University of Gdańsk

Subject card

Subject name and code	Sustainable development in spatial planning, PG_00191738		
Field of study	Spatial Management		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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	2	Language of instruction	Polish Polish
Semester of study	3	ECTS credits	4.0
Learning profile	academic	Assessment form	exam
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 hab. Jarosław Czochański	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	30.0	0.0	0.0	0.0	60

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	60	0.0	40.0	100

Subject objectives

Learning about:

- Environmental and legal conditions for the protection and shaping of space
- Legal, organizational, natural and functional conditions of environmental protection
- Principles of shaping /use of space in conditions of sustainable development
- threats to the environment and tools to counteract them
- the material-horizontal and vertical structure of the environment
- processes of the circulation of matter - the importance for the economy
- measures and methods of analysis of the landscape structure
- functioning of natural systems, determinants of habitat diversity and biodiversity

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GPL3_W06] zna i rozumie forms, methods and tools for space protection (environment, landscape, cultural heritage)	distinguishes and can present the basic forms, methods and tools for the protection of space (environment, landscape).	[SW4] test/exam - oral or written
[GPL3_W05] knows and understands conditions and processes of spatial management, with particular regard to the specifics of Polish maritime areas and the voivodeships of northern Poland	Recognizes and explains the basic natural conditions of spatial management processes with particular attention to the physical-geographical specificity of the coastal zone of the Southern Baltic, the South Baltic Coastland and South Baltic Lakelands	[SW4] test/exam - oral or written
[GPL3_W02] knows problems, theories and trends in spatial management, taking into account aspects of the natural environment; understands their theoretical and practical significance	identifies, defines and characterizes simple interactions that occur between subsystems of the natural and human environment	[SW4] test/exam - oral or written
[GPL3_K04] is ready to initiate and actively participate in activities for the benefit of spatial order and sustainable development of the region, country and Europe	engages in solving dilemmas related to the profession in accordance with the principles of sustainable development	[SK4] test/exam - oral or written
[GPL3_K06] is ready to care for the achievements and traditions of the profession, and comply with the principles of professional ethics by themselves and to demand that from others	works independently on the level of his professional and personal competence, understands the need to develop the achievements of the profession in accordance with the principles of ethics	[SK4] test/exam - oral or written

Subject contents

Legal and organizational basis of environmental protection
Motives and concepts of environmental protection
Protection of nature and environmental components
Use of the environment and its consequences.
Global and local threats to the environment
Atmospheric air pollution
Threats and protection of biodiversity
Eco-development
State monitoring of the environment
Forests and their functions.
Landscape ecology as a scientific discipline - history of development, relations with other sciences
Concepts and terminology, specifics of landscape ecology research
Main features of the natural environment and landscape research carried out in the stream of landscape ecology
Horizontal and vertical structure of the natural environment - changes over time, measures and methods of analysis
Ecotones as a specific element of landscape structure
Relationships between components of the natural environment
Functional structure - links between natural components and landscape units, methods of analysis
Basics of ecology, determinants of ecosystem functioning and methods of study
Functioning of biotic components of the landscape - biogeographical theories, patch and corridor model - with reference to the basics presented in the first year
Green and blue infrastructure
Fundamentals of urban ecology
Physiognomy and landscape protection - a synthetic approach
Landscape functioning vs. principles of land management - summary/synthesis (shaping ecological living conditions)

Prerequisites and co-requisites

Knowledge of the content of the subject: Environmental Basis of Spatial Management

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
written exam	51.0%	100.0%

Recommended reading	Basic literature	• Environmental Protection Law; • The Law on Nature Protection; • The Law on Water; • The Law on Protection of Agricultural and Forest Land; • Dobrzańska D., Dobrzański G., Kiełczewski D., 2008, Protection of the natural environment, PWN, Warszawa. • Kistowski M., Wiśniewski P., 2017, Low-carbon rural development in Poland and low-carbon economy plans. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk • Maciak F., 2003, Protection of the natural environment, PWN, Warszawa. • Matuszkiewicz J.M., 2009, Forest complexes of Poland, PWN, Warszawa. • Ostaszewska K., 2002, Landscape geography, PWN, Warszawa. • Przewoźniak M., Czochański J.T., 2020, The natural basis of land management. An ecological approach. Wyd.Nauk. Bogucki, Poznań, pp.416; • Przewoźniak M., 1987, Fundamentals of complex physical geography, Wyd. UG, Gdańsk. • Richling A., 1992, Complex physical geography, PWN, Warszawa. • Richling, Solon, 1998, Landscape ecology, PWN, Warszawa. • Staszek W., 2005, Functional structure of the young glacial geosystem on the example of the Borucinka basin. Prace i Studia Geograficzne,Uniwersytet Warszawski, p. 79-95. • Staszek W., 2018, Influence of functional environmental processes on selected coastal ecosystems of the Gdańsk seashore, Ecological Questions 29 (2018) • Wiśniewski P., 2015: The anti-erosion function of soil-protective forests. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk
	Supplementary literature	• Cieszewska A., 1998,The model of patches and corridors and its application, Warszawa. • Korwel B., Kistowski M., 2004, Landscape structure of young glacial areas in terms of the concept of matrices, patches and corridors methodological study on the example of the central part of the Kashubian Lakeland., Problemy Ekologii Krajobrazu t. XIV, p. 93-102. • Korwel-Lejkowska B., 2005, An attempt to assess the transformation of the landscape structure of the Pruszcz Gdański municipality in 1985-2000 in the light of natural conditions, Problemy Ekologii Krajobrazu, t. XVII, p. 131-139. • Krzymowska Kostrowicka A., 1997, Geoecology of tourism and leisure, PWN, Warszawa. • Kurek R., 2010, A guide to designing animal crossings and measures to reduce wildlife mortality along roads. • Pietrzak M., 1998, Landscape syntheses - assumptions, problems, applications, Bogucki Wyd. Naukowe, Poznań. • Richling A. (red.), 2007, Geographical studies of the natural environment, PWN, Warszawa. • Staszek W., 2007, Variability of plant landscapes of wet and swampy habitats as a result of variation of hydrochemical conditions in a young glacial catchment area [in:] K. Ostaszewska, I. Szumacher, S. Kulczyk, E. Malinowska (eds), Znaczenie badań krajobrazowych dla zrównoważonego rozwoju [Importance of landscape research for sustainable development]. Wyd. UW, Warszawa: 439-450. • Wiśniewski P., Wojtasik M., 2006: Environmental problems of the municipal waste landfill in Rozwarzyn near Nakło, Ekologia i Technika, vol.XIV, nr 2, 70-76. • Wiśniewski P., Loranc-Wiśniewska L., Wojtasik M., 2008: Financing environmental protection on the example of Bank Ochrony Środowiska S.A. Bydgoszcz Branch, Ekologia i Technika, vol. XVI, nr 5, 248-250.
	eResources addresses	Basic https://bogucki.home.pl/repozytorium/9788379863983/9788379863983.pdf - Przewoźniak M., Czochański J.T., 2020, The natural basis of land management. An ecological approach. Wyd.Nauk. Bogucki, Poznań, pp.416;
Example issues/ example questions/ tasks being completed	1. What elements does blue and green infrastructure consist of and what are the meanings for human living conditions ? 2. What environmental significance do ecological corridors have ? 3. Functions of green areas in cities. 4. Landscape and environmental effects of suburbanization	
Work placement	Not applicable	

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