

ARBORICULTURE

(Specialization Horticulture, 2nd Year of study, 2nd Semester)

Credits (ECTS): 3

Course category: Domain-specific discipline (mandatory)

Course holder: PhD / Lecturer Roberto Renato BERNARDIS

Objectives of the discipline:

- Knowledge on the biological, ecological and technological particularities of the ornamental trees and shrubs; the technology of generation of the arboreal and arbustive material.
- Knowledge and proper use of the notions that are specific to ornamental tree culture.
- Knowledge and proper use of the elements needed into recognize the arboreal species.

Contents (syllabus)

Course (chapters/subchapters)
1. Introduction. The importance and development of ornamental tree culture in Romania and worldwide.
2. Biology of ornamental woody plants.
3. The relationships with the ecologic, climatic, edaphic, biotic and anthropic culture factors
4. Zonation of the woody species in Romania
5. Technologies of generative seedlings production. Technologies of seedlings propagation by cuttings
6. Technologies of seedlings obtaining by marcotting, root suckers, bush division and grafting
7. Conifer trees and shrubs I
8. Conifer trees and shrubs II
9. Deciduous trees and shrubs I
10. Deciduous trees and shrubs II
11. Deciduous trees and shrubs III
12. Roses –rose species and genera. Climbing shrubs (liana)

Practical activity
1. Classification and main morphologic features of ornamental woody plants.
2. Vegetative organs of the ornamental woody plants.
3. Foundation, organization and arrangement of a dendrologic garden nursery. Foundation, organization and arrangement of a dendrologic garden nursery.
4. Recognition of the conifer trees and shrubs
5. Recognition of the deciduous trees and shrubs by their spindles, shoots, leaves, flowers, fruits and seeds
6. Conifers and deciduous seeds propagation. The processing and preservation technology of the dendrologic species seeds.
7. The extraction, conditioning and preservation of the dendrologic species seeds.
8. Conifers and deciduous cutting propagation Conifers and deciduous marcotting, root sucker and bush division propagation
9. Conifers and deciduous grafting propagation.
10. Extraction of the seedlings from the garden nursey. Trees and shrubs plantation and transplantation.
11. Development of the ornamental trees and shrubs head. Development of the "Winter Trees".
12. Roses propagation technology. Lawns development and maintenance technology.
13. Ornamental trees and shrubs fertilization. Ornamental trees and shrubs watering.
14. Mobilization of the soil from the planted areas. Mulching of the occupied surfaces. Protection of the plants that are sensitive to low temperatures.

Bibliography

1. **Bernardis R., 2010** - *Arboricultură ornamentală. Vol.1.* Editura „Ion Ionescu de la Brad”, Iași.
2. **Bernardis R., 2011** - *Arboricultură ornamentală. Vol.2.* Editura „Ion Ionescu de la Brad”, Iași.
3. **Bernardis R., 2012** - *Arboricultură ornamentală. Vol.3.* Editura „Ion Ionescu de la Brad”, Iași.
4. **Bernardis R., 2016** - *Tehnologia arborilor și arbuștilor ornamentali.. Vol.1.* Editura „Ion Ionescu de la Brad”, Iași.
5. **Bernardis R., 2017** - *Tehnologia arborilor și arbuștilor ornamentali.. Vol.2.* Editura „Ion Ionescu de la Brad”, Iași.
6. **Draghia Lucia, 2000** - *Producerea materialului săditor dendrologic,* Editura „Ion Ionescu de la Brad” Iași.
7. **Iliescu Ana-Felicia, 1998** - *Arboricultura ornamentală,* Edit. Ceres București.
8. **Sandu Tatiana, 2009** - *Arboricultură ornamentală.* Editura „Ion Ionescu de la Brad”, Iași.
9. **Sonea V., Palade L., Iliescu Ana-Felicia, 1979** - *Arboricultură ornamentală și arhitectură peisageră,* Editura Didactică și Pedagogică București.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Final exam	Written / oral examination	80
Evaluation of the activity during the semester	Written and oral assessments during the semester	20

Contact

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