University of Gdańsk

Subject card

Subject name and code	Statistics - laboratory, PG_00119892		
Field of study	Geography		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	Bachelor'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	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Climate Research Laboratory -> Department of Physical Oceanography and Climate Research -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Mirosława Malinowska	
	Teachers	dr Mirosława Malinowska	

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	5.0	25.0	60

Subject objectives

The participant of the course will acquire knowledge in: use of basic statistical methods, ability to select statistical methods depending on the type of data, ability to interpret data and results of statistical procedures.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOGRL3-U06] apply methods and research tools of geographic sciences, including conducting observations and field measurements, and assess their suitability for the tasks in which the application objective of geography can be achieved	is able to apply methods and research tools in the field of statistics and assess their usefulness for the implementation of tasks in which the application objective of geography can be achieved	[SU4] test/exam - oral or written
[GEOGRL3-W07] on advanced level methods of aquiring data on the natural and anthropogenic environment, including operation of specialized equipment	knows and understands to an advanced degree the methods of obtaining data on the natural and anthropogenic environment	[SW4] test/exam - oral or written
[GEOGRL3-W08] at an advanced level methods and principles development of data on the natural and anthropogenic environment, and methods of their analysis and interpretation	knows and understands to an advanced degree the methods and principles of developing data on the natural and anthropogenic environment, as well as methods of their analysis and interpretation	[SW4] test/exam - oral or written
[GEOGRL3-K02] bear full responsibility for the actions taken actions and adhere to the principles of professional ethics and principles of intellectual honesty, is aware of the importance of a professional approach in professional life professional life	is ready to bear full responsibility for actions taken and to observe the principles of professional ethics and intellectual honesty, is aware of the importance of a professional approach in professional life	[SK8] observation of student's independent or team work
[GEOGRL3-U07] use geoinformatics techniques and simple statistical tools and methods of spatial analysis to determine relationships between a variety of variables specific to the geographic environment and present the results of the analyses performed	is able to use simple statistical tools and methods of spatial analysis to determine the relationships between a variety of variables characteristic of the geographical environment and to present the results of the analyses carried out	[SU4] test/exam - oral or written

Subject contents

1 Detailed and distributional series, measures of position, dispersion, skewness and flattening, graphical data presentation techniques

2. Correlation analysis

3 Regression and trend function

4. Probability - introduction, statistical distributions

Prerequisites and co-requisites

Assessment methods and criteria

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

Recommended reading	Basic literature	Makać W., Urbanek-Krzysztofiak D., 2004. methods of statistical description. Publishing House of the University of Gdańsk, Gdańsk.Balicki A., Makać W., 2010, Methods of statistical inference, Wyd. UG, Gdańsk.Norcliffe G. B., 1986, Statistics for geographers, PWN, Warsaw.
	Supplementary literature	Luszniewicz A., Słaby T., 1997, Applied statistics, PWE, Warsaw.Augustyniak H., 1999, Descriptive statistics with elements of demography, Przedsiębiorstwo Wydawnicze Ars boni et aequi, Poznań.
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Based on the data presented, determine the mean median, dominant, standard deviation and kurtosis coefficient. 2 The lake has frozen 20 times in the last 100 years. Calculate the probability that this lake will freeze at least once in the next 10 years. 3. The output of a certain source has a normal distribution with a mean of 80l/s and a standard deviation of 10 l/s. Calculate the probability that the output of the source will be between 60-90 l/s. 4. Test whether there is a statistically significant relationship between precipitation in a certain catchment area and the flows of the main river in the closing profile. Calculate the strength of this relationship.	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.