

# **GROWING FRUIT TREES, Landscape III<sup>rd</sup> year, 2nd semester**

**Credit value (ECTS): 3**

**Course category: mandatory**

**Course holder:**

Lecturer PhD ZLATI CRISTINA

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

Knowledge and proper use of the fruit growing specific notions.

Knowledge of the biological, ecological and technological peculiarities of fruit species and fruit shrubs, to substantiate the cultivation technologies; technology for the production of fruit planting material.

Highlighting the decorative characteristics of the fruit growing species and the ways of including them in the landscaping.

Knowledge and proper use of the elements of recognition of the species and varieties of fruit trees.

Knowledge of the ecological requirements of fruit species.

Applying the principles of shaping the crown of the trees and performing maintenance and fruiting cuts depending on the particularities of growing and fruiting the fruit growing species.

Design and evaluation of the production activities of the fruit planting material.

Use of methods, techniques and tools for grafting trees.

Knowledge of the importance, origin and area of the spread as well as the ecological requirements for the proper zoning of the fruit growing species.

## **Contents (syllabus)**

<b>Course (chapters/subchapters)</b>
<b>1. Introduction to fruit growing</b>
1.1. Definitions, Terminology, Taxonomy
1.2. Classification of fruit tree species
<b>2. The biological basis of modern fruit growing</b>
2.1. Morphology and physiology of fruit species
2.2. Periods of age
2.3. The annual cycle of fruit tree species
<b>3. Ecology of fruit trees and shrubs</b>
<b>4. Planting material production</b>
4.1. Nursery organization
4.2. Technology of rootstock propagation
4.3. Production of graft branches
4.4. Trees multiplication by grafting
<b>5. Establishment of fruit plantations</b>
5.1. Fruit growing technology systems
5.2. The choice and location of species and varieties in the orchards
5.3. Maintenance of plantations
<b>6. Particularities of apple culture</b>
<b>7. Particularities of pear and quince culture</b>

<b>8. Particularities of sweet and sour cherry culture</b>
<b>9. Particularities of plum culture</b>
<b>10. Particularities of apricot and peach culture</b>
<b>11. Particularities of nut fruits culture</b>
<b>12. Particularities of strawberry culture</b>
<b>13. Particularities of blackcurrant, blueberry, raspberry and blackberry culture</b>
<b>14. Particularities of small fruit shrubs culture</b>

<b>Practical works</b>
<b>Fruit-bearing branches in pomaceae</b>
<b>Fruit-bearing branches in drupaceae</b>
<b>Fruit-bearing branches in nuts</b>
<b>Fruit-bearing branches on fruit shrubs</b>
<b>Multiplication of trees by grafting</b>
<b>Planting trees</b>
<b>Formation of globular crowns with central axis</b>
<b>Formation of globular crowns without central axis</b>
<b>Formation of flattened and artistic crowns - palisades</b>
<b>Pruning and maintenance the orchards</b>
<b>The assortment of apples, pear and quince</b>
<b>The assortment of sweet and sour cherry, apricot, plum and peach</b>
<b>The assortment of walnut, almond, hazelnut and chestnut</b>
<b>The assortment of fruit bushes (strawberries, blackcurrants, raspberries, blackberries, blueberries, gooseberries, sea buckthorn and other shrubs)</b>

### **Bibliography**

- Cepoiu N. i colab., 1996- *Curs de pomicultur biologic* , U.S.A.M.V. Bucure ti.**
- Cirea V., 1995- *Pomicultur general* , curs lito., UAI.**
- Botez M., B descu G., Botar A., 1984- *Cultura pomilor i arbu tilor fructiferi*, Ed. Ceres, Bucure ti.**
- Cimpoie Gh., 2000 – *Conducerea i t ierea pomilor*. Intreprinderea Editorial Poligrafic tiin a Chi in u.**
- Cirea V., Drobot Gh., Drobot Mari - Ann, 1990- *Pomicultur general* - Îndrum tor de lucr ri practice, lito U.A.I.**
- Cociu V., 1990- *Soiurile noi - factor de progres în pomicultur* , Ed. Ceres, Bucure ti.**
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- Gr dinariu G., Istrate M., 1996- *Cultura pomilor i arbu tilor fructiferi*, curs lito. U.A.M.V. Ia i.**
- Gr dinariu G., Istrate M., Dasc lu M., 1998- *Pomicultur* , Ed. Moldova.**
- Gr dinariu, G. 2002 – *Pomicultur special* . Editura „Ion Ionescu de la Brad”, Ia i.**
- Istrate M., 2007 - *Pomicultur general* . Editura „Ion Ionescu de la Brad”, Ia i.**
- Mladin Gh., Mladin Paula, 1992- *Cultura arbu tilor fructiferi pe spa ii restrânse*, Ed. Ceres, Bucure ti,**
- Zlati Cristina, Gradinariu G., 2010 – *Pomologie*, Ed. Moldova, Ia i.**

### **Evaluation**

<b>Evaluation form</b>	<b>Evaluation Methods</b>	<b>Percentage of the final grade</b>
	Oral exam	70%

Course	presence	
Practical works	Tests + course and practical	30%

### Contact

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## Viticulture (Specialization Landscaping, the third Year of study, the sixth Semester)

**Credit value (ECTS): 3**

**Course category:**

**Domain discipline (mandatory)**

**Course holder:**

**Assoc. Prof. PhD. Mihai MUSTEA**

**Discipline objectives (course and practical works):** theoretical and practical training of students regarding biological particularities, production of vine planting material, establishment and maintenance of vineyards cultivated for landscape purposes;

- identification and correct use of specialized terms;
- knowledge of the requirements regarding the ecological factors of the vines
- knowledge of the main biological processes of vines;
- knowledge of technologies for soil preparation, planting and maintenance of vines;
- identification of the particularities of cultivation of vines for landscape purpose.

### Contents (syllabus)

Course (chapters/subchapters)
<b>1. Introduction</b> 1.1 Definition and content 1.2 The situation of viticulture on the globe and in Romania
<b>2. Morphology and anatomy of vines</b>
<b>3. The ecology of vines</b> 3.1 The influence of climatic factors, edaphic factors, secondary biotope factors.
4. Biology of vines 4.1 The ontogenetic biological cycle 4.2 The annual biological cycle
<b>5. Establishment of fruit plantations</b> 5.1 Selecting and preparing the land for planting 5.2 The choice of fruit varieties and rootstocks 5.3 Planting vines

<p><b>6. Maintenance of young fruit plantations</b>  6.1 Choosing and designing support systems,  6.2 Cuttings for the formation of vines.</p>
<p><b>7. Maintenance of fruit plantations</b>  7.1 Cutting vines,  7.2 Soil maintenance systems  7.3 Works and operations in green  7.4 Fertilization and irrigation  7.5 Grape harvesting.</p>

Practical works
Recognition of the wooden elements of the vine
Morphology and anatomy of buds. Determining the viability of the buds
Planting vines
Training cuts on vines
The fruit cuts at the vine
Supporting for vine
Agrotechnical works applied in fruit plantations
Works and operations in green on vine

### **Bibliography**

1. Dejeu L. C. 2010 - Viticulture. Ceres Publishing House, Bucharest
2. Dobrei A., M I escu Mihaela, Ghi Alina, 2011 - Viticulture, biological and technological bases. Solness Publishing House, Timisoara
3. Mustea M., 2004 - Viticulture, biological bases, establishment and maintenance of young fruit trees. "Ion Ionescu de la Brad" publishing house, Iasi.
4. Pop Nastasia, 2010 - General viticulture, Eikon Publishing House, Cluj-Napoca.
5. Suditu P. et al., 2002 - Mechanization of viticulture work. Pim Publishing House.
6. ârdea C. 1995 - Viticulture. Didactic and Pedagogical Publishing House, Bucharest.

### **Evaluation**

Evaluation form	Evaluation Methods	Percentage of the final grade
Course	Exam	60 %
	presence	
Practical works	Tests + cours and practical	40 %

### **Contact**

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