

Faculty of Civil and Environmental Engineering						
Study programme:	<b>Landscape Architecture</b>	Degree level: full-time programme			<b>Bachelor's degree</b>	
Specialization	<b>Planning of green areas</b>	Diploma path: -				
Module name:	<b>Ecology</b>					
Module type:	<b>obligatory</b>	Semester:	<b>1</b>	ECTS	<b>4</b>	Module ID: <b>AK1103</b>
No. of hrs in semester:	L - 15	C - 0	LC- 0	P- 0	SW- 30	S- 0
Prerequisites:	<i>Complete with prerequisites or "-"</i>					
Teaching methods:	<i>lecture, specialization workshop</i>	Assessment:	<i>Evaluation must be relevant to the intended learning outcomes</i>			
		lecture - written test; specialization workshop: two tests, evaluation of reports, verification of preparation for classes				
Aims and objectives:	<i>Understanding of ecological processes, the use of ecological processes in the activities related to landscaping</i>					
Module content:	<i>The levels of biological organization: species, individual, population, biocoenosis, ecosystem, landscape. Life and the physical environment. Adaptation to aquatic and terrestrial environments. Habitat and ecological niche. Ecology tolerance of individuals. Population ecology. Population structures. Temporal and spatial dynamics of populations. Reproductiveness, mortality, migration. Island biogeography theory; metapopulation theory. Biocoenosis ecology. The structure and organization of biocoenosis. Interaction: competition, predation, parasitism, mutualism, ... Ecosystem: spatial and trophic structure. The food chains, food webs and food levels. Energy and matter in the ecosystem. Primary and secondary production. Pathways of elements in the ecosystem. Ecological succession. Plant geography and animal geography. Main biomes of the world. Applied ecology.</i>					
Learning outcomes	<i>Write min. 4, max. 8 learning outcomes in the following order: knowledge - skills - competences. Each learning outcome must be verifiable.</i>				<i>Relevance to the programme learning outcomes</i>	
LO1	student has knowledge of the structure and functioning of populations, biocoenosis and ecosystem				K_W01, K_W02	
LO2	recognizes and understands the relationship between abiotic environment and organisms; understands bioindication term				K_W01, K_U04	
LO3	know how to choose and use the research methods used in population and biocoenosis ecology				K_W01, K_U04	
LO4	know how to identify environmental threatened and know how to prevent them				K_W06	
LO5	recognises the relationship between ecology and other fields of science e.g. technical sciences				K_K05	
LO6	know how to work in a team				K_K03, K_K04	
LO7						
LO8						
	lecture attendance		15 x 1h		15	
	participation in classes, laboratory classes, etc.		15 x 2h		30	

student workload	preparation for classes, laboratory classes, projects, seminars, etc.		20
	work on projects, reports, etc.		
	participation in student-teacher sessions related to the class / seminar / project		5
	implementation of project tasks		20
	preparation for and participation in exams/tests		12
		TOTAL:	
quantitative indicators	Student workload - activities that require direct teacher participation	52h	ECTS 2
	Student workload - practical skills activities	75h	3
basic references:	1) Krebs Ch.J.: <i>Ecology. Experimental Analysis of Distribution and Abundance</i> . Pearson Education, Inc., 2009. 2) Mackenzie A., Ball A.S., Virdee S.R.: <i>Instant Notes Ecology</i> . BIOS Scientific Publishers Limited, 2001		
supplementary references:	1) Forman R.T.T.: <i>Land Mosaics: The Ecology of Landscapes and Regions</i> . Cambridge Univ. Press, Cambridge 1999		
learning outcomes	<i>methods of assessing learning outcomes</i>	type of class (if more than one) where the outcomes are assessed	
LO1	evaluating the student's reports, tests on lecture content	L, SW	
LO2	evaluating the student's reports and preparation for the classes, performance in classes, tests on lecture content	L, SW	
LO3	evaluating the student's reports	SW	
LO4	tests on lecture content	L	
LO5	tests on lecture content	L	
LO6	evaluating the student's reports and performance in classes	SW	
LO7			
LO8			
Department:	Department of Environmental Conservation and Management	Group instructors:	dr Beata Matowicka, dr Dan Wołkowycki
Date:	27.10.2012	Coordinator:	dr Beata Matowicka

L - lecture    C - class    LC - laboratory class    P-project  
SW - specialization workshop    S - seminar