

(Table 5.2) Course unit description

Study program : ECOLOGY			
Type and level of studies: Master academy study – II level of studies			
Course unit: Applied Hydrobiology			
Teacher in charge : Snežana B. Simić, Vladica M. Simić			
Language of instruction: English			
ECTS: 6			
Prerequisites: /			
Semester: Summer semester			
Course unit objective The aim is to familiarize students with the possibilities of applying scientific knowledge in the field of hydrobiology through projects related to aspects of the assessment of the ecological status of water, aquaculture and fisheries in open waters.			
Learning outcomes of Course unit Training students to work on the preparation of studies and projects related to the assessment of the ecological status of aquatic ecosystems, aquaculture and fisheries in open waters.			
Course unit contents <i>Theoretical classes</i> Biotechnology of algae and cyanobacteria. Collections of algal cultures. The mass cultivation of algae and cyanobacteria. The significance of algae and possibilities of exploiting them in different areas of life (environmental, industry, food, aquaculture). Use of algae in ecological status water assessment. Invasive species. Fundamentals of aquaculture. Marine culture. Hot-water, freshwater ponds. The cold freshwater ponds. Fishing in open waters. Hydro biologic basis of plans for the conservation and sustainable use of fish stocks. Assessment of biomass production and fish species of natural waters. Evaluation of growth and production of fish by the FISAT software. The dimensions of the sustainable use of fish stocks. <i>Practical classes</i> Algae culture. Growing algae mass cultivation of algae. The use of algae in aquaculture. Algae as water bioindicators. Recognition of species that cause water blooming (toxic and non-toxic). Algae in aquariums - influence of physical and chemical factor to development algae. Methods prevention uncontrolled development of algae in aquariums. The methodology of the plan for the sustainable exploitation of fish stocks in natural ecosystems. Examples plan for the sustainable exploitation of fish stocks. Working in a programming package FISAT Visit: Water purifying plant cvetojevac. Kragujevac; Center for fishery and applied hydrobiology Radmilovac. Belgrade. The Faculty of Agriculture			
Literature E.W. Becker (1994): Microalgae biotechnology and microbiology, Cambridge University Press, Cambridge. pp 293. Stoyan Mihov, Ivan Hristov (2011). River ecology. WWF-DCPO Peter B. Moyle (2011) Fishes: An Introduction to Ichthyology. Prentice-Hall of India Pvt.Ltd Simon Jennings, Michel J. Kaiser, John D. Reynolds (2001) Marine Fisheries Ecology. Blackwell publishing company			
Number of active teaching hours			Other classes
Lectures:	Practice:	Other forms of classes: Mentoring (consultative) system	
Independent work:			
Teaching methods Lectures, power-point presentations, Internet use, seminars, field and laboratory practice			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures		oral examination	40
practical classes/tests		written examination	30
Seminars/homework	30	
Other	-		
Grading system			

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