## Biotechnical Faculty / NURSERY PRODUCTION / PRODUCTION OF DENDROLOGICAL PLANTING MATERIAL

| **Course:** | PRODUCTION OF DENDROLOGICAL PLANTING MATERIAL | | | |
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| **Course ID** | **Course status** | **Semester** | **ECTS credits** | **Lessons** (Lessons+Exercises+Laboratory) |
| 12423 | Mandatory | 3 | 6 | 2+1+1 |
| **Programs** | NURSERY PRODUCTION | | | |
| **Prerequisites** | does not have | | | |
| **Aims** | To acquaint students with the basics of reproduction and production of dendrological planting material, as well as the characteristics of the most important genera of decorative dendrological plants of conifers, broadleaved trees and evergreen broadleaved trees | | | |
| **Learning outcomes** | After passing the exam, the student will be able to: - recognize the most important ornamental species of trees and shrubs - produce seedlings of trees and shrubs from seeds - apply modern technology of scarification and produce dendrological species by cuttings - chooses adequate methods and care of seedlings - organizes and manages nursery production | | | |
| **Lecturer / Teaching assistant** | Dr Jelena Lazarević | | | |
| **Methodology** | ectures, exercises, seminar work, colloquiums (identification of plant material) and final exam | | | |
| **Plan and program of work** | | | | |
| Preparing week | Preparation and registration of the semester | | | |
| I week lectures | The use and importance of dendrological planting material. Functions of greenery in cities. Dendrological planting material in afforestation and land reclamation | | | |
| I week exercises | Forest vegetation in Montenegro, overview of basic types and functions | | | |
| II week lectures | Basic types of coniferous trees and shrubs in use in Montenegro | | | |
| II week exercises | Morphological characteristics and species recognition | | | |
| III week lectures | Basic types of broadleaves trees and shrubs in use in Montenegro | | | |
| III week exercises | Morphological characteristics and species recognition | | | |
| IV week lectures | Nurseries of dendrological planting material | | | |
| IV week exercises | Planning a nursery production of dendro reproductive material (spatial and chronological component, Colloquium I | | | |
| V week lectures | Propagation of woody plants. Basic types of reproduction. Generative reproduction. Fruiting of woody species; collection and storage of seeds. Origin of seeds. | | | |
| V week exercises | Testing the quality of seeds of woody species, parameters. | | | |
| VI week lectures | Seed dormancy of woody and shrub species (with examples) and procedures for overcoming dormancy. Seed treatment before sowing. Sowing seeds. | | | |
| VI week exercises | Overcoming dormancy, seed treatment before sowing, practical examples. | | | |
| VII week lectures | Vegetative propagation of woody species. Significance; Division of vegetative propagation. | | | |
| VII week exercises | Examples of vegetative propagation of shrub species | | | |
| VIII week lectures | Sowing seeds, work in the seedbed in the first year after sowing. Care of cuttings in the first year. Production and schooling of shruby plantlets. | | | |
| VIII week exercises | Field tour of ornamental plant nurseries | | | |
| IX week lectures | Production and training/care of tree seedlings (basic principles). | | | |
| IX week exercises | Production of row seedlings, examples, Colloquium II | | | |
| X week lectures | Propagation of conifers. Generative propagation of conifers and production of conifer seedlings (according to species) | | | |
| X week exercises | Coniferous Forest Nurseries. Principles of forest seed selection | | | |
| XI week lectures | Propagation of conifers. Vegetative propagation of conifers and production of seedlings (by species). | | | |
| XI week exercises | Vegetative propagation of thuja | | | |
| XII week lectures | Propagation of deciduous trees. Generative propagation of deciduous trees and production of | | | |

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| | deciduous seedlings (according to species) |
| XII week exercises | Use of hardwoods on green areas, examples |
| XIII week lectures | Propagation of deciduous trees. Vegetative reproduction of deciduous trees |
| XIII week exercises | Conditions, objects and substrates |
| XIV week lectures | Basic principles of the establishment of plantations of woody plants in urban areas. |
| XIV week exercises | Maintenance and care of conifers. II colloquium |
| XV week lectures | Market of dendrological planting material. |
| XV week exercises | Visit of the dendrological planting material sales center |
| **Student workload** | Weekly: 6 credits x 40/30= 8 hours Structure: 2 hours of lectures; 1 hour of exercises; 1 hour laboratory 4 hours independent student work, including consultations; During the semester Classes and final exam: 8 hours x 16 Sunday = 128 hours Necessary preparations before the beginning of the semester (administration, registration, certification) 2 x 8 = 4 p.m.; Total workload for the course: 6 x 30 = 180 hours Additional work for exam preparation in the remedial course the deadline, including passing the remedial exam, from 0 to 36 hours; Load structure: 128 hours (teaching), 16 hours (preparation) and 36 hours (additional work) |

| **Per week** | **Per semester** |
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| **6 credits x 40/30=8 hours and 0 minuts**<br>2 sat(a) theoretical classes<br>1 sat(a) practical classes<br>1 excercises<br>**4 hour(s) i 0 minuts**<br>of independent work, including consultations | Classes and final exam:<br>**8 hour(s) i 0 minuts x 16 =128 hour(s) i 0 minuts**<br>Necessary preparation before the beginning of the semester (administration, registration, certification):<br>**8 hour(s) i 0 minuts x 2 =16 hour(s) i 0 minuts**<br>Total workload for the subject:<br>**6 x 30=180 hour(s)**<br>Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item)<br>**36 hour(s) i 0 minuts**<br>Workload structure: **128 hour(s) i 0 minuts (cources), 16 hour(s) i 0 minuts (preparation), 36 hour(s) i 0 minuts (additional work)** |
| **Student obligations** | Students are required to attend classes and exercises |
| **Consultations** | Wednesday; 4-5 pm (after class, classroom) |
| **Literature** | L iterature: Radulović M.2011: Production of dendrological planting material, script, Stilinović S., 1986: Production of planting material of forest and ornamental trees and shrubs, University of Belgrade, Faculty of Forestry Stilinović S. 1988. Seed production of forest and ornamental trees and shrubs, University of Belgrade, Faculty of Forestry |
| **Examination methods** | Forms of knowledge testing and assessment: - Seminar work: 10 points - Colloquium: (2 x 20) 40 points - Final exam: 50 points Grades and points: A (≥ 90 to 100 points); B (≥ 80 to < 90); C (≥ 70 to < 80); D (≥ 60 to < 70); E (≥ 50 to < 60) F < of 50 |
| **Special remarks** | |
| **Comment** | |

| **Grade:** | F | E | D | C | B | A |
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| **Number of points** | less than 50 points | greater than or equal to 50 points and less than 60 points | greater than or equal to 60 points and less than 70 points | greater than or equal to 70 points and less than 80 points | greater than or equal to 80 points and less than 90 points | greater than or equal to 90 points |