GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Geographic Information Systems (GIS), PG_00060663		
Field of study	Transport and Logistics		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2025/2026
Education level	first-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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	5.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Aleksander Kniat	
	Teachers		

Lesson types and methods of instruction

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	5.0	60.0	125

Subject objectives

Presentation of geographic information analysis and synthesis methods in a GIS system.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W06] has established knowledge of engineering methods and design tools enabling the implementation of projects in the field of construction and operation of transport means and systems	Student is able to apply tools and methods of GIS system to design a maritime transportation object or system.	[SW1] Assessment of factual knowledge
[K6_U03] is able to use computer methods to support the design, development and operation of transport means and systems	Student is able to perform a spatial analysis using GIS system concerning exploitation of maritime transportation objects or systems.	[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools

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.

Prerequisites and co-requisites

Basic knowledge about operating system and file system usage.

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
Supplementary literature	Litwin L., Myrda G., Systemy Informacji Geograficznej. Zarządzanie danymi przestrzennymi w GIS, SIP, SIT, LIS. 2005
eResources addresses	Uzupełniające Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	1. spatial analysis to select objects that satisfy some criteria 2. cartogram presenting statistic data
Work placement	Not applicable

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