GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00049946		
Field of study	Economic Analytics		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2022/2023
Education level	second-cycle studies	Subject group	Optional subject group 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
Semester of study	3	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Katedra Statystyki i Ekonometrii -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Marta Kuc-Czarnecka	
	Teachers	dr Marta Kuc-Czarnecka	

Lesson type and method of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	30.0	0.0	0.0	45

E-learning hours included: 0.0

Statystyka przestrzenna - zima 2022/23 - Moodle ID: 24386
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24386

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	45	4.0	26.0	75

Subject objectives

To acquaint students with the possibilities of using GIS tools in the analysis of spatial phenomena.

To acquaint students with the specificity of the analytical process on the vector and raster data model.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U08] has the ability to implement analytical methods to independently propose solutions to economic problems and verify their effectiveness	uses in practice GIS tools to support business decisions.	[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task
[K7_W10] has an in-depth knowledge of quantitative methods to describe and analyse socio-economic processes using information technology	identifies essential GIS tools and the possibilities of their implementation in business spatial analytics.	[SW1] Assessment of factual knowledge

Subject contents

Introduction to GIS
Applications of GIS in scientific research
Coordinate systems and map projections
Acquisition of spatial data
Methods of symbolisation and visualisation of research results
Vector data model - introduction and applications
Vector data model - essential functions
Raster data model - introduction and applications
Raster data model - essential functions
Digital terrain model
Spatial neighborhood
Modeling and spatial interpolation
Network analyses

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
group project	60.0%	70.0%
test	60.0%	30.0%

Recommended reading	Basic literature	Urbański, J. (2020) STO stron GIS, Wydawnictwo Uniwersytetu Gdańskiego Iwańczak, B. (2012) QGIS 3.14 Tworzenie i analiza map, Helion Longley P.A. (2008) GIS. Teoria i praktyka, PWN
	Supplementary literature	Malczewski, J., Jaroszewicz J. (2018). Podstawy analiz wielokryterialnych w Systemach Informacji Geograficznej, Wydawnictwo Politechniki Warszawskiej
	eResources addresses	
Example issues/ example questions/ tasks being completed	For the selected region, assign a land cover type with the largest area within a 2 km radius to each city with less than 2,000 inhabitants. Designate areas in the selected city that are more than 3 km from the nearest BTS. What elements define the horizontal datum reference frame? Describe one type of cartographic projection of your choice.	
Work placement	Not applicable	