**COURSE OUTLINE**

## 1. GENERAL

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|---|---|---|---|
| **SCHOOL** | School of Food and Nutritional Sciences | | |
| **DEPARTMENT** | Department of Food Science and Human Nutrition | | |
| **STUDY LEVEL** | *Undergraduate* | | |
| **COURSE CODE** | **3440** | **ΕΞΑΜΗΝΟ ΣΠΟΥΔΩΝ** | 2nd |
| **COURSE TITLE** | **Pomology** | | |

| **INDEPENDENT TEACHING ACTIVITIES** | **WEEKLY TEACHING HOURS** | **ECTS** |
|---|---|---|
| Theory (Lectures) | 3 | |
| Laboratory | 2 | |
| Total | 5 | 5 |
| | | |

| | |
|---|---|
| **COURSE TYPE** | Field of Science |
| **PREREQUISITES** | - |
| **LANGUAGE** | Greek |
| **IS THE COURSE OFFERED for ERASMUS STUDENTS?** | No |
| **COURSE WEB PAGE** | https://oeclass.aua.gr/eclass/courses/4971/ |

## 2. LEARNING OUTCOMES

**Learning Outcomes**

The aim of the course "Pomology" is to familiarize students at both theoretical and practical levels with the characteristics (morphological and physiological), requirements (soil, climatic, etc) and cultivation practices of the main fruit tree species grown in our country.

In particular, the theoretical course aims to analyse the following issues:

- Origin, evolution, and classification of fruit tree species
- National and international economic importance of fruit tree products
- Botanical and morphological traits of fruit trees species
- Bearing (fruiting) habit of the main fruit tree species
- Anthesis, pollination, fertilization as well as fruit setting, growth, and maturation
- Ecological (soil and climatic) requirements of pomological species
- Fruit tree dormancy
- Fruit tree propagation (sexual and asexual; grafting and rootstocks)
- Orchard site selection – Designing and planting an orchard
- Pruning and training systems
- Irrigation
- Orchard mineral nutrition and soil management
- Frost protection
- Harvesting criteria and quality standards of fruits

Emphasis is given to some fruit crops of high pomological importance for Greece, such as olive, citrus, peach, apricot, sweet cherry, apple, pear, pistachio, almond, and walnut.

The goal of the Laboratory classes is to familiarize the students with:

- Identification of main fruit trees (pomes, stone fruits, citrus, olive, pomegranate, loquat, fig, etc.)

- Fruiting organs and fruit bearing habits of the main fruit trees
- Fruit tree propagation (sexual and asexual; grafting, cuttings)
- Pruning of olive and citrus trees
- Designing an orchard and planting trees

Therefore, upon successful completion of the course, the students will:

- Be capable of identifying the main fruit trees cultivated in Greece
- Be able to understand the ecology, morphology, and physiology of fruit crops cultivated in Greece
- Obtain the basic knowledge concerning the cultivation practices applied in fruit trees

| | **General Competencies** |
|---|---|

- Make decisions
- Work autonomously
- Work in teams
- Retrieve, analyse and synthesize data and information, with the use of necessary technologies
- Respect natural environment
- Advance free, creative and causative thinking
- Advance of free thinking and reasoning

## 3. COURSE CONTENT

**Theory:**

- Origin, evolution, and classification of fruit tree crops
- Economic importance of fruit tree products for Greece and the entire world
- Botanical and morphological traits of fruit trees
- Bearing (fruiting) habit of the main fruit tree species
- Anthesis, pollination, fertilization, and fruit setting, growth, and maturation
- Ecological (soil and climatic) requirements of pomological species
- Fruit tree dormancy
- Fruit tree propagation (sexual and asexual; grafting and rootstocks)
- Orchard site selection – Designing and planting an orchard
- Pruning and training systems
- Irrigation
- Orchard mineral nutrition and soil management
- Frost protection
- Harvesting criteria and quality standards of fruits

**Laboratory:**

- Fruiting organs and bearing habit of the main fruit trees cultivated in Greece
- Fruit tree propagation (sexual and asexual; grafting, cuttings)
- Pruning of olive trees
- Pruning of citrus trees
- Designing an orchard and planting trees

## 4. TEACHING and LEARNING METHODS - Evaluation

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|---|---|
| **TEACHING METHOD** | Face to face, In class (theory) and in arboretum (laboratory). |
| **USE OF INFORMATICS and COMMUNICATION** | ➢ Power-Point slides<br>➢ Open e-class platform |

<table>
<tr><td>TECHNOLOGIES</td><td>➢ Teaching support through access to on-line websites, databases etc.<br>➢ Communication with students via e-mail</td></tr>
<tr><td>TEACHING ORGANISATION</td><td>
<table>
<tr><th>Activity</th><th>Workload</th></tr>
<tr><td>Lectures (theory)</td><td>39</td></tr>
<tr><td>Laboratory</td><td>26</td></tr>
<tr><td>Personal or Group project</td><td>8</td></tr>
<tr><td>Autonomous study</td><td>52</td></tr>
<tr><td>Course total<br>(25 hours of student workload per ECTS)</td><td>125 (5 ECTS)</td></tr>
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<tr><td>STUDENTS EVALUATION</td><td>1. Theory - Written final exams including:<br>• Multiple choice questions<br>• Questions with short answers<br>• Open questions<br><br>2. Laboratory class - Written final exams including:<br>• Multiple choice questions<br>• Questions with short answers<br>• Open questions</td></tr>
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## 5. BIBLIOGRAPHY


Books

Greek:

- Γενική και Ειδική Δενδροκομία , 2010. Μ. Βασιλακάκης.
- Ειδική Δενδροκομία Τόμος Β (Ακρόδρυα, Πυρηνόκαρπα και Λοιπά Καρποφόρα), 1996. Κ. Ποντίκης.
- Ειδική Δενδροκομία (Φυλλοβόλα Οπωροφόρα Δένδρα), 2013. Ι. Θεριός &Κ.
- Δημάση – Θεριού.
- Ελαιοκομία, 2000. Κ. Ποντίκης
- Ειδική Δενδροκομία (Εσπεριδοειδή), 2003. Κ. Ποντίκης
- Γενική Δενδροκομία Μέρος Α΄ (Πολλαπλασιασμός και Υποκείμενα Οπωροφόρων), 2006. Κ. Δημάση – Θεριού & Ι. Θεριός.
- Ελαιοκομία, 2005. Ι. Θεριός
- Πολλαπλασιασμός Καρποφόρων Δένδρων και Θάμνων, 1994. Κ. Ποντίκης