

Study Programme: Fruit science, viticulture and horticulture, module Ornamental horticulture
Course Unit Title: Agroforestry systems
Course Unit Code: 19.PEJ016
Name of Lecturer(s): Saša Orlović, Lazar Pavlović
Type and Level of Studies: Bachelor
Course Status (compulsory/elective): compulsory
Semester (winter/summer): winter
Language of instruction: english/ serbian
Mode of course unit delivery (face-to-face/distance learning): face-to-face
Number of ECTS Allocated: 5
Prerequisites: no
<p>Course Aims:</p> <p>The goal of the course is to get knowledge in the field of Agroforestry systems so that they can successfully design and establish of windbreaks, eco-networks, beekeeping plantations and energy production plantations. In addition to this, the goal is to learn how to best use the advantages of growing agricultural and forest species on the same place.</p>
<p>Learning Outcomes:</p> <p>The student is qualified for further upgrading through master's and doctoral studies to engage in scientific work in the field of agroforestry.</p>
<p>Syllabus:</p> <p>Theoretical teaching</p> <p>The importance of agroforestry. Alley plantings of forest and agricultural plants. Planning and design. Economic and social importance. Protective forest plantations along the banks. Planning and design. Functions and significance. Soil and water remediation. Impact on the water-air regime. Forest plantations and pastures. Planning and design. Choice of species. Management. Economic benefits. Significance for the environment. Wind protection belts. Planning and design. Acting. Significance for rural development. Windbreaks and diversity. Importance for sustainable development in agriculture. Importance for animal husbandry. Influence on the microclimate. Impact on yields of agricultural crops. Special purpose plantings. Planning and design. Plantings of short rotations to obtain raw material for energy production and raw material for chemical processing of wood. Choice of species. Use of hybrids. Eco network. Eco corridors. Mitigation zones. The core of diversity. Surfaces for restoration. Diversity of forest ecosystems. Possibilities of restoration of autochthonous woody species. Conservation of forest woody species ex and in situ. Dynamics of floodplain forest ecosystems and conservation opportunities. Hillside plants, windbreaks, anti-deflation belts and belts for noise reduction, greenery with sanitation and revitalization effect. Functional surfaces, spatial and anti-noise specificities of widespread greenery. Criteria for an adequate selection of trees. Ways and technological procedures of establishing, planting and maintaining greenery. The specifics of the renewal of landscape greenery and the procedures for its realization. The issue of landscape revitalization using vegetation management. Technologies and procedures for the revitalization of areas affected by agricultural and industrial activities, recultivation.</p> <p>Practical teaching: Exercises, Other forms of teaching, Study research work</p> <p>Preparation of practical works related to the design of agroforestry plantations, alley plantations, forest plantations and pastures, protected plantations along watercourses, plantations for energy production, development of projects of local</p>

ecocorridors.

Required Reading:

1. Агрошумарски системи- скрипта проф. др Саше Орловића. Уџбеник у припреми.
2. An Introduction to Agroforestry. 1993. By P.K.Ramachandran Nair. Kluwer Academic Publishers (in cooperation with ICRAF). 496 p

Weekly Contact Hours: 4

Lectures: 2

Practical work: 2

Teaching Methods: Teaching is conducted with the use of modern technology. Method of oral presentation and conversation. Method of presentations, demonstrations, simulations and illustrations on the board and using computers and computer software QGIS; R; Microsoft Office package.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	45
Practical work	20	oral exam	30

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.