GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Geospatial information systems, PG_00057117		
Field of study	Transport and Logistics		
Date of commencement of studies	February 2024	Academic year of realisation of subject	2024/2025
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Faculty of Ocean Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Aleksander Kniat	
	Teachers	dr inż. Aleksander Kniat	

Lesson types and methods of instruction

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

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	45	9.0	21.0	75

Subject objectives

Presentation of geographic information analysis and synthesis methods and its practical usage.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_K02] The student is aware of the importance of non-technical aspects and the effects of engineering activities, including its impact on the natural environment and the related responsibility for decisions made	Student understands how to perform a spatial analysis using GIS system concerning exploitation of maritime transportation objects or systems.	[SK2] Assessment of progress of work
[K7_W04] The student has basic knowledge of IT and telecommunication systems in transport and in the area of control in transport systems	Student understands how to apply tools and methods of GIS system to design a maritime transportation object or system.	[SW3] Assessment of knowledge contained in written work and projects

Subject contents

Definition and applications of Geographic Information Systems (GIS).
Data in GIS system: spatial data and attributes.
Storing and using data, data sources.
Vector vs. raster objects.
Coordinate's systems.
Standard data formats.
Vizualization: maps, layers, symbols, labels.
Data classification.
Data analysis and synthesis, processing data from different sources, marcos and programming langauges.
Graphs and algorithms in spatial analysis (object location, shortest path)
Spatial data analysis examples in QGIS.

Prerequisites and co-requisites

Basic knowledge about operating system and file system usage.

Basic knowledge about programming.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
project	60.0%	100.0%

Recommended reading	Basic literature	Davis D. GIS dla każdego 2009 Gaździcki J. Systemy Informacji przestrzennej 1990 Kadaj R. "Polskie uklady wspolrzednych w geodezji" 2000
	Supplementary literature	Litwin L., Myrda G., Systemy Informacji Geograficznej. Zarządzanie danymi przestrzennymi w GIS, SIP, SIT, LIS. 2005
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.