Subject card

Subject name and code	Module on the specificity of the faculty research, PG_00045748
Field of study	Geodesy and Cartography

Date of commencement of studies	February 2023	Academic year of realisation of subject	2022/2023
Education level	second-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment

Conducting unit	Department of Geodesy -> Faculty of Civil and Environmental Engineering

Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Mariusz Figurski
	Teachers	

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	0.0	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	22.0	75

Subject objectives	Acquisition of knowledge on the methods of research used in technical sciences and in the faculty's educational practice.
	Acquisition of skills in conducting scientific discussions.
	Acquiring the ability to search and combine information from various studies available in Polish and world resources.
	Acquiring the ability to conduct quantitative and qualitative research in the field of geodesy and cartography and Civil Engineering.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U13] knows how to correctly define basic calculation models used in the computer calculation	Has the ability to cooperate, communicate and conduct scientific discourse in the field of formulating research problems, choosing a research method, discussing the results obtained and formulating conclusions.	[SU1] Assessment of task fulfilment
	[K7_W15] has the knowledge in soil testing and geotechnical monitoring with particular emphasis on measurement methods	Has deepened and structured knowledge about the methods of research used in technical sciences and education; knows the map of positions and methodological approaches; understands the role of quality standards in conducting research.	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation
	[K7_U14] can plan and interpret the results of geotechnical studies, including research capacity, settlement and displacement of foundations, the ground and resistance structural framework	Has developed skills to analyze the results of numerical research: develops and transforms quantitative and qualitative data using specialized analytical and statistical software, selects the appropriate analytical method, interprets test results in accordance with the principles of statistical inference and numerical studies, draws conclusions in a substantively authorized manner.	[SU4] Assessment of ability to use methods and tools
	[K7_U12] can use numerical methods to solve complex engineering tasks, performs numerical calculations, using MES or Matlab; use the selected software for programming the artificial neural networks	Has developed skills to analyze the results of numerical research: develops and transforms quantitative and qualitative data using specialized analytical and statistical software, selects the appropriate analytical method, interprets test results in accordance with the principles of statistical inference, draws conclusions in a substantively authorized manner.	[SU2] Assessment of ability to analyse information

Subject contents	
	Using a data resource.
	Methods of conducting research, research methodology.
	Data archives in Poland and in the world. Data access rules.
	Research diagrams
	Interpretation of test results.
	Consultation on the methodology of writing a scientific article
	Consultations on the use of data

Prerequisites and co-requisites	
	He has a structured knowledge of theories in the field of civil engineering, geodesy and cartography, learning and teaching as well as other educational processes, and has ordered knowledge about various research methods in geodesy and cartography, their specificities and processes taking place in them.
	Has the ability to search the world's Internet resources in terms of information about a given field of science, as well as selecting the most useful information and assessing its credibility.
	Has the ability to perform calculations and data analysis using computer software, including: calculating the minimum, maximum, average and measure of distraction for many observations, grouping observations, adjusting the trend to the time series, creating graphs allowing to compare the distribution of features in several communities, creating graphs depicting the course of time series.

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Presence at lectures.	60.0%	50.0%
	Conversation about the presentation.	10.0%	20.0%
	Review of the submitted presentation.	30.0%	30.0%

Recommended reading	Basic literature	Zieliński J., Metodologia pracy naukowej, Wyd. Oficyna Wydawnicza ASPRA-JR Warszawa 2012
		Węglińska M., Jak pisać pracę magisterską. Poradnik dla studentów., Wyd. Impuls Kraków 2016.

	Supplementary literature	Eugeniusz Gatnar, Marek Walesiak . 2009. Statystyczna analiza danych z wykorzystaniem programu R. Warszwa: Wydawnictwo Naukowe PWN. Siwiński W., Tauber R.D.: Metodologia badań naukowych. Wyd. WSHiG, Poznań 2006.
	eResources addresses	Adresy na platformie eNauczanie: Specyfika Badawcza Wydziału - Moodle ID: 29036 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=29036
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	