**Horticultural technologies (IIIrd Year of study, IInd SEMESTER)**

**Credit value (ECTS) 4**

**Course category**

Domain (Compulsory courses)

**Discipline Code:** A.EMIAIA.S.308

**Course holder:**

**Ph. D. Lecturer Alexandru COJOCARU**

**Ph. D. Lecturer Cristina ZLATI**

**Discipline objectives (course and practical works)**

The aim of the course is the theoretical training of students of the Faculty of Agriculture, specialization Farm and food machinery engineering, undergraduate cycle, on the general and special elements of the cultivation of the main vegetable species from which the tuberous roots are consumed, vegetable species of the cabbage group, vegetable species of the *Solanaceae family* from which the fruits are consumed, vegetable species of the *Cucurbitaceae* family. It also aims to learn about the biological, ecological and technological peculiarities of fruit trees and shrubs in order to provide a basis for cultivation technologies, the technology of producing fruit planting material and maintaining plantations, the study of the growth and fruiting characteristics of different species and groups of fruit varieties in order to establish differentiated technologies.

The practical work aims to familiarize students with the recognition of seeds of the main vegetable species, knowledge of the assortment of species and varieties of vegetable plants of the botanical families *Cruciferae*, *Solanaceae* and *Cucurbitaceae*. It will also study the technique of producing vegetable seedlings, the preparation of land and buildings for the establishment of vegetable crops, general and special care of vegetable crops and the harvesting of vegetables. Students will be familiarized with the recognition of fruiting branches of pomaceae, drupaceae, nut trees and fruit bushes. Also, they will study tree planting, principles of crown formation, assortment characterization and main varieties of pomaceae, drupaceae, nut and fruit tree species.

**Contents (syllabus)**

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| **Course (chapters/subchapters)** |
| **General considerations on vegetable production**  **Propagation and ecology of vegetable plants** |
| **General technology of vegetable seedling production** |
| **General technology of growing vegetables in non-protected field** |
| **Cultivation technology of vegetable plants for tuberous roots** |
| **Technology of cultivation of vegetable plants of the cabbage group** |
| **Cultivation technology of vegetable plants of the *Solanaceae* family from which the fruits are consumed** |
| **Cultivation technology of *Cucurbitaceae* vegetable crops** |
| **Introduction to Fruit Growing:** Definitions, Terminology, Taxonomy  **Biological and ecological bases of modern fruit growing** |
| **Production of certified fruit planting material** |
| **Establishment and maintenance of orchards** |
| **Pomeaceous crops (apple, pear, quince)** |
| **Cherry and cherry growing**  **Plum and apricot growing** |
| **Cultivation of nut species** |
| **Growing strawberry and fruit bushes**  **Fruit harvesting in fruit growing** |

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| **Practical works** |
| **Knowledge of the seeds of the main vegetable species** |
| **Knowledge of the assortment of species and varieties of root tuber vegetables**  **Knowledge of the assortment of species and varieties of vegetable plants of the cabbage group** |
| **Knowledge of the assortment of species and varieties of vegetable plants of the *Solanaceae* family Knowledge of the assortment of species and varieties of vegetable plants of the *Cucurbitaceae* family** |
| **Production of vegetable seedlings** |
| **Preparing land and buildings for the establishment of vegetable crops** |
| **Establishment of vegetable crops in greenhouses, glasshouses, garden plots and open fields** |
| **General and special care of vegetable crops**  **Harvesting vegetables** |
| **Fruit branches of pomaceae**  **Fruiting branches of drupaceae** |
| **Fruit branches on nut trees**  **Fruit branches on fruit bushes** |
| **Tree propagation by grafting** |
| **Planting trees**  **Principles of crown formation** |
| **Assortment characterization and main varieties of pomaceae species** |
| **Assortment characterization and main varieties of drupaceae species**  **Assortment characterization and main varieties of nut species** |
| **Presentation of the main varieties and biotypes of strawberry, currant, raspberry, mulberry, blackberry, gooseberry, gooseberry, whitethorn, dogwood, mace, sweet rose, elder, scorus** |
| **Final colloquium of knowledge evaluation** |

**References**

1. Cojocaru A., Stan T., 2023 *- Legumicultură generală - Manual lucrări practice vol. I*. Editura “Ion Ionescu de la Brad”, Iași. ISBN 978-973-147-486-1
2. Stan N., Stan T., 2010 - *Legumicultură generală*. Editura “Ion Ionescu de la Brad”, Iaşi.
3. Stoleru V., Munteanu N., 2011 - *Legumicultură – Îndrumător pentru proiectarea culturilor legumicole*, Editura Performantica, Iaşi. Editura ”Ion Ionescu de la Brad”, Iași
4. Teliban G.C., Munteanu N., Stoleru V., 2020 - *Legumicultură specială. Manual pentru lucrări practice, vol I*. Editura ”Ion Ionescu de la Brad”, Iași
5. Babuc V., Peşteanu A., Gudumac E., Cumpanici A., 2013 - *Producerea merelor-Manual Tehnologic*. Casa editorial-poligrafică Bons Offices SRL, Chisinău.
6. Babuc V., Peşteanu A., Gudumac E., 2015 - *Conducerea şi tăierea pomilor şi arbuştilor fructiferi*. Casa editorial-poligrafică Bons Offices SRL,, Chisinău.
7. Cimpoieș Gh., 2020 - *Soiuri de pomi*. Tipografia Print-Caro, Chișinău.
8. Grădinariu, G. 2002 - *Pomicultură specială*. Editura Ion Ionescu de la Brad, Iaşi.
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10. Sumedrea Mihaela, Sumedrea D., Asănică A., 2011 - *Pomicultură practică*. Editura Invel Multimedia, București.
11. Zlati Cristina, Gradinariu G., 2010 - *Pomologie*. Editura Moldova, Iaşi.

**Evaluation**

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| **Evaluation form** | **Evaluation Methods** | **Percentage of the final grade** |
| Exam | Oral examination | 60% |
| Appreciation of the activity during the semester | Oral assessment during the semester, verification tests and final laboratory colloquium. | 40% |

**Contact**

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