**VEGETABLE PRODUCTION**

1. **GENERAL**

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| **SCHOOL** | APPLIED ECONOMICS AND SOCIAL SCIENCES | | | | |
| **DEPARTMENT** | AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT | | | | |
| **STUDY LEVEL** | Undergraduate | | | | |
| **COURSE CODE** | 775 | **SEMESTER** | | 8th | |
| **COURSE TITLE** | VEGETABLE PRODUCTION | | | | |
| **INDEPENDENT TEACHING ACTIVITIES** | | | **WEEKLY TEACHING HOURS** | | **ECTS** |
| LECTURES | | | 3 | |  |
| LABORATORY EXERCISES | | | 2 | |  |
| TOTAL | | | 5 | | 5 |
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| **COURSE TYPE** | Academic subject area | | | | |
| **PREREQUISITES** |  | | | | |
| **LANGUAGE** | Greek/English | | | | |
| **IS THE COURSE OFFERED forERASMUS STUDENTS?** | Yes | | | | |
| **COURSE WEB PAGE** | <http://www.ekk.aua.gr/index.php?sec=lessons&item=16> | | | | |

1. **LEARNING OUTCOMES**

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| **Learning Outcomes** | |
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| After successfully completing the course, attendees will be able to:   * have a sound overview of the current status and perspectives of vegetable production in Greece and at global level, the nutritional value, and the economic aspects of producing vegetables both in open field and in greenhouse, as well as their marketing, * select the most appropriate crops and cropping systems for a particular cultivation site, * understand the major interactions between vegetable production, root and air environment, including climatic conditions, * advise growers about the most appropriate cropping practices and new technological developments in the sector of vegetable production and marketing, * understand the different links of the vegetable supply chain after harvesting, including harvesting technologies and their economics, package, transport, post-harvest storage and marketing. * Apply good agricultural practices based on integrated crop management in the vegetable production sector. * Support as advisors or inspectors certification procedures in vegetable production enterprises * Compile technical studies on vegetable production * Support research projects related to the vegetable supply chain. * Establish and manage a vegetable production or marketing enterprise. | |
| **General Competences** |
| Independent work and development of economic thought on issues concerning vegetable production and supply.  Adaptation to changing conditions in the vegetable production and marketing sector  Decision making in all links of the vegetable supply chain  Independent work  Working in a multi-disciplinary working environment  Inspiration of new research ideas  Respect to the environment  Promotion of creative and critical thinking on different approaches related to production and supply of vegetables following environment-friendly practices. | |

1. **COURSE CONTENT**

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| 1. THEORY    * + 1. Introduction to vegetable production. Current status and perspectives of vegetable production in Greece and at global level. Nutritional value of vegetables        2. Interactions of root and air environment with vegetable production        3. Open-field vegetable production systems. Integrated and organic vegetable production        4. Vegetable production in greenhouses and screenhouses. Soilless vegetable production        5. Propagation material and establishment of vegetable crops        6. Irrigation and fertilization of vegetable crops        7. Other cultural practices (weed, pest and insect control, application of growth regulators, climate control, pruning and support in greenhouses).        8. Harvesting and postharvest handling of vegetable products (packing, transport and postharvest storage). Marketing and import – export of vegetables.        9. Special production techniques of tomato, pepper and eggplant        10. Special production techniques of Cucumber, melon, watermelon and zucchini        11. Special production techniques of lettuce and other leafy vegetables        12. Special production techniques of root and tuber vegetables 2. LABORATORY EXCERCISES   Identification of vegetable plant species  Germinability of vegetable seeds  Techniques and means of seed sowing in nurseries  Transplanting vegetable seedlings  Growing media for nurseries and soilless production  Grafting of vegetables  Systems of soilless vegetable production  Nutrient solution preparation and management in soilless cultivated vegetables  Pruning and support of tomato, pepper and eggplant grown in greenhouses  Pruning and support of Cucurbitaceae grown in greenhouses. |

1. **TEACHING and LEARNING METHODS - Evaluation**

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| **TEACHING METHOD** | Lectures in the amphitheater and laboratory exercises in the labs, the open field and the greenhouse facilities of the Laboratory of Vegetable Crops. |
| **USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES** | Power Point presentations using appropriate computer and projector equipment.  Communication with students through e-mail, Zoom, Microsoft teams, and Skype.  Uploading of information and teaching material in the web page of the Laboratory of Vegetable Crops (<https://www.aua.gr/ekk/en/>).  Use of a specialty designed platform in laboratory excercises (<https://nutrisense.online/>). |
| **TEACHING ORGANISATION** | |  |  | | --- | --- | | *Activity* | *Work Load (h)* | | Lectures (direct) | 39 | | Laboratory excersices | 26 | | Group and/or individual work | 12 | | Autonomous study | 48 | | Total contact hours and training | ***125 h***  ***( 5 ECTC)*** | |
| **STUDENTS EVALUATION** | Evaluation of students in the theoretical part of the course will be based on a written examination after completion of the semester.  The evaluation oof students’ performance in the laboratory excercises will be based on testing their ability to identify different vegetable plant species based on their external appearance and on a final written examination at the end of the semester |

1. **BIBILIOGRAPHY**

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| I. In Greek:  1. Σάββας, Δ., 2016. Γενική Λαχανοκομία. Εκδόσεις Πεδίο.  2. Ολύμπιος, Χ., 2015. Η Τεχνική της Καλλιέργειας των Υπαίθριων Κηπευτικών. Εκδόσεις Αθ. Σταμούλη, Αθήνα.  3. Χα, Ι.Α., Πετρόπουλος, Σ., 2014. Γενική Λαχανοκομία και Υπαίθρια Καλλιέργεια Κηπευτικών. Πανεπιστημιακές Εκδόσεις Θεσσαλίας, Βόλος.  II. In English  Hochmuth, G. (Ed.)., 2019. Achieving sustainable cultivation of vegetables. Burleigh Dodds Science Publishing, Cambridge, UK.  **RELEVANT SCIENTIFIC JOURNALS**  Scientia Horticulturae  Journal of Horticultural Science and Biotechnology  European Journal of Horticultural Science  Journal of the American Society for Horticultural Science |