ARBORICULTURE (I) - Landscape Specialization, Year II, Semester IV

Nr. transferable credits: 5

Domain discipline (required)
Discipline holder:
Chief of doctor works SANDU TATIANA

The objectives of the discipline (course and applications):
The main objective of the discipline is obtaining the theoretical and practical knowledge of ornamental woody plants, in order to produce dendrological material used in the arrangement of green spaces, at the level of knowledge for European and world higher education.
The aim is to know the species of trees and ornamental shrubs regarding morphology, ecology, culture technology, knowledge and proper use of dendrological species and varieties in landscape architecture and environmental protection.
The practical works follow the theoretical and practical knowledge of the methods of propagation, cultivation technologies of the main dendrological species encountered in our country.
Knowledge about aspects regarding the establishment of the dendrological nurseries, the choice of the site, the organization of the territory, the preparation of the land, the choice of the culture system, the technologies of vegetative propagation (through cuttings, logs, grafting) as well as the biotechnologies of vegetative propagation of the woody plants.

Content of the discipline

COURSE (Chapters / Subchapters)
Introduction Importance and development of ornamental arboriculture in Romania and around the world.
Head. 1. Biology of ornamental woody plants. **1.**1 The particularities of growth and development. **1.**2 The biochemical features of ornamental woody plants.
Head. 2. Relations with ecological factors of culture. **2.**1. Relations with climatic factors. **2.**2. Relations with edaphic factors. **2.**3. Relations with biotic factors. **2**.4. Relations with anthropogenic factors. **2.**5. Zoning of woody species in Romania.
Head. 3. Study of the characteristics, the cultivation technology and the use of ornamental woody plants - the Spermatophyta crevice, the undergrowth. Pinophytina (Gymnospermae) **3**.1. Fam Cycadaceae, genus Cycas; **3**.2. Fam. Ginkgoaceae, genus Ginkgo; **3.**3. Fam. Taxaceae, genus Taxus, Torereya. **3.**4. Fam. Cephalotaxaceae, genus Cephalotaxus; **3.**5. Fam. Pinaceae, genus Abies. **3.**6. Fam. Pinaceae, genus Picea; **3.**7. Fam. Pinaceae, genus Larix. **3.**8. Fam. Pinaceae, genus Pinus; **3.**9. Fam. Pinaceae, genus Pseudotsuga; the genus Tsuga; **3.**10. Fam. Araucariaceae, the genus Araucaria; **3.**11. Fam Taxodiaceae, genus Taxodium, Sequoia, Cryptomeria; **3.**12. Fam. Cupressaceae, genus Thuja. **3.**13. Fam. Cupressaceae, genus Chamaecyparis, genus Juniperus, genus Cupressus, genus Cupressocyparis, genus Calocedrus, genus Thujopsis.

Head. 4. Study of the properties, cultivation technology and how to use ornamental woody plants - Spermatophyta claw, subincreng.Magnoliophytina (Angyospermae) **4.**1. Fam. Magnoliaceae, genus Magnolia, new Liriodendron; **4.**2. Fam. Calycanthaceae, the genus Calycanthus. **4.**3. Fam. Berberidaceae, genus Berberis, genus X Mahoberberis, genus Mahonia, **4.**4. Fam. Aristolochiaceae, the genus Aristolochia, **4.**5. Fam. Ranunculaceae, the genus Clematis. **4.**6. Fam. Cercidiphyllaceae, the genus Cercidiphyllum, **4.**7. Fam. Hamamelidaceae, genus Liquidambar, genus Hamamelis; **4.**8. Fam. Platanaceae, genus Platanus; **4.**9. Fam. Ulmaceae, genus Ulmus, genus Celtis, **4.**10. Fam. Moraceae, genus Morus, genus Maclura, genus Broussonetia; **4.**11. Fam. Juglandaceae, genus Juglans, genus Carya, genus Pterocarya; **4.**12. Fam. Fagaceae, genus Quercus, genus Castanea, **4.**13. Fam Betulaceae, genus Betula, genus Alnus.
Practical work
Dendrological nursery - definition, classification, design mode and site choice
Organization of the dendrological nursery
Calculation of the surface of the dendrological nursery.
Application of desolation in the dendrological nursery
Soil works in the dendrological nursery
Soil preparation systems in the dendrological nursery.
Ploting and preparing the land for cultivation.
Production of dendrological seedlings vegetatively.
Multiplication by cuttings to ornamental woody plants.
Keeping cuttings by stratification. Rooting of dendrological cuttings
Propagation by marking on ornamental woody plants.

Bibliography

1. **Draghia, Lucia, 2000** - *Production of dendrological planting material*, "Ion Ionescu de la Brad" Publishing House Iaşi.
2. **Iliescu Ana-Felicia, 1998** - *Ornamental Arboriculture*, Edit. Ceres Bucharest.
3. **Sandu Tatiana, 2009** - *Ornamental Arboriculture*, "Ion Ionescu de la Brad" Publishing House, Iaşi.
4. **Sandu Tatiana, 2016** - *Ornamental arboriculture - Practical works*. PIM Publishing House, Iaşi.
5. **Sandu Tatiana, Vlahidis, V, 2016** - *Dendrological nursery*, "Ion Ionescu de la Brad" Publishing House, Iaşi.

Final evaluation

Forms of evaluation	Modalities of evaluation	Percentage of the final note
Oral examination	Acquisition of the knowledge presented at the lectures and from the additional bibliography	60%
	Attendance and course monitoring	10%
Practical work	Individual study	30%

Contact

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