University of Gdańsk

Subject card

Subject name and code	Modern tools of touring mapping, PG_00167950		
Field of study	Sightseeing and Historical Tourism		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2025/2026
Education level	Master's studies	Subject group	Obligatory subject group 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	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Geographic Information System (GIS) Laboratory -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Maciej Markowski	
	Teachers	dr Marek Markowski	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	30.0	0.0	0.0	30

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	30	6.0	20.0	56

Subject objectives

Introducing students to mapping portals as sources of spatial data and information. Understanding the principles of composing cartographic images, acquiring theoretical and practical knowledge in designing and using maps and map layers illustrating cultural and historical-touristic phenomena using GIS tools. Acquiring skills in creating, acquiring, and processing vector and raster data. Ability to utilize spatial data on mobile devices through free mapping applications/services such as Google MyMaps and OpenStreetMap.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[KiTHMU2_K03] Is ready to initiate and carry out activities for the protection and promotion of natural values and cultural heritage of the region, Poland and Europe	The student is prepared to initiate and conduct activities aimed at protecting and promoting the natural values and cultural heritage of the region, Poland, and Europe through the development of thematic layers and map compositions.	[SK2] presentation/project/paper/ report
[KiTHMU2_W05] Has in-depth knowledge of methods of dissemination of historical and sightseeing knowledge	The student has advanced knowledge of utilizing spatial data in the fields of historical and cultural geography. They possess in-depth understanding of freely available software for creating thematic maps as layers for OpenStreetMap. Furthermore, they comprehend the potential of GIS tools for disseminating historical and cultural knowledge.	[SW2] presentation/project/paper/ report
[KiTHMU2_U02] He/she is able to approach solved tasks in an innovative way, adapting existing or developing new research methods and tools, using and integrating his/her knowledge from various fields of science	The student is proficient in using GIS tools and office software tools (such as MS Access, MS Excel, Notepad) for data input in cartographic projects. They adapt these tools for editing data layers for maps, integrating knowledge from office applications and GIS tools to solve problems related to creating historical and cultural layers. The student utilizes GIS tools to prepare visual maps containing data related to culture, history, and tourism for printing, multimedia presentations, etc. They have skills in creating and editing layers that can be used in available mapping services.	[SU2] presentation/project/paper/ report

Subject contents

1. Introduction to cartography and GIS, discussing the history of GIS development and implementation, as well as its basic advantages and benefits.
2. Utilization of widely accessible applications (e.g., QGIS, Google Earth Pro, Microsoft Office) for spatial data presentation.
3. Vector data: accuracy, topology of vector drawings, geometry and errors, processing of vector data.
4. Raster data: types, classification, grid data utilization, discussion of possibilities and application examples.
5. Georeference process.
6. Importing databases in various formats (e.g., WMS, WFS, xls, dbf, gpx, xml), and using this data for further processing.
7. Exporting and exchanging vector data in commonly used formats.
8. Analysis and presentation of spatial data on thematic maps (tourist-topographic maps, cycling maps, historical monuments, historical points) using mapping services and publicly available mobile applications.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
coursework	51.0%	100.0%

Recommended reading

Basic literature	Urbański J., 2012, GIS w badaniach przyrodniczych (ebook), Centrum GIS, Uniwersytet Gdański.
Supplementary literature	Arnold S., Geografia historyczna, Warszawa 1951. Dobrowolska M., Przedmiot i metoda geografii historycznej, Przegląd Geograficzny, 1953, t. 25.Tyszkiewicz J., Geografia historyczna. Zarys problematyki, Warszawa 2014. Tomlinson R., Thinking about GIS, 2013, Esri Press.
eResources addresses	

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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