University of Gdańsk

Subject card

Subject name and code	Advanced GIS in Socio-Economic Geography B, PG_00204884						
Field of study	Socio-economic geography with elements of GIS						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
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	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		mgr inż. Joanna Jaczewska				
	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		8.0		72.0	125
Subject objectives	Acquisition of the ability to carry out advanced spatial socio-economic analyses using a programme from the GIS environment Acquisition of the ability to carry out statistical analyses using a programme from the GIS environment Correct presentation of spatial data on thematic maps						

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<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[GSEMU2_W04] recognises in-depth methods and tools (quantitative, qualitative, cartographic) of research in socio-economic geography</td><td>knows and understands in depth methods of cartographic presentation of spatial data</td><td>[SW2] presentation/project/paper/ report</td></tr>
<tr><td>[GSEMU2_U04] adapts existing research tools and methods to solve complex and unusual problems occurring in the anthropogenic environment</td><td>adapts research methods and tools from the GIS environment to perform spatial analyses of real estate and commercial and service establishments and other types of facilities</td><td>[SU6] demonstration of practical skills</td></tr>
<tr><td>[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</td><td>selects and applies appropriate GIS software methods and tools to present population, economic and communication issues</td><td>[SU6] demonstration of practical skills</td></tr>
<tr><td>[GSEMU2_U02] properly selects sources and information derived from them, with particular regard to sources of spatial information; evaluatesthem critically and interpret them creatively</td><td>correctly selects spatial data sources, imports data from the CSO and GUGiK into the GIS environment and critically evaluates them</td><td>[SU6] demonstration of practical skills</td></tr>
<tr><td>[GSEMU2_K01] is ready to critically assess knowledge and received content in the field of socio-economic geography and Geographic Information Systems</td><td>verifies and critically evaluates the issues analysed and presented resulting from the use of GIS tools</td><td>[SK1] oral statement/conversation/ discussion</td></tr>
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<tr><td>Subject contents</td><td>B. Problems of the exercises:B.1 Use of GIS in the investigation of property losses caused by a natural disasterB.2 Finding the best location for retail and service establishments and other types of facilitiesB.3 Connecting databases to a programme from the GIS environment.B.4 Create cartograms and cartodiagrams of population and economic issues. Publishing the results of analyses on the webweb, using Web-GIS tools.B.5 Visualisation of travel times to urban centres.B.6 Selected methods for automating spatial data processing and analysis.B.7 Internet-based spatial data sources and methods for their extraction.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>knowledge of the basics of cartographic presentation of data, ability to perform simple statistical analyses, knowledge of English at anintermediate level</td></tr>
<tr><td>Assessment methods and criteria</td><td>
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<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Project or presentation</td><td>51.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Literatura wymagana do ostatecznego zaliczenia zajęć (zdania egzaminu):Iwaniak A., Olszewski R., Gotlib D., 2008. GIS. Obszary zastosowań. Wydawnictwo Naukowe PWN, WarszawaKidner D., Higgs G., White S. (red.), 2003. Socio-Economic Applications of Geographic Information Science. Taylor&Francis Group, London-NewYork.Pieniążek M., Zych M., 2017. Mapy statystyczne. Opracowanie i prezentacja danych. Główny Urząd Statystyczny, Warszawa</td></tr>
<tr><td>Supplementary literature</td><td>Kunz M. (red.), 2007. Systemy Informacji Geograficznej w praktyce. Studium zastosowań. Wydawnictwo Uniwersytetu Mikołaja Kopernika, Toruń.Bolstad P., 2016. GIS Fundamentals: A First Text on Geographic Information Systems. Fifth Edition, New YorkLongley P.A, Goodchild M.F., Rhind D.W. 2008. GIS. Teoria i praktyka. Wydawnictwo Naukowe PWN. Warszawa.Peterson, G. (2009) GIS Cartography: A Guide to Effective Map Design, CRC Press. Boca Raton.Masik G., 2017, Zróżnicowanie poziomu życia w województwie pomorskim [w:] J. Hrynkiewicz, A. Potrykowska (red.), Sytuacja demograficznawojewództwa pomorskiego jako wyzwanie dla polityki społecznej i gospodarczej, Rządowa Rada Ludnościowa, Warszawa, t. 14, s. 218-239.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>completion of a dissertation - project or presentation-Completion of a dissertation, i.e. a socio-economic analysis and itspresentation on a map</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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