Study Programme: Ornamental horticulture/Landscape architecture

Course Unit Title: Genetic resources and biodiversity of horticultural plants

Course Unit Code: 19.ORN010

Name of Lecturer(s): Ass. Prof. Mirjana Ljubojević, PhD

Type and Level of Studies: Master studies

Course Status (compulsory/elective): elective

Semester (winter/summer): winter

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated:6

Prerequisites:

Course Aims:

Acquisition of theoretical and practical knowledge related to the conservation and application of genetic resources in horticulture and landscape architecture and students' training for scientific research work in the field of biodiversity and its conservation.

Learning Outcomes:

A student who successfully completes the course is able to understand the importance of genetic resources of horticultural plants, their importance and use, directly for the needs of greening or as part of breeding programs.

Syllabus:

Theory

Biodiversity expansion through native, non-native, subtropical and tropical horticultural species and their importance to science and practice in horticulture and landscape architecture. Conservation of genetic resources of important horticultural species. Selection from natural populations. Morphological features, ecological and physiological characteristics, distribution and economic importance of autochthonous dendroflora. Polymorphism and selection for specific traits. Nutritive value of utilitarian species. Allochthonous, subtropical and tropical species: Origin, specific climatic and edaphic growing conditions, the possibility of using these species on green areas. Possibilities of processing fruits of utilitarian species. Decorative cultivation forms and gardening art of shaping adaptive dendrological species.

Practice

Preservation, conservation, characterization, documentation, exchange of plant genetic resources, certification and media promotion. Recognition of wild forest species in natural associations. Recognition of introduced species and their cultivation conditions.

Required Reading: Stevanović, V. (2009): Biodiversity and genetic resources. Collection of scientific papers from the meeting: Management of Genetic Resources of Plant and Animal Species of Serbia. White City. p. 217-240. Milošević, M., Dragin, S., Stegić, M. (2009): Plant genetic diversity in agriculture. Faculty of Agriculture, Novi Sad. Mratinić, Evica, Kojić, M. 1998. Wild species of fruit trees Serbia. Institute for Research in Agriculture of Serbia, Belgrade

Weekly Contact Hours: Lectures:2 Practical work:2

Teaching Methods: Teaching is conducted interactively in the form of lectures. In the lectures, the theoretical part is presented accompanied by characteristic examples for easier understanding of the material. In addition to lectures,

consultations are held regularly. Lecture presentations are available to students in electronic form. Parts of the material, divided into logistical units, can also be taken during the teaching process through a colloquium. Colloquiums are written in the form of a test. Theoretical teaching takes place using the computer presentation method and other didactic means. Practical teaching takes place using visual methods in the laboratory.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class	10	written exam	
participation		written exam	
Practical work	10	oral exam	40
Preliminary exam(s)	20		
Seminar(s)	20		

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