation is dynamic. It mainly involves problem solving. is done orally or in writing or with a combination of the two, with or without pre-examination on the basic principles of the course, with or without exculpatory advances and with other test or inventive methods, depending on the composition of the dynamics and the needs of the audience. 4. The above are done in the Greek language. For foreign language students (eg Erasmus students) conducted in English 												

(5) ATTACHED BIBLIOGRAPHY (In Greek)

<p>(6) 1. Γενική Δενδροκομία, 1997. Κ. Ποντίκης (7) 2. Γενική και Ειδική Δενδροκομία , 2010. Μ. Βασιλακάκης. (8) (9) -Συναφή επιστημονικά περιοδικά: (10) 1. Γενική και Ειδική Δενδροκομία , 2010. Μ. Βασιλακάκης. (11) 2. Δενδρώδεις Καλλιέργειες, 1991. Ε.Μ. Σφακιωτάκης (12) 3. Πολλαπλασιασμός Καρποφόρων Δένδρων και Θάμνων, 1994. Κ. Ποντίκης</p>
