

Title	Applied Limnology						
Code							
Study Program	Postgraduate Interdisciplinary University Study Programme Environment Protection and Nature Conservation						
Semester	III.						
ECTS	5						
Status	elective						
Lecturer	Assistant Professor Filip Stević, PhD						
Co-Lecturers							
Requirements for Enrolment	No.						
Objectives	The aim of the course is acquiring knowledge of the living communities and the structure and function of different types of freshwater ecosystems, with special emphasis on water protection.						
Learning Outcomes	After successfully completing the course, students will be able to: 1. Define the basic concepts of limnology. 2. Know the biological communities and function of freshwater ecosystems. 3. Explain the connection and interdependence of the type of habitat, the living conditions and organisms. 4. Identify the problem of water pollution and to know the extent of restoration. 5. Understand the importance of monitoring, management and protection of aquatic ecosystems.						
Connection between Learning Outcomes, Curricular and Student Activities						Credits*	
	Student Activities	ECTS	Learning Outcomes	Curricular Activities	Methods of Assessment	min	max
	Presence in lecture with active participation	1	1-5	Lecture	Evidence, evaluation	10	15
	Presence in seminars, seminar work	1	1-5	Seminars	Evidence, evaluation of seminar work	10	15
	Preparation for the written exam	1	1-5	Knowledge test	Written exam	15	25
	Preparation for the exam	2	1-5	Final exam	The oral part of the exam	25	45
Total	5					60	100
Consultations							
Learning Activities	Lectures		Seminars		Practice		
Hours	10		5		-		
Contents / Teaching Units	<p>Course content: Basic terms and concepts in limnology. Water as living medium - physical and chemical water properties, importance and interdependence between the parameters. The water cycle. Origin, distribution and type of freshwater systems. Cycles of nutrients, vertical gradient. Biological communities - the division and distribution of aquatic organisms. Trophic levels and functional feeding groups and food network in aquatic habitats. Functional characteristics and adaptations of organisms to different environmental conditions in lotic and lentic ecosystems. Primary and secondary production and energy flow in freshwater ecosystems. Invasive species. Indicator species of environmental changes. Eutrophication and restoration measures. Hydroelectric power plants. Fisheries and Aquaculture. Use, pollution and water protection.</p> <p>Seminars content: The importance of freshwater ecosystems. Anthropogenic influence</p>						

	on freshwater ecosystems. Monitoring, assessment and management of aquatic ecosystems. The legal framework for water protection. Grouping, systematization and fundamental interpretation of collected data.
Obligatory Literature	Wetzel, R.G., 2001: Limnology – Lake and River Ecosystems. 3 rd ed. Academic Press, San Diego. Dobson, M., Frid, C., 2009. Ecology of Aquatic Systems. Oxford University Press.
Recommended literature	Brönmark, C. & Hansson, L-A., 1998: The Biology of Lake and Ponds. Oxford University Press, Oxford, New York. Limnological Analyses. Springer, New York. Originalni znanstveni radovi vezani uz sadržaj predmeta.
Requirements for Aquiring Signature	Attendance of lectures and seminars. Preparation and presentation of a seminar work. These activities will ensure the student minimum 20 points required for signature.
Type of Exam	The teacher during maintenance items assess the work of each student which makes up 15% of the final grade. Successfully developed and presented seminar work counts 15% of the final grade. Written exam makes up 25% of the final grade, while the oral exam makes up 45% of the final grade.
Lectures Language	Croatian.
Quality Monitoring	Students would evaluate the quality of course in order to provide continuous improvement of teaching and quality programs. There will be carried out and the analysis of students' exams.