

Subject card

Subject name and code	Spatial analysis methods II B, PG_00150396						
Field of study	Spatial Management						
Date of commencement of studies	October 2025		Academic year of realisation of subject			2026/2027	
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	2		Language of instruction			Polish	
Semester of study	4		ECTS credits			6.0	
Learning profile	academic		Assessment form			exam	
Conducting unit	Institute of Socio-Economic Geography and Spatial Management -> Faculty of Social Sciences -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Tomasz Michalski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	25.0	15.0	50.0	0.0	0.0	90
	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	90		30.0		50.0	170
Subject objectives	The purpose of the course is to provide knowledge of the suite of measurement tools and analysis performed in the framework of issues related to land use planning and development, including survey and interview tools and the computer application for visual analysis and space planning AutoCAD and ArcGIS Pro and project management, to acquire skills in the application of these tools, and to acquire competence as to independently decide on the choice of tools appropriate for the given problem.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GPL3_W08] principles of operating basic equipment, devices and software used to obtain and process geographical information and spatial planning	K_W08 (P6S_WG) at a basic level characterizes the functions and use of selected CAD software, characterizes the principles of operation of basic equipment and devices used for acquisition and processing of geographic information.	[SW4] test/exam - oral or written [SW3] text preparation/written work
	[GPL3_K06] 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	K_K06 (P6S_KR) observes the principles developed in the achievements and traditions of the profession of urban planner, planner and researcher including the principles of professional ethics and expects this from others.	[SK3] text preparation/written work [SK4] test/exam - oral or written
	[GPL3_K03] identify and resolve cognitive problems related to the profession in accordance with the latest knowledge in the field of spatial management, including expert opinions	K_K03 (P6S_KK) recognizes the importance of knowledge in solving problems cognitive and practical, and consults experts in case of difficulties in solving problems independently in the field of planning and spatial planning, environmental protection and activities for sustainable development)	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[GPL3_U06] use specialist language in a debate with specialists in the field of spatial planning and management	K_U06 (P6S_UW, P6S_UK) uses specialized interface CAD software in uses this skill in discussions with specialists in the the field of planning and spatial development.	[SU3] text preparation/written work [SU4] test/exam - oral or written
	[GPL3_U04] make the correct selection of basic quantitative methods (including field research), use them in the analysis of spatial diversity of natural, social or economic phenomena and also make a correct interpretation of the results on the basis of the specificity of selected methods	K_U04 (P6S_UW) selects quantitative methods in order to apply them in the analysis of spatial differentiation of natural, social or economic phenomena and also interprets the results based on the knowledge of the specifics of the selected methods.	[SU3] text preparation/written work [SU4] test/exam - oral or written
	[GPL3_W04] at an advanced level, the aims and conditions of using basic methods of quantitative analysis and interpretation of spatial processes and phenomena	K_W04 (P6S_WG) lists the types, purposes and conditions of application of methods of quantitative analysis and interpretation of spatial processes and phenomena based on based on statistics	[SW4] test/exam - oral or written [SW3] text preparation/written work
	[GPL3_U03] select appropriate sources of information and on this basis give opinions on the development of space for a specific area with particular regard to the principles of sustainable development and spatial order	K_U03 (P6S_UW) lists, describes and can read maps used in urban planning and can read and produce a planning drawing using the basic capabilities of CAD and ArcGIS Pro software.	[SU3] text preparation/written work [SU4] test/exam - oral or written

Subject contents	A. Problems of the lecture: Projects, business processes, programs. Presentation of the conceptual apparatus. Features of a project. Classic areas of project management. Project organization and life cycle. Key project stakeholders. Project processes. PRINCE2, Agile methodology. Project preparation. Creating a project management team. Defining project objectives. Determining how the project will be implemented. Defining the business case. Planning the work and controls in the project. Initiating the project. Planning the project. Quality planning. Establishing a system of communication and documentation of work. Project control elements. Planning the scope and structure of tasks. Acquiring and building a project team. Management of human resources. Managing the production of products. Preparation of final product description, product structure diagram and product succession diagram. Controlling the stage. Planning the stage. Evaluation of project progress. Reviewing the status of the stage. Interim reporting. Strategic management quality planning and control in a project. Quality planning. Quality control in the project. Controlling the progress of the project. Strategic planning. Closing the project. Risk analysis in a project. Specifics of risk analysis. Planning, identification and assessment of risks. Ways of monitoring risks and methods of risk responses taken. Example of risk forms. Typology of social research by purpose and object of research. Basic stages of the research process. Selection of appropriate research methods and techniques vs. appropriate posing of the research problem. Characteristics of quantitative and qualitative approaches in social research. Comparison of the two approaches, with an indication of their strengths and weaknesses. Selected characteristics of research samples. Randomization techniques and sampling frames. Practical application of quantitative research methods using new technical capabilities, including surveys conducted online (PAPI, CATI, CAPI, CAWI, CASI). Basic knowledge of quantitative and qualitative data analysis. Research report and ways of presenting results. B. Exercise problems: Project writing workshop based on previously conducted analysis and gathered conclusions. Selection of the project team. Determining the schedule of work in the project team Analysis of the activities necessary for the project, gaining knowledge of the project environment and its audience, perhaps: analysis of the (financial) resources necessary for the project. Scheduling the project in time and dividing it into individual tasks. Use of project management tools. Basic IT tools for project management and their use in the implementation of their own projects. Preparation of the final form of the team's project in the form of a proposal. Discussing the strengths and weaknesses of the project. Refining the weaker points in the course of discussion. Systematic evaluation of project progress. Controlling changes in the project. Identification of risks that may occur in the project and search for Introduction to survey design - types of survey implementation techniques: PAPI, CATI, CAPI, CAWI, CASI. - if this will be in a lecture on Social Research Methodology, it does not have to be here, except as a brief reminder Construction of survey questionnaires including types and types of questions. The layout of the questionnaire - the order of questions and sections and the rules of transitions between questions (types of questions and rules for their arrangement, scales, cafeterias). The problem of errors in questionnaire research (technical errors in the construction of questions, errors of the interviewer and respondent, the influence of third parties). Methods of selecting a sample for a survey: comprehensive versus representative surveys. The main problems of implementing sample surveys. Testing the data entry process and piloting the survey implementation. Distribution of the survey. Methods of data analysis and presentation: preparation of data for analysis; development of collected research materials (clustering, typologization, coding of closed and open-ended questions, methods of coding and data entry). Quantitative analysis of surveys (graphical rearrangement of survey results, principles of table construction). Principles of developing a survey report. Operation and functions of ArcGIS Pro.		
Prerequisites and co-requisites	Knowledge of the content and technical skills provided for in the content of the course Methods of Spatial Analysis I, proficient computer skills		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	exercises (tasks)	51.0%	70.0%
	lecture (test)	51.0%	30.0%

Recommended reading	Basic literature	Babbie E. 2013. Podstawy badań społecznych. Wydawnictwo Naukowe PWN, Warszawa. Silverman D., 2007. Prowadzenie badań jakościowych. Wydawnictwo Naukowe PWN, Warszawa. Zawadzka A.K.Z., Ład nasz przestrzenny, Wydawnictwo Uniwersytetu Gdańskiego, Wolters Kluwer, Gdańsk-Warszawa, 2017. Zawadzka A.K., Słabości i skutki prawnych regulacji związanych z procedurą sporządzania projektu decyzji o warunkach zabudowy [w:] T. Markowski, P. Żuber (red.), System planowania przestrzennego i jego rola w strategicznym zarządzaniu rozwojem kraju, Studia KPZK PAN, Tom CXXXIV, Warszawa 2011, s. 123-138. Zawadzka A.K., Zasady ochrony i kształtowania ładu przestrzennego ustalone w planach miejscowych na przykładzie wybranych gmin obszaru funkcjonalnego aglomeracji Trójmiasta [w:] G. Chaberek-Karwacka (red.), Współczesne uwarunkowania procesów zarządzania przestrzenią w Polsce, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk, 2017, s. 15-40. Wejhert K., Elementy kompozycji urbanistycznej, Wydawnictwo Arkady, Warszawa, 2008, Ustawa z dnia 27 marca 2003 r. o planowaniu i zagospodarowaniu przestrzennym. Rozporządzenie Ministra Infrastruktury z dnia 26 sierpnia 2003 r. w sprawie wymaganego zakresu projektu planu miejscowego 'Przewodnik użytkownika programu CAD załączony w wersji elektronicznej do oprogramowania.
	Supplementary literature	Crang M., Cook I., 2007. Doing Ethnographies. London: Sage. Denzin N., Lincoln Y.S., 2009. Metody badań jakościowych, Wydawnictwo Naukowe PWN, Warszawa. Flick U., 2010. Projektowanie badania jakościowego. Wydawnictwo Naukowe PWN, Warszawa. Grabkowska M., 2011. Inner-city Transformations After Socialism. Findings from Interviews with Residents of Pre-war Tenement Houses in Gdańsk. Bulletin of Geography. Socio-economic Series, 15, 117-129. Grabkowska M., 2018. Urban space as a commons in print media discourse in Poland after 1989, Cities, 71, 22-29. Kvale S., 2010. Prowadzenie wywiadów. Wydawnictwo Naukowe PWN, Warszawa. Nowak S., 2011. Metodologia badań społecznych, Wydawnictwo Naukowe PWN, Warszawa. Silverman, D., 2008. Interpretacja danych jakościowych. Wydawnictwo Naukowe PWN, Warszawa
	eResources addresses	
Example issues/ example questions/ tasks being completed	Lecture: written examination of the tasks to be solved - obtaining a minimum of 51% of the points from the written test Auditorium exercises: work during the classes, colloquium - achieving a minimum of 70% of the tasks minimum 51% of the points in the written test. Laboratory exercises: design of a measuring tool, a task to be performed with the use of a computer application. using a computer application - knowledge and ability to apply will be evaluated (60% of the points), ingenuity (20% of the points) and aesthetics of the presentation of both the measurement tool and the tasks performed (20% of the points) The student obtains one mark from the course which in 70% results from the mark for the exercises The student obtains one mark from the course which 70% comes from the mark for the exercises and 30% from the mark for the examination/assessment, while in order to pass the course it is necessary to obtain a pass mark for both the exercise and lecture parts of the course.	
Work placement	Not applicable	

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