Course Unit Descriptor

Study Programme: MSc Ecology

Course Unit Title: Bryophyte Diversity in Forest Ecosystems of Serbia

Course Unit Code: ME30

Name of Lecturer(s): Dragana Vukov

Type and Level of Studies: Master Academic Degree

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: 7

Prerequisites: None

Course Aims: Improving knowledge about bryophyte diversity in Serbia's forest ecosystems, factors affecting their diversity and the functions of this group of plants in temperate zone forests.

Learning Outcomes: Students are able to recognize typical bryophyte representatives in forest ecosystems, as well as their role in the functioning of forest ecosystems. The course provides the knowledge about indication potential of bryophyte flora in forests.

Syllabus:

Theory

Basic concepts in bryological researches of forest ecosystems; Diversity of forest communities in Serbia; Diversity of bryophytes in Serbia; Methods for studying Bryophyte flora and vegetation in forests; Bryophyte forest communities of oak forests *Quercion pubescentis - petrae* and *Quercion petraeae cerris*; Bryophytes of forest communities of oak forests *Quercion frainetto*; Bryophytes in forests community *Aceri tatarico-Quercion*, Bryophytes in the forests on the alluvial land *Salicion albae, Populio albae* and *Alno - Quercion roboris*; Bryophytes in beech forests from the alliance *Fagion moesiace*; Bryophytes in beech - fir forests from the *Abieti-Fagenion moesiace* alliance; Bryophytes of beech forests on acidic silicate substrates from the *Luzulo-Fagenion moessacae* alliance; Bryophytes in the forests from the class *Vaccinio - Piceetea*; Bryophytes in forests of pine and other species from the class *Erico -Pinetea;* The role of bryophytes in the functioning of forest ecosystems; Indicator potential of Bryophytes for assessment of the state of forest ecosystems; Indicator potential of bryophytes for assessment of forest pollution.

Practice

Basic laboratory methods in bryology; Morphological characteristics of the main groups of bryophytes; Morphological adaptations of Bryophytes in forests; Methods for determining the abundance and coverage of the epiphytic species in forests; Methods for determining the abundance and coverage of epigeic and epilitic bryophytes in forests; Basic statistical methods in analysis of the bryophyte vegetation of forests; Representatives of bryophytes in different oak forests, determination; Representatives of bryophytes of beech forests, determination; Representatives of bryophytes of mixed beech forests, determination; Representatives of bryophytes in mixed coniferous forests, determination; Representatives of bryophytes in coniferous forests, determination; Representatives of bryophytes living on rotten trunks, determination; Experimental methods for evaluation of bryophyte impact on the water regime of forests; Experimental methods for the determinations of biomass and bioproduction of bryophytes in forests; Experimental methods for estimating the impact of bryophytic cover on natural forest restoration

Required Reading:

Vanderpoorten, A., Goffinet, B. 2009. Introduction to bryophytes. Cambridge University Press

Goffinet, B., Shaw, J. 2000. Bryophyte biology. Cambridge University Press. New York

Glime, J. M. 2015. Bryophyte ecology. Available online at: http://www.bryoecol.mtu.edu/

Weekly Contact Hours:	**Lectures:** 2	**Practical work:** 2+0+4

Teaching Methods:

lectures, practical classes

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation		written exam	20
Practical work		oral exam	50
Preliminary exam(s)		…….	
Seminar(s)	30		

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