University of Gdańsk

Subject card

Subject name and code	GIS in spatial planning, PG_00191745						
Field of study	Spatial Management						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2028/2029			
Education level	Bachelor's studies		Subject group	Obligatory subject group in the field of study 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	3.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Faculty of Social Sciences -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Ada Wolny-Kucińska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	45.0	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	30.0	75

Subject objectives	To learn the interface and basic functions of SketchUp, to acquire the ability to use it and to perform simple tasks with the using this program. To gain knowledge of the tools, principles and conditions of real estate management, including the acquisition of the ability to value real estate. To gain knowledge about the conditions of technical infrastructure planning, to acquire knowledge of the possibility of using GIS tools in planning technical infrastructure, and to practice such applications.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GPL3_W08] knows and understands the principles of operating basic equipment, devices and software used to obtain and process geographical information and spatial planning	presents the principles of operating specialized software used in tasks related to planning and spatial development spatial development	[SW2] presentation/project/paper/ report [SW3] text preparation/written work
[GPL3_W07] knows and understands the methods and tools for shaping spatial development	lists the forms, methods and tools of real estate management and technical infrastructure planning	[SW4] test/exam - oral or written [SW3] text preparation/written work
[GPL3_K03] is ready to identify and resolve cognitive problems related to the profession in accordance with the latest knowledge in the field of spatial management, including expert opinions	performs, with the use of expert knowledge, the current tasks of the of authorities at various levels in the field of real estate management	[SK5] implementation of a problem task [SK8] observation of student's independent or team work
[GPL3_U09] can plan and implement lifelong learning independently	analyses his/her skills and possibilities for further development after graduation	[SU1] oral statement/conversation/ discussion
[GPL3_U06] uses specialist language in a debate with specialists in the field of spatial planning and management	solves engineering tasks in the planning of technical infrastructure with the use of computer analysis and simulation using using GIS software	[SU3] text preparation/written work
[GPL3_K06] is ready to care for the achievements and traditions of the profession, and comply with the principles of professional ethics by themselves and to demand that from others	identifies and resolves ethical dilemmas related to the performing work in the field of real estate management and planning of technical infrastructure	[SK8] observation of student's independent or team work
[GPL3_W09] knows and understands at an advanced level, subsystems of the natural environment and the human life environment, interactions and contemporary trends of changes between these subsystems	characterizes the basic processes of the life cycle of elements of the technical infrastructure	[SW4] test/exam - oral or written [SW3] text preparation/written work
[GPL3_U03] selects appropriate sources of information and, on this basis, gives opinions on the development of space for a specific area with particular regard to the principles of sustainable development and spatial order	analyzes proposed solutions to problems in the field of spatial real estate management and infrastructure planning technical	[SU3] text preparation/written work [SU5] implementation of a problem task

Subject contents

Basics of ArcGIS Pro software operations. Digitization of cartographic content using ArcGIS Pro software. Spatial data analysis. Spatial data presentation. Basic technical infrastructure systems and their operations. Markings, symbolization, description of technical infrastructure networks and devices Planning the development of technical infrastructure networks, estimating demand, calculations using GIS tools. Introduction to real estate management. Characteristics of real estate. Real estate market research and analysis. Basics of real estate valuation approaches, tools and techniques

Prerequisites and co-requisites

knowledge and skills provided by the syllabuses for the subjects Methods of Spatial Analysis I and Methods of Spatial Analysis II

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
exercises (tasks)	51.0%	100.0%

Recommended reading

Basic literature

Bończak-Kucharczak E., 2020. Ustawa o gospodarce nieruchomościami. Wolters Kluwer, Warszawa.
Kucharska-Stasiak E., 2007. Nieruchomość a rynek. Wydawnictwo Naukowe PWN, Warszawa.
Źróbek S., Źróbek R., Kuryj J., 2012. Gospodarka nieruchomościami z komentarzem do wybranych procedur. Wyd. Gall, Warszawa.
Kicman A., Klepacka B., 1991, Infrastruktura techniczna w planowaniu przestrzennym, Politechnika Białostocka, Białystok;

	Supplementary literature	Bieniek G., Rudnicki S., 2005. Nieruchomości. Problematyka prawna, Wyd. LexisNexis, Warszawa. Bryx M., 2009. Rynek nieruchomości. System i funkcjonowanie, Poltext, Warszawa. Cymerman R., Cymerman J., 2016. Gospodarka nieruchomościami w zadaniach. Wydawnictwo PK, Koszalin. Cymerman R., Hopfer A., 2012. System, zasady, procedury wyceny nieruchomości. PFSRM, Warszawa. Nowak M., 2017, Gospodarka nieruchomościami w gminie. Kluczowe problemy prawne. CH Beck, Warszawa. Ostrowska D., Staniszewska A., Spigarska E., Staśkiel M. i inni, 2020. Rynek nieruchomości w Polsce. Teoria i praktyka. Wolters Kluwer, Warszawa. Sobolewska-Mikulska K., 2021. Gospodarka nieruchomościami i kataster. Wybrane problemy. Wyd. PW, Warszawa.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Completion of a minimum of 70% of the assignments during class hours +achieving a minimum score of 51% for the final assessment task. The following will be assessedability to use the software, knowledge of real estate market analysis tools andability to apply them, + ability to use GIS tools in technical infrastructure planning.GIS tools in the planning of technical infrastructure.	
Work placement	Not applicable	

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