University of Gdańsk

Subject card

Subject name and code	Methods in spatial analysis I A, PG_00150382		
Field of study	Land Management		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	undergraduate studies	Subject group	Humanistic-social subject group
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	8.0
Learning profile	academic	Assessment form	
Conducting unit	Instytut Geografii Społ-Ekon i Gospodarki Przestrzennej -> Faculty of Social Sciences		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Włodzimierz Golus	
	Teachers	dr Marta Popaszkiewicz mgr Natalia Soldatke mgr Tomasz Mikulski dr inż. Ada Wolny-Kucińska mgr Sandra Żukowska	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	60.0	0.0	0.0	90
	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	90	30.0	100.0	220

Subject objectives	Acquiring knowledge of cartography and graphic presentation of phenomena in space using specialised GIS softwareThe course prepares you for identifying and solving specific tasks in the field of spatial management.GIS software and use it to solve specific tasks in the field of spatial management; preparation for identifying and solvingto identify and solve cognitive problems related to their profession in accordance with the latest knowledge in the field of spatial management.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GPL3_U03] select appropriate sources of information and on this basis give opinions on the development of space for a specific area with particular regard to the principles of sustainable development and spatial order	select area-specific sources of spatial information	[SU3] text preparation/written work [SU6] demonstration of practical skills
[GPL3_U04] make the correct selection of basic quantitative methods (including field research), use them in the analysis of spatial diversity of natural, social or economic phenomena and also make a correct interpretation of the results on the basis of the specificity of selected methods	create different types of cartodiagrams and cartograms and apply other quantitative methods in the analysis of spatial phenomena using specialised software and equipment	[SU3] text preparation/written work [SU6] demonstration of practical skills
[GPL3_W08] principles of operating basic equipment, devices and software used to obtain and process geographical information and spatial planning	lists and explains the use of basic office software and spatial information processing (GIS) software	[SW4] test/exam - oral or written [SW3] text preparation/written work
[GPL3_K01] make decisions independently and be responsible for the effects of their own actions and those of their team's	independently operate specialised software and carry out prescribed analytical tasks in the field of spatial management	[SK3] text preparation/written work
[GPL3_W04] at an advanced level, the aims and conditions of using basic methods of quantitative analysis and interpretation of spatial processes and phenomena	lists the basic quantitative methods and considerations for their use in analysing and interpreting spatial processes and phenomena	[SW4] test/exam - oral or written [SW3] text preparation/written work
[GPL3_W07] forms, methods and tools for shaping spatial development	lists and characterises planning and land-use planning tools	[SW4] test/exam - oral or written [SW3] text preparation/written work

Subject contents

A. Problems of the lecture:Definitions, tasks and divisions;The essence of cartographic communication;Contemporary understanding of the terms "map", "cartography", "topography"Elements of a mapTypes of mapsSelection of presentation method. Qualitative methods of cartographic data presentationQuantitative methodsB. Exercise topics:Introduction to principles of IT use - network security, data archiving,Tools to support teamwork - resource sharing, use of cloud services, Google Drive. Dropbox, OnedriveBasic office software (MS Office)Basics of using GIS programs.Basic operations on mapsPhoto interpretation of LiDAR productsWorking with maps in the field, basics of orientation

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Task using software	51.0%	30.0%
Essay	51.0%	40.0%
Test of open and closed questions	51.0%	30.0%

Recommended reading

Basic literature	Czarnecki K.: Geodezja Współczesna W Zarysie. Wydawnictwo Gall, Katowice 2010.Jagielski A.: Geodezja I. Wydawnictwo Geodpis, Kraków 2005.Jagielski A.: Geodezja Ii. Wydawnictwo Geodpis, Kraków 2005.Iwaniak A., Olszewski R., Gotlib D., 2008. GIS. Obszary zastosowań. Wydawnictwo Naukowe PWN, Warszawa.Kidner D., Higgs G., White S. (red.), 2003. Socio-Economic Applications of Geographic Information Science. Tay-lor&Francis Group, London-NewYork.Craig W.J., Harris T.M., Weiner D. (red.), 2002. Community Participation and Geographic Information Systems. Tay-lor&Francis Group, London-New York.A.2. studiowana samodzielnie przez studentaKunz M. (red.), 2007. Systemy Informacji Geograficznej w praktyce. Studium zastosowań. Wydawnictwo Uniwer-sytetu Mikołaja Kopernika, Toruń.Wang F., 2006. Quantitative Methods and Applications in GIS, Taylor&Francis Group, London-New York.Longley P., Clarke G. (red.), 1995. GIS for business and service planning. John Wiley&Sons, New-York.
Supplementary literature	Longley P. A. I Inni: Gis. Teoria I Praktyka. Wydawnictwo Naukowe PWN, 2008.Przewsłocki S.: Geomatyka. Wydawnictwo Naukowe PWN, 2008.Birkin M., Clarke G., Clarke M., Wilson A., 1996. Intelligent GIS. Location decisions and strategic planning. John Wiley&Sons, New-York.
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

lecture: credit - written test of open and closed questions;examination - essaylaboratory classes: a task to be completed in the laboratorycomputer laboratory with the use of specialist softwareBasic assessment criterialecture: written test of open and closed questions - mark in accordance with the study regulationsstudy regulations;A student obtains one mark from the course which in 60% results from the mark for exercises60% of the grade for the exercises and 40% for the examination/assessment, while in order to pass a course it is necessary toa pass mark for both the laboratory and the lecture part.

Work placement	Not applicable

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