GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Monographic Lectures, PG_00048298		
Field of study	Informatics		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	Optional subject group Specialty 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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Geoinformatics -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Marek Moszyński	
	Teachers	dr hab. inż. Marek Moszyński	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	15.0	30

E-learning hours included: 0.0

eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=1381

Moodle ID: 23828 Wykład monograficzny TMiG 2025 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=23828

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	30	4.0	16.0	50

Subject objectives

Introduction to driving problems of geoinformation systems

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W10] knows and understands, to an increased extent, the basic processes occurring in the life cycle of equipment, objects and technical systems, as well as methods of supporting processes and functions, specific to the field of study	The student identifies problems related to the construction, operation and use of devices used in geoinformatics systems, including space and satellite systems.	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[K7_W03] knows and understands, to an increased extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum	Student identifies problems related to the use of geoinformation technologies in information systems.	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects

<table>
<tr><td>Subject contents</td><td>Course content – lecture
1. Taxonomy of technologies using information systems with particular emphasis on geoinformation systems
2. Selected problems related to the use of geoinformatic systems in Earth observation
3. Selected problems related to the use of geoinformatic systems in telecommunications
4. Selected problems related to the use of geoinformatic systems in satellite navigation systems
5. European institutions and their activities in the use of satellite technologies
6. Trends and flywheels for the development of economies based on the use of geoinformation technologies
Course content – seminar

1. Using Earth Observation Data for Security Purposes
2. Using Situational Awareness Data for Security Purposes</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>No requirements</td></tr>
<tr><td>Assessment methods and criteria</td><td><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>project development timeline</td><td>55.0%</td><td>100.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>1. Konceny G. "Geoinformation, Remote Sensing, Photogrammerty and Geographic Information Systems", Taylor & Francis Group, New York 2003.
2. Longley P., Goodchild M., Maguire D., Rhind D. "Geographic Information Systems and Science", John Wiley & Sons Ltd., West Sussex 2005.</td></tr>
<tr><td>Supplementary literature</td><td>No requirements</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>1. Information technologies supporting large-scale processing
2. Platforms for the visualization of large-scale data
3. Platforms for storing and sharing satellite images
4. Cloud computing with the use of satellite data
5. Time analysis of satellite images
6. The use of machine learning to extract information from satellite data
7. The use of deep learning and neural networks to analyze satellite images</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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