Study Programme: PhD in Biology

Course Unit Title: Bryophyte ecology

Course Unit Code: DNE025

Name of Lecturer(s): Ass. Prof. Miloš Ilić, PhD

Type and Level of Studies: Doctoral studies
Course Status (compulsory/elective): elective

Semester (winter/summer): winter/summer

Language of instruction: English

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

Number of ECTS Allocated: 15

Prerequisites: -

Course Aims:

Acquiring broad knowledge about ecology, diversity and distribution of bryophytes, their role in different types of ecosystems, as well as factors that affect the diversity of these plants.

Learning Outcomes:

Students acquire a broader knowledge about the ecology and diversity of bryophytes that will form the basis for independent research.

Syllabus:

Theoretical lectures

Morphology and life cycle of bryophytes; Sexual strategies; Life and growth forms; Ground bryophytes in different types of ecosystems; Ecology of epiphytic; epilithic and epixylic bryophytes; Bryophyte role in ecosystem; Bryophytes – Invertebrates relations; Basic principals of physiological ecology of bryophytes: mineral nutrition; water relations, temperature and light responses, stress response; Influence of different ecological factors on bryophyte diversity; Bryophytes as indicators of environmental conditions; Ecology of peatlands; Different aspects of bryophyte biogeography; Bryophytes and pollution; Quantitative approaches in bryophyte ecology; Threatened bryophytes; Economic values of bryophytes.

Practical lectures

Student research work, which is in line with the field of study of the candidate and the topic of the doctoral thesis.

Required Reading:

Veljić, M., Vukov, D., Sabovljević, M. 2018. Biologija briofita I: morfologija i sistematika. Biološki fakultet Univerziteta u Beogradu, Prirodno-matematički fakultet Univerziteta u Novom Sadu. Beograd-Novi Sad.

Glime, J. M. 2017. Bryophyte ecology. Available online at: http://www.bryoecol.mtu.edu/

Smith, A. (ed.) 1982. Bryophyte ecology. Springer Netherlands.

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

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

Hodgetts, N. G. 2015. Checklist and country status of European bryophytes – towards a new Red List for Europe. Irish Wildlife Manuals, No. 84. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland.

Weekly Contact Hours: Lectures: 5 Practical work: 5

Teaching Methods:

Lectures, consultations, field and laboratory work, student essay.

Knowledge Assessment (maximum of 100 points):

Oral exam: 50 Essay: 50