

Study program : Ecology				
Type and level of studies: Master studies of Ecology				
<b>Course unit:</b> Algal ecology				
<b>Teacher in charge :</b> Snežana B. Simić				
Language of instruction ( <i>English or other foreign language</i> ): English				
ECTS: 5				
Prerequisites: enrolled 2st semesters				
Semester ( <i>Winter Semester or Summer Semester</i> ): Summer semester				
<b>Course unit objective</b>				
Introduction to the ecology and significance of different groups of micro and macroalgae.				
<b>Learning outcomes of Course unit</b>				
Training of students for environmental and laboratories practice, for better knowledge of algae biology and ecology and importance of algae in nature and possibilities of their application in different areas of environmental protection and improvement.				
<b>Course unit contents</b>				
<i>Theoretical classes</i>				
Algae of aquatic ecosystems. Neuston algae. Plankton algae. Phytoplankton of lotic ecosystem. Phytoplankton of lentic ecosystem. Factors distribution of phytoplankton in freshwater ecosystems. Spatial and temporal distribution of phytoplankton. Nekton algae. Benthic algae. Benthic algae in the lotic ecosystem. Benthic algae in the lentic ecosystem. Periphyton algae. Endophytic algae. Endoscopic algae. Parasitic algae. Algae of extreme habitats (aerophytic, cryophyla, thermal, algae habitats with extremely salty water (halofil) and extreme acidic water (acidophilic algae), soil algae. Algae adaptation for the defense of other organisms or in increasing competitiveness in relation to other algae. Invasive species. Toxic species. Ecological feature of algae in the function of bioindication. Use of algae in the framework of the saprobiotic system. Use of algae (phytoplankton, silicate algae) in the assessment of the status of water bodies. Estimation of endangered algae. Protected species. Red lists.				
<i>Practical classes</i>				
Practical classes will take place on field and in the laboratory. In the field, ecological conditions will be monitored, samples will be collected in different methods, students will be trained to conserve, herbalize samples, make prepartes, determine ,measuring and photomicrography specific taxons in the laboratory. Qualitative and quantitative community analysis. Use of basic methods for determining water quality. Methods for determining cyanotoxin. Methods for assessing algae vulnerability. Legal regulations in this areas. Part of the thematic units will be processed through seminar work.				
<b>Literature</b>				
Cvijan M. Fužinato S. (2011): Ekologija algi. Biološki fakultet Beograd. 45.				
Simić, S., Simić, V. (2012): Ekologija kopnenih voda (Hidrobiologija 1). Biološki fakultet u Beogradu. PMF u Kragujevcu. Beograd. 304.				
Sedmak, B., Svirčev Z. (2011): Cijanobakterije i njihovi toksini – ekotoksikološki i toksikološki rizici i cvetanje cijanobakterija u Srbiji. Visoka škola za varstvo okolja. Velenje. 133.				
Svirčev, Z., Baltić, V., Simeunović, J. (2011): Cvetanje cijanobakterija u Srbiji-putevi ekspozicije, zdravstveni i zakonodavni aspekt. 88				
Radulović, S, Teodorović (2011). Ekologija i monitoring kopnenih voda. Metodološki priručnik. PMF. Univerzitet u Novom Sadu. 199				
Reynolds, C. S. (1984): The Ecology of Freshwater Phytoplankton. Cambridge Univeristy Pres, 384 pp.				
Stevenson, R. J. (1996): An Introduction to Algal Ecology in Freswater Benthic Habitats. In: Algal Ecology, Freshwater Benthic Ecosystem (Stevenson, R.J., Bothwell, K. L. Lowe, R. L., eds.), Academic Press, 3-26.				
<b>Number of active teaching hours</b>				<b>Other classes</b>
Lectures:	Practice:	Other forms of classes:	Independent work:	
3	2	0	0	
<b>Teaching methods</b>				
Lectures, power-point presentations, Internet use, seminars, field and laboratory practice				
<b>Examination methods ( maximum 100 points)</b>				
<b>Exam prerequisites</b>	<b>No. of points:</b>	<b>Final exam</b>	<b>No. of points:</b>	

Student's activity during lectures	5	oral examination	40
practical classes/tests	5	written examination	20
Colloquium	20		
Seminars/homework	10		
Project	-		

<b>Grading system</b>		
<b>Grade</b>	<b>No. of points</b>	<b>Description</b>
<b>10</b>	<b>91-100</b>	Excellent
<b>9</b>	<b>81-90</b>	Exceptionally good
<b>8</b>	<b>71-80</b>	Very good
<b>7</b>	<b>61-70</b>	Good
<b>6</b>	<b>51-60</b>	Passing
<b>5</b>	<b>0-51</b>	Failing

**(Table 5.2) Course unit description**