GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00069058		
Field of study	Geodesy and Cartography		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	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	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Geodesy -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Katarzyna Bobkowska	
	Teachers		

Lesson types

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

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	0.0	0.0	45

Subject objectives

1. Introducing students to the basics of project management.
2. Introducing students to the scope of the GIS project.
3. Introducing students to the stages of the GIS planning methodology.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W05] has a well-established knowledge of analytical methods and surveying techniques necessary for creating and solving a variety of problems in geodesy and cartography	Has knowledge of methods and tools used in geoinformatics project management, including planning, risk assessment, and implementation of tasks in the GIS environment.	[SW1] Assessment of factual knowledge
[K7_U06] creates solutions to complex and unstructured problems taking into account the variability of the environment by synthesising information from different sources, using analytical and simulation methods	Is able to plan, develop, and present a geoinformatics project, taking into account needs analysis, schedule, risks, and implementation efficiency.	[SU5] Assessment of ability to present the results of task

Subject contents

Course content – lecture
- Basic concepts and significance of geoinformatics project management.
- Project life cycle stages of planning, implementation, monitoring, and closure.
- Scope and characteristics of geoinformatics projects in administration, environmental management, and engineering.
- Project organizational structure roles and responsibilities of team members.
- Project planning defining objectives, schedule, resources, and budget.
- Identification and analysis of risks in GIS projects.
- Quality control and change management during project implementation.
- Principles of communication and team management.
- Overview of selected project management methodologies.
- Case studies examples of geoinformatics project implementation.

Course content – laboratory
- Identification of GIS system user needs analysis of functional and business requirements.
- Project planning based on conversations with a simulated stakeholder (AI) defining goals, requirements, and constraints.
- SWOT and risk analysis for geoinformatics projects.
- Development of project task structure and schedule (WBS, Gantt).
- Time and priority management use of tools such as Kanban and Trello.
- Team communication and project progress reporting.
- Presentation of project results and reflection on the management process.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">The student has basic knowledge of Geographic Information Systems (GIS) and understands the importance of spatial data in engineering and decision-making processes.</td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Reports</td><td>80.0%</td><td>30.0%</td></tr><tr><td>Test</td><td>60.0%</td><td>70.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">• Tomlinson R., Zarządzanie projektami GIS, Wydawnictwo ESRI Press / Helion, Gliwice, 2016.
• PRINCE2® Foundation, Zarządzanie projektami metodyką PRINCE2, AXELOS / TSO, Warszawa, 2017.
• PMBOK® Guide, Przewodnik po zarządzaniu projektami, Project Management Institute, Warszawa, 2021.
• Kerzner H., Zarządzanie projektami. Kompendium wiedzy, Wydawnictwo PWN, Warszawa, 2019.</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Didactic materials and laboratory instructions available on the eNauczanie PG platform</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">• Scope and stages of geoinformatics project management.
• Definitions of a project and project management.
• Life cycle of a geoinformatics project.
• Project organizational structure.
• Role of the project manager and project team members.
• Stakeholder analysis in a project.
• Project scope and planning.
• Resource planning and project scheduling.
• Risk management in GIS projects.
• Communication within the project team.
• Monitoring and evaluation of project progress.
• Case studies examples of geoinformatics projects.</td></tr>
<tr><td>Practical activites within the subject</td><td colspan="3">Not applicable</td></tr>
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