University of Gdańsk

Subject card

Subject name and code	Geoecology - laboratory, PG_00193877		
Field of study	Geography		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2029/2030
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	5	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Division of Landscape and Environmental Studies -> Institute of Socio-Economic Geography and Spatial Management -> Faculty of Social Sciences -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Barbara Korwel Lejkowska	
	Teachers		

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	10.0	0.0	0.0	10
	E-learning hours included: 0.0						

Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
	Number of study hours	10	2.0	13.0	25

Subject objectives	Introducing measures and methods for analyzing landscape structure and the relationships between landscape elements and the functioning of natural systems.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOGRL3-W04] has advanced knowledge of the Earth's geographical environment, understood as a unified system of interconnected and interacting components; its diversity, functioning, and dynamics of change, including the interaction of environmental components in the area of the South Baltic Coast and Lake District	students should be familiar with the concept of the environment, its structure and functioning, in particular the relationships between its components	[SW4] test/exam - oral or written
[GEOGRL3-W05] knows the interactions between the natural and anthropogenic environments on various spatial and temporal scales, with particular emphasis on the processes and phenomena occurring in the area of the South Baltic Coast and Lake District and the conditions of these interactions	students should identify the basic processes and phenomena occurring in the natural environment and the interactions between the components and elements of the environment and anthropogenic elements	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[GEOGRL3-U05] can use scientific language and express opinions and discuss topics related to geography in Polish and a foreign language	students should know and be able to apply basic terms from the field of geoecology that are relevant to the topic	[SU2] presentation/project/paper/ report [SU4] test/exam - oral or written
[GEOGRL3-K03] is prepared to social action, including cooperation to preserve the ecological balance and protect the Earth's resources and its sustainable development, using forms of own entrepreneurship for this purpose	students should identify situations and problems related to ecological balance and be able to critically evaluate methods and forms of spatial development consistent with sustainable development.	[SK2] presentation/project/paper/ report
[GEOGRL3-U03] can plan and conduct, independently and as part of a team, simple research in the field of geography under the supervision of a scientific advisor, based on the necessary information from professional literature and other sources	students should be able to apply appropriate substantive solutions, using qualitative and quantitative methods based on spatial data sources and professional literature	[SU2] presentation/project/paper/ report

Subject contents

- Learning basic terms in geoecology
- Learning the basic methods of landscape structure analysis: the geocomplex method, analysis of landscape contrast and selected indicators (including abundance, area, relationship); -multi-stage project
- Model of patches, matrices, and corridors basics of the concept and an attempt to determine units based on a topographic map and other sources

Prerequisites and co-requisites

Ability to use GIS software (QGIS, ARCGIS, or MapInfo) and basic Office programs (Word, Excel), ability to read maps and interpret aerial photographs

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
project 1 (geocomplex method)	51.0%	33.0%
project 2 (patches-corridors-matrix)	51.0%	28.0%
test	51.0%	39.0%

Recommended reading	Basic literature	Balon J., Maciejowski W., 2012, Geoecology for Landscape Architects, PK Publishing House, Krakow Cieszewska A., 1998, Model of patches and corridors and its application, Warsaw. Forman, R. T. T., Godron M., 1986, Landscape Ecology, John Wiley and Sons, New York. Malinowska E., Lewandowski W., Harasimiuk A. (eds.), 2004, Geoecology and Landscape Protection Lexicon, University of Warsaw, Wema Industrial Publishing House, Warsaw Pietrzak M., 2010, Fundamentals and Applications of Landscape Ecology Theory and Methodology, State Higher Vocational School in Leszno, Leszno Richling A., Solon J., 2011, Landscape ecology, PWN, Warsaw Sołowiej D., 1992, Fundamentals of the methodology of assessing the human natural environment, UAM, Poznań
	Supplementary literature	Chmielewski T.J., 2012, Landscape Systems, Structure-Functioning-Planning, PWN, Warsaw Korwel B., Kistowski M., 2004, Landscape structure of young glacial areas in terms of matrices, patches, and corridors a methodological study based on the example of the central part of the Kashubian Lake District, Problems of Landscape Ecology, vol. XIV, pp. 93102. Korwel-Lejkowska B., 2005, An attempt to assess changes in the landscape structure of the municipality of Pruszcz Gdański in 1985-2000 in the light of natural conditions, Problems of Landscape Ecology, vol. XVII, pp. 131-139. Pietrzak M., 1998, Landscape Syntheses Assumptions, Problems, Applications, Bogucki Scientific Publishing House, Poznań Richling A. (ed.), 2007, Geographical research of the natural environment, PWN, Warsaw
	eResources addresses	
Example issues/ example questions/ tasks being completed	landscape map analysis designation of ecological corridors and patches of choosen area	
Work placement	Not applicable	

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