University of Gdańsk

Subject card

Subject name and code	Statistical methods in biology and medicine, PG_00203357						
Field of study	Medical Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
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	1		Language of instruction	Polish			
Semester of study	1		ECTS credits	2.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Laboratory of Avian Ecophysiology -> Department of Vertebrate Ecology and Zoology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Magdalena Remisiewicz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	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		4.0	16.0	50	
Subject objectives	To understand the basic concepts related to descriptive statistics and the verification of statistical hypotheses. To learn and understand methods of analysing numerical data. To acquire the ability to select methods for statistical analysis. To acquire skills in the use of computer statistical programs.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLMEDMU2_W04] knows in-depth understanding the principles of planning research based on the achievements of biological and medical sciences, the principles of operation of equipment and apparatus used in medical biology research, and the principle of interpreting biological phenomena and processes based on empirical data in research work and practical activities	The ability to use learned data analysis techniques to describe phenomena in the field of biological and medical sciences, including specialised data.	[SW4] test/exam - oral or written
[BIOLMEDMU2_W01] has an in-depth knowledge of scientific fields and disciplines relevant to medical biology and the studied specialty and knows their main development trends	Ability to use statistical data analysis methods.	[SW4] test/exam - oral or written
[BIOLMEDMU2_K08] is ready to lead the group and take responsibility for it	Ability to plan and organise work within a team.	[SK8] observation of student's independent or team work
[BIOLMEDMU2_K02] is ready to recognize the importance of knowledge in solving cognitive and practical problems and to seek expert advice when having difficulty solving a problem on his own	The ability to recognise the importance of acquired knowledge in solving cognitive and practical problems in the field of biological and medical sciences.	[SK4] test/exam - oral or written
[BIOLMEDMU2_U07] is able to show initiative and lead teamwork and cooperate in the planning and implementation of research tasks	Ability to cooperate with others as part of a team.	[SU8] observation of student's independent or team work
[BIOLMEDMU2_U03] is able to formulate and solve problems on the basis of the known laws and methods, including - using computer tools and statistical methods	The ability to correctly interpret the results of statistical analysis.	[SU4] test/exam - oral or written

Subject contents

Reinforcement of basic concepts in descriptive statistics and statistical hypothesis testing. Testing hypotheses about differences between means and relationships between variables. Analysis of covariance. Linear models. Ways of assessing the consistency of measurement methods.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test of 30 questions	51.0%	100.0%

Recommended reading

Basic literature	Meissner W.2010. Przewodnik do ćwiczeń z przedmiotu metody statystyczne w biologii. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk.
Supplementary literature	Stanisz A. 2006. Przystępny kurs statystyki z zastosowaniem STATISTICA PL na przykładach z medycyny. Tom 1. Statystyki podstawowe. StatSoft,, Kraków. Stanisz A. 2007.Przystępny kurs statystyki z zastosowaniem STATISTICA PL na przykładach z medycyny. Tom 2. Modele liniowe i nieliniowe. StatSoft, Kraków. Ferguson G.A., Takane Y. 2008. Analiza statystyczna w psychologii i pedagogice. Wyd. III. Wydawnictwo Naukowe PWN, Warszawa.
eResources addresses	

Example issues/ example questions/ tasks being completed	Selection of tests to compare two samples. Selection of tests to compare more than two samples. Correlation and regression. Analysis of covariance.
Work placement	Not applicable

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