

Subject card

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| Subject name and code | Statistics - laboratory, PG_00119892 | | | | | | |
| Field of study | Geography | | | | | | |
| Date of commencement of studies | October 2024 | Academic year of realisation of subject | | | | 2025/2026 | |
| 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 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 | | | | | | |
| 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. | | | | | | |

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| Learning outcomes | Course outcome | Subject outcome | Method of verification |
| | [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-W07] on advanced level methods of acquiring 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-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 |
| [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 | |
| Subject contents | <p>1 Detailed and distributional series, measures of position, dispersion, skewness and flattening, graphical data presentation techniques</p> <p>2. Correlation analysis</p> <p>3 Regression and trend function</p> <p>4. Probability - introduction, statistical distributions</p> | | |
| Prerequisites and co-requisites | | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | written assessment | 51.0% | 100.0% |

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| 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 | <p>1. Based on the data presented, determine the mean median, dominant, standard deviation and kurtosis coefficient.</p> <p>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.</p> <p>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.</p> <p>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.</p> | |
| Work placement | Not applicable | |

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