University of Gdańsk

Subject card

Subject name and code	Transport and spatial planning, PG_00202203						
Field of study	Socio-economic geography with elements of GIS						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	Master'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	1		Language of instruction	Polish			
Semester of study	2		ECTS credits	6.0			
Learning profile	academic		Assessment form	exam			
Conducting unit	Division of Regional Development -> Institute of Socio-Economic Geography and Spatial Management -> Faculty of Social Sciences -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Renata Anisiewicz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	0.0	0.0	60
	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	60		8.0	82.0	150	
Subject objectives	Knowledge and skills in using GIS tools and basic data description and visualization tools in the process of analysis and forecasting of the functioning and development of transport systems in urban areas; competences and ability to interpret data and results of spatial or spatiotemporal analyzes presented in the form of descriptions of tables, charts and maps.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GSEMU2_W02] recognises in-depth complexity of knowledge about the specifics of the functioning of territorial social systems	explains the role of transport in the functioning of territorial social systems	[SW4] test/exam - oral or written
[GSEMU2_K02] is ready to solve cognitive and practical problems in the field of socio-economic geography in cooperation with various entities, taking into account the acquired knowledge	proposes modification to the existing transport system in a given area in order to improve the functioning of entire socio-economic system	[SK2] presentation/project/paper/ report
[GSEMU2_K01] is ready to critically assess knowledge and received content in the field of socio-economic geography and Geographic Information Systems	proposes improved solutions for the construction of transport systems in various areas based on the assessment of existing needs and existing socio-economic relations	[SK2] presentation/project/paper/ report
[GSEMU2_W04] recognises in-depth methods and tools (quantitative, qualitative, cartographic) of research in socio-economic geography	knows and understands methods of modeling transport systems using GIS tools	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[GSEMU2_W03] understands to a deeper extent, the determinants (natural, social, economic, cultural) of processes occurring in the human life environment on various spatial and time scales	recognize the environmental, social and economic determinants of movement processeson a local and regional scale and on various time scales	[SW4] test/exam - oral or written
[GSEMU2_U03] selects and applies appropriate social research methods (including statistical and cartographic ones) and research tools with particular emphasis on information technologies and GIS software	selects and creates appropriate methods and tools for examining functional and spatial structures, including socio-economic structure of a given area	[SU2] presentation/project/paper/ report
[GSEMU2_U02] properly selects sources and information derived from them, with particular regard to sources of spatial information; evaluatesthem critically and interpret them creatively	identifies functional and spatial structures and uses them in modeling transport systems of a given areas	[SU2] presentation/project/paper/ report

Subject contents	A.Topics of the lecture A1. Definition of basic concepts: transport and communication, urban transport, public transport, collective transport, individual transport. Types of means of transport and their advantages and disadvantages in specific conditions. A2. Stages of development of public urban transport and its impact on the spatial structure of cities. Changes in the importance of public transport in cities in the face of the development of individual motorization. A3.Technical, economic and spatial conditions for the development of urban and individual transport. A4. Operation of public transport systems in selected cities in Poland and around the world. A5.Contemporary trends in planning and organizing public transport systems. A6.Prospects for the development of public transport in cities in Poland (in the context of Poland's membership in the EU) and in the world. Transport development strategies in the face of contemporary trends in urban development (including suburbanization, revitalization). A7. Shaping public and individual transport systems in urbanized areas. A8. Technical, economic and spatial conditions for creating transport networks in urban and suburban areas. A9. Organizational and legal conditions for the functioning of public and individual transport in Poland and in the world. A10.Planning transport development in the context of strategic documents at the national and European level. A11. Demand for ecological transport. A12. Costs of transport operation. B. Exercise issues B1. Urban theory and concepts and their impact on transport systems B2. Analysis of the spatial and functional structure of urbanized areas in the context of transport systems B3. Tools supporting the analysis and modeling of transport systems B4. Forecasting the demand for public and individual transport services B5. Designing changes in transport systemsTopics of the lecture
Prerequisites and co-requisites	-has knowledge and skills in using GIS software, word processors and spreadsheets -has knowledge and skills in preparing a written study

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written test or presentation	51.0%	50.0%
	project or presentation	51.0%	50.0%
Recommended reading	Basic literature	Lijewski T., 1986, Geografia transportu Polski, PWE, Warszawa. Koziarski S., 2005, Transport w Europie, Wydawnictwo Uniwersytetu Opolskiego, Opole, Wydawnictwa Komunikacji i Łączności, Warszawa. Rudnicki A., 1999, Jakość komunikacji miejskiej, Stowarzyszenie Inżynierów i Techników Komunikacji, Kraków. Wesołowski J., 2008, Miasto w ruchu. Dobre praktyki w organizowaniu transportu miejskiego, Instytut Spraw Obywatelskich, Łódź. Wyszomirski O. (red.), 2008, Transport miejski. Ekonomika i organizacja, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk. Taylor Z., 2007, Rozwój i regres sieci kolejowej w Polsce, IGiPZ PAN, Warszawa. Koziarski S., 1996, Przekształcenia struktury przestrzennej sieci kolejowej w Polsce i na świecie, Państwowy Instytut Naukowy Instytut Śląski w Opolu, Opole. Koziarski S., 2004, Rozwój przestrzenny sieci autostrad na świecie, Studia i Monografie UO, Uniwersytet Opolski, Opole. Grzywacz W., Wojewódzka-Król K., Rydzkowski W., 2003, Polityka transportowa, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk. Połom M., Palmowski T., 2009, Rozwój i funkcjonowanie komunikacji trolejbusowej w Gdyni, Wydawnictwo Bernardinum, Gdynia-Pelplin. Pijet-Migoń E., 2012, Zmiany rynku lotniczych przewozów pasażerskich w Polsce po akcesji do Unii Europejskiej, Rozprawy Naukowe Instytutu Geografii i Rozwoju Regionalnego Uniwersytetu Wrocławskiego nr 25, Wrocław. Soczówka A., 2012, Zróżnicowanie struktury przestrzennej komunikacji miejskiej w konurbacji katowickiej, Prace Wydziału Nauk o Ziemi UŚ, nr 76, Katowice. Wiśniewski Ł., 2015, Zróżnicowanie dostępności transportowej miast w województwie łódzkim, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.
	Supplementary literature	Goliszek S., Połom M., 2016, Wpływ budowy nowej linii tramwajowej w Olsztynie na zmianę dostępności transportem zbiorowym, Acta Sci. Pol. Administratio Locorum, 15(3), s. 19-34. Połom M., Beger M., Topa E., 2017, Badania nad dostępnością pieszą i transportem zbiorowym do parków miejskich na przykładzie Gdańska, Studia Miejskie, 27, s. 25-38. Połom M., Goliszek S., 2017, Transport in Poland during the period of accession of the European Union, Journal of Geography, Politics and Society, 7(3), s. 41-49. Połom M., Tarkowski M., Puzdrakiewicz K., 2018, Urban transformation in the context of rail transport development: the case of a newly built railway line in Gdańsk (Poland), Journal of Advanced Transportation, ID 1218041, s. 1-15. Połom M., Tarkowski M., 2018, Rola Pomorskiej Kolei Metropolitalnej w kształtowaniu struktury przestrzenno-funkcjonalnej Gdańska, Studia Miejskie, 30, s. 39-55. Puzdrakiewicz K., 2017, Zastosowanie zielonej infrastruktury do zmniejszenia negatywnych zjawisk spowodowanych transportem w środowisku miejskim, Prace Komisji Geografii Komunikacji PTG, 20(2), s. 69-78. Wybrane artykuły naukowe z czasopism branżowych: Prace Komisji Geografii Komunikacji PTG, Warszawa-Rzeszów-Gdańsk, Transport Miejski i Regionalny, Przegląd Komunikacyjny, TTS Technika Transportu Szynowego, Autobusy: Technika, Eksploatacja, Systemy Transportowe i podobnych, Rynek Kolejowy, Infrastruktura Transportu, Journal of Transport Geography, Transport Reviews, Transport Policy i pokrewnych.
	eResources addresses	
Example issues/ example questions/ tasks being completed	issues covering the main content of exercises and lectures	
Work placement	Not applicable	

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