COURSE OUTLINE

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	AGRICULTURE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	AGRI_305	**SEMESTER OF STUDIES**	THIRD
COURSE TITLE	GENERAL POMOLOGY		
FACULTY MEMBER			

INDEPENDENT TEACHING ACTIVITIES *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*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	2	
Lab exercises	2	
Total	4	5

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Specialized general knowledge
PREREQUISITE COURSES:	Typically, there are no prerequisite courses
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek.
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (English)
COURSE WEBPAGE (URL)	

2. LEARNING OUTCOMES

Learning outcomes

• Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area

• Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B

• Guidelines for writing Learning Outcomes

The general pomology course aims to train students into the science of cultivation of fruit trees. The course is focused on fundamental approaches, related to morphology and physiology of fruit trees. Environmental factors affecting development, growth and fruit set of trees are analyzed in relation to nutritional and water requirements. Advanced attention is provided to acceptable cultivational practices in order to produce best quality fruits with minimum environmental impact.

By the end of this course the student will have developed the following skills:

- Understanding of tree development and fruit formation.
- Knowing the effect of environmental factors affecting fruit yield and quality.
- Be able to establish new commercial orchards.
- Be able to apply principles, techniques and methods which are currently used in contemporary fruit tree orchards.

- Be conscious to apply proper, environmentally friendly cultivational practices.

General Competences

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?

Search for, analysis and synthesis of data and	*Project planning and management*
information, with the use of the necessary	*Respect for difference and multiculturalism*
technology	*Respect for the natural environment*
Adapting to new situations	*Showing social, professional and ethical responsibility and*
Decision-making	*sensitivity to gender issues*
Working independently	*Criticism and self-criticism*
Team work	*Production of free, creative and inductive thinking*
Working in an international environment	*……*
Working in an interdisciplinary	*Others…*
environment	*…….*
Production of new research ideas	

- Autonomous (Independent) work
- Team work
- Project planning and management
- Respect for the environment
- Adaptation to environmental changes under optimum, suboptimum and extreme conditions.
- Production of new research ideas
- Promotion of free, creative and inductive thinking

3. SYLLABUS

Lectures

1. Introduction – Basic elements pomological science (importance of fruit trees at national and global level, origin of fruit tree species and taxonomical species characteristics)
2. Fruit tree parts and their fundamental functions.
3. Ecology and environment of fruit trees. Frost and frost protection of fruit trees.
4. Juvenile characteristics, alternative bearing and commercial life span of fruit trees.
5. Bud dormancy of fruit trees.
6. Pollination, flower fertilization, fruit set, development and growth of fruits, fruit thinning.
7. Maturity scale and harvest of tree fruits. Postharvest conditions and applications for tree fruits and storage principles. Plant hormones, applications and regulatory pathways in fruit trees.
8. Cultivational practices of fruit trees related to water management.
9. Cultivational practices of fruit trees related to tree nutrition and fertilization.
10. Pruning and tree formation systems.
11. Fruit trees propagation.
12. Grafting/budding fruit trees.
13. Rootstocks of fruit trees.

Laboratory exercises

1. Identification of most important fruit trees at local, national and global level.
2. Planning and establishment of tree orchard.
3. Differences of fruit tree growth among species.
4. Fruit bearing (fruit buds, morphological / physiological changes).

5. Pruning and training fruit trees. 6. Fruit trees propagation techniques.

4. TEACHING AND LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY
Face-to-face, Distance learning, etc.</td><td>Face to face lectures in the classroom and laboratory.</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES
Use of ICT in teaching, laboratory education, communication with students</td><td>Use of Information and Communication Technologies (ICTs) in teaching. Scenarios in silico and evaluation of pomological data will be integrated in the course.
Exemplary solutions will be provided.</td></tr>
<tr><td>TEACHING METHODS
The manner and methods of teaching are described in detail.

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.

The student's study hours for each learning activity are given as well as the hours of nondirected study according to the principles of the ECTS</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lectures (2 conduct hours per week x 13 weeks)</td><td>26</td></tr>
<tr><td>Lab Practice (2 conduct hour per week x 6 weeks)</td><td>12</td></tr>
<tr><td>Individual and group lab reports</td><td>20</td></tr>
<tr><td>Hours for private study of the student, preparation and attendance mid-term or/and final examinations.</td><td>67</td></tr>
<tr><td>Total number of hours for the Course (25 hours of work-load per ECTS credit)</td><td>125 hours (total student work-load)</td></tr>
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<tr><td>STUDENT PERFORMANCE EVALUATION
Description of the evaluation procedure

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

Specifically-defined evaluation criteria are</td><td>Student performance evaluation will be explained to the students at the beginning of the course/beginning of the semester.

1. Mandatory final written examination for lectures / theoretical part of the course, comprises 60% of the final mark of the student.
2. Mandatory final written examination for the transferred laboratory skills of the course, comprises 40% of the final mark of the student.

Minimum pass mark: 5 (full scale: 0-10)

1. The above mentioned process will be taking place in Greek and for foreign students (eg ERASMUS students) in English.
Examination will be based on full length questions and / or multiple choice questions.

2. Oral examination could take place if permitted by the legal/regulatory framework under which the student is affiliated</td></tr>
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given, and if and where they are accessible to students.	(or enrolled) to the department. If permitted, oral examination will take place simultaneously with written exams.

5. ATTACHED BIBLIOGRAPHY

Proposed literature (indicative and not restrictive):

1. Βασιλακάκης Μ., 2016. Γενική και Ειδική Δενδροκομία, Εκδότης Γαρταγάνης Θεσσαλονίκη, σελ. 1424.
2. Παπαχατζής Α. και Καλορίζου Ε., 2010. Γενική Δενδροκομία. Εκδόσεις Γραμμικό, Λάρισα.
3. Ποντίκης Κ. 1997. Γενική Δενδροκομία, Εκδόσεις Σταμούλη, Αθήνα
4. Crombie E. (2016). Textbook of Pomology. Syrawood Publishing House 217p.
5. Westwood M.N., 2009. Temperate-Zone Pomology: Physiology and Culture, Third Edition, Timber Press.

Proposed research journals for further reading (indicative and not restrictive):

1. Scientia Horticulturae
2. Acta Horticulturae
3. Tree physiology
4. Plant Physiology and Biochemistry
5. HortScience