

**Subject card**

<b>Subject name and code</b>	System analysis in spatial management, PG_00201363						
<b>Field of study</b>	Spatial Management						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2026/2027		
<b>Education level</b>	Master's studies	<b>Subject group</b>			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	1	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	1	<b>ECTS credits</b>			3.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			exam		
<b>Conducting unit</b>	Division of Spatial Studies -> Institute of Socio-Economic Geography and Spatial Management -> Faculty of Social Sciences -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Grażyna Chaberek-Kaluźniak				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	30.0	15.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	45		7.0		23.0	75
<b>Subject objectives</b>	To acquire the ability to perceive the surrounding world as a set of complex and dynamic human systems and human organisations that are interrelated and conditioned by each other, as well as the ability to interpret spatial phenomena in accordance with the methodology of systems thinking, including organisation and management. The practical aim of the course is the ability to conduct a system analysis and synthesis on the example of a selected spatial system and analysis of managerial functions in spatial systems.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GPMU2_W07] knows basic principles for creating and developing forms of individual entrepreneurship that make use of knowledge in the field of spatial management and corporate social responsibility, with particular emphasis on responsibility for environmental impact	Understands the procedure for the formation of individual forms of entrepreneurship, the business objectives of the organisation and identifies the conditions for their realisation	[SW4] test/exam - oral or written [SW5] implementation of a problem task
	[GPMU2_W03] understands to a deeper extent, the conditions (natural, social, economic, cultural, legal) of processes taking place in spatial management, with particular emphasis on the specifics of Polish maritime areas and voivodships of northern Poland	Recognises types of social organisations, defines their function in the process of shaping space	[SW4] test/exam - oral or written [SW5] implementation of a problem task
	[GPMU2_W01] recognises an in-depth degree, the interdisciplinary nature of spatial management and has ordered and theoretically founded knowledge of multidimensional approaches in spatial policy	defines elements of space as components of a system, the study of which requires a complex interdisciplinary approach	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
	[GPMU2_U09] can independently plan own professional or scientific career and guide others in this respect	builds examples of strategic business and individual goals according to the SMART technique	[SU4] test/exam - oral or written [SU5] implementation of a problem task
	[GPMU2_U05] formulates and tests hypotheses regarding determinants (natural, social, economic, cultural, legal) of spatial management	Identifies the determinants of economic activity development in a given area and its impact on the level of land use	[SU4] test/exam - oral or written [SU5] implementation of a problem task
	[GPMU2_U02] properly selects sources and information derived from them, with particular regard to sources of spatial information, evaluates them critically and interprets them creatively	build spatial interaction models and, on their basis, analyse the causes and effects of the interaction of different factors on spatial systems	[SU1] oral statement/conversation/ discussion [SU5] implementation of a problem task [SU8] observation of student's independent or team work
[GPMU2_K03] is ready to initiate and organise activities for the benefit of society and environmental protection of the region, country and Europe in cooperation with various entities and authorities at various levels	proposes model linkages of spatial problems with particular attention to economic, social and environmental conflicts in accordance with the latest knowledge of spatial management	[SK1] oral statement/conversation/ discussion [SK5] implementation of a problem task	
Subject contents	<p>Lecture topics:  A 1: Seeing the world anew - systems thinking  A 2: Systems and systems - fundamentals of systems theory  A3: Systems analysis and synthesis  A 4: Systems modelling  A 5: Process modelling  A 6: Systems life-cycle and assessment  A 7: Systems behaviour  A 8: Organisations as systems  A: Control and regulation  Management as a type of control  A 10: Managerial functions, part 1  A 11: Managerial functions, part 2  A 12: Managerial functions, part 2A  A 13: Spatial territorial units as systems  A 14: Management in local government units  A 15: Engineering contemporary systems - case study  B. Problematics of exercises  B 1: Agility and responsibility (proactivity)  B 2: Organised action cycle (objectives and planning tools)  B 3: Thinking maps  B 4: Project (process) model - Gantt chart  B 5: Organisational structure models  B6: ARIS process model</p>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	open and closed questions test	51.0%	50.0%
	case study	51.0%	50.0%

Recommended reading	Basic literature	<p>Bertalanffy L. von, 1984, Ogólna teoria systemów: podstawy, rozwój, zastosowania, Państwowe Wydawnictwo Naukowe, Warszawa.</p> <p>Klaassen J. H., Paelinck J. H. P., Wagenaar S., 1982, Systemy przestrzenne, Państwowe Wydawnictwo Naukowe, Warszawa.</p> <p>Chaberek-Karwacka G., 2012, Logistyka w regionalnej polityce lokalizacyjnej, Wyd. Uniwersytetu Gdańskiego, Gdańsk.</p> <p>Karwacka G., 2009, The Influence of Logistics System Life Cycle on the Sustainable Development, w. Book of Proceeding from the 5th International Conference: Environmental Accounting Sustainable Development Indicators 2009. Usti and Labem: J. E. Purkyne University in Usti and Labem, s.93.</p> <p>Chaberek-Karwacka, G., 2019, Streets as Factors for and Barriers to Cities in Sustaining Development: A Comparison of Gothenburg and Gdansk, in. Sharma, Vishwa Raj, Chandrakanta (Eds.), Making Cities Resilient, Springer, ISBN 978-3-319-94932-1</p> <p>Chaberek-Karwacka G, 2018, Organizational and infrastructural solutions in creating competitive advantage of sustainable urban transport Gdańsk case study, Miscellanea Geographica Regional Studies on Development, Vol. 22 No. 4 DOI: 10.2478/mgrsd-2018-0029</p> <p>Chaberek-Karwacka G., Brdulak A. 2018, Kultura organizacyjna start-upów jako narzędzie rozwoju zrównoważonego miast, w: Bujak A., Topolska K., Kolasińska-Morawska, K. (red.) Logistyka w naukach o zarządzaniu, część 1. Przedsiębiorczość i zarządzanie, XIX (11) cz. 3, Warszawa-Łódź: Wydawnictwo SAN, 325-337</p> <p>Czermiński. M. Czerska, D. Nogalski, R. Rutka, J. Apanowicz: Zarządzanie organizacjami. TNOiK, Toruń 2002</p> <p>M. Czerska: Organizacja przedsiębiorstw. Metodologia zmian organizacyjnych, Wyd. U.G. 1996</p> <p>R. W. Griffin: Podstawy organizacji i zarządzania, Wyd. Naukowe PWN, Warszawa 1996</p> <p>Karwacka G, Chaberek M.: Logistyka jako praktyczne urzeczywistnienie prakseologicznych zasad dobrej roboty. [w:] Ekonomia XL, Nauki Humanistyczno-społeczne, zeszyt 391, Toruń 2009, s. 7-17.</p>
	Supplementary literature	<p>Chojnicki Z., 1999, Problemy metodologiczne Regional Science [w:] Z. Chojnicki, Podstawy metodologiczne i teoretyczne geografii, Bogucki wydawnictwo Naukowe, Poznań, s. 1044-14.</p> <p>Kulikowski R., 1977, Analiza systemowa i jej zastosowanie. Modelowanie środowiska, zarządzanie i planowanie rozwoju kraju, Państwowe Wydawnictwo Naukowe, Warszawa.</p> <p>Laszlo E., 1978, systemowy obraz świata, Seria: ±, Państwowy Instytut Wydawniczy, Warszawa</p> <p>Kaczorowska A., Jaan-Henrika K., Kronenberg J., Dagmar H., 2016, Ecosystem services in urban land use planning: Integration challenges in complex urban settings Case of Stockholm, Ecosystem Services, Volume 22, Part A, 204-212</p> <p>James A.F. Stoner, Edward Freeman, Daniel R. Gilberth: Kierowanie, PWE 1999 (wyd. II)</p> <p>AK. Kozmiński, W. Piotrowski (red.): Zarządzanie - teoria i praktyka, PWN, Warszawa 1995</p> <p>Strategor: Zarządzanie formą. Strategie, struktury, decyzje, tożsamość, PWE, Warszawa 1995</p> <p>R. Rutka: Organizacja przedsiębiorstw. Przedmiot projektowania, Wyd. U.G. 1996</p> <p>H. Steinemann, G. Schreyogg: Zarządzanie, Wyd. Polit. Wrocławskiej 1992 lub 1998</p> <p>R. A. Webber: Zasady zarządzania organizacjami, PWE 1984</p> <p>Chaberek-Karwacka G, 2018, Organizational and infrastructural solutions in creating competitive advantage of sustainable urban transport Gdańsk case study, Miscellanea Geographica Regional Studies on Development, Vol. 22 No. 4 DOI: 10.2478/mgrsd-2018-0029</p> <p>Chaberek-Karwacka G., Brdulak A. 2018, Kultura organizacyjna start-upów jako narzędzie rozwoju zrównoważonego miast, w: Bujak A., Topolska K., Kolasińska-Morawska, K. (red.) Logistyka w naukach o zarządzaniu, część 1. Przedsiębiorczość i zarządzanie, XIX (11) cz. 3, Warszawa-Łódź: Wydawnictwo SAN, 325-337</p>
	eResources addresses	
Example issues/ example questions/ tasks being completed	Pre-screening of a randomly assigned model using a specific example	
Work placement	Not applicable	

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