

ARBORICULTURE
(HORTICULTURE, II th Year of study, IV th Semester)

Credit value (ECTS): 4

Course category: mandatory

Course holder: PhD, Lecturer Roberto Renato BERNARDIS

Discipline objectives (course and practical works)

- 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) |
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| 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 works |
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| 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. **Draghia Lucia, 2000** - *Producerea materialului săditor dendrologic*, Editura „Ion Ionescu de la Brad” Iași.
5. **Iliescu Ana-Felicia, 1998** - *Arboricultura ornamentală*, Edit. Ceres București.
6. **Sandu Tatiana, 2009** - *Arboricultură ornamentală*. Editura „Ion Ionescu de la Brad”, Iași.
7. **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 |
|------------------------|-----------------------------|--------------------------------------|
| Course | Exam | 80% |
| | presence | 10% |
| Practical works | Tests + cours and practical | 10% |

Contact

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