



Subject card

Subject name and code	Statistics II, PG_00050163						
Field of study	Economics						
Date of commencement of studies	October 2020	Academic year of realisation of subject				2021/2022	
Education level	first-cycle 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			blended-learning		
Year of study	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Economic Sciences -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Michał Pietrzak				
	Teachers		dr hab. Michał Pietrzak				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	E-learning hours included: 15.0						
Statystyka II (lato 2021_22) - Moodle ID: 17314 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17314							
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		47.0	100
Subject objectives	Getting to know the basic concepts of probability and their application in mathematical modeling. Understanding the classical probabilistic distributions, their properties and applications in problems practical in various fields of science and technology. The student has knowledge about sample statistics distributions, estimators, statistical hypotheses, tests parametric and non-parametric. The student plans and conducts statistical research using statistical packages.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K6_K03] understands the social role of the economist's profession. Recognises the importance of intellectual honesty in their own and others' actions		The student knows sampling, evaluating it character and then selection of appropriate statistical method for significance evaluation of its parameter (parametric test) and distribution (non-parametric test).			[SK2] Assessment of progress of work [SK3] Assessment of ability to organize work	
	[K6_W06] knows the methods and tools of data acquisition appropriate for economic sciences, which allow to describe processes taking place in them and relations between them		The student knows methods and tools of data acquisition appropriate for economic sciences allowing to describe the occurring processes and relations between them.			[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge	
	[K6_U10] can analyse specific problems and select methods and instruments to solve them in a rational way		The student can analyze specific problems and select methods and instruments allowing their rational resolution.			[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools	
	[K6_W07] has the knowledge of basic quantitative and qualitative methods used in economic sciences		The student knows basic quantitative and qualitative methods used in economic sciences.			[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation	
Subject contents	Population and Sample; Distributions of discrete and continuous random variables; Basic statistics and their distributions; Estimators and their properties; Testing of statistical hypotheses; Significance level and test power; Parametric statistical tests. One-way analysis of variance. Nonparametric tests. Regression analysis.						
Prerequisites and co-requisites	probability theory, descriptive statistics, mathematics, operation of Microsoft Office						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		60.0%	50.0%
		60.0%	50.0%
Recommended reading	Basic literature	<p>Mieczysław Sobczyk, Statystyka, PWN, Warszawa 2021</p> <p>wersja on-line: http://han3.uci.umk.pl/han/ibuk/https/libra.ibuk.pl/book/697</p> <p>Mariola Piłatowska, Repetytorium ze statystyki, PWN, Warszawa 2020</p> <p>wersja on-line: http://han3.uci.umk.pl/han/ibuk/https/libra.ibuk.pl/book/362</p> <p>Luszniewicz A., Słaby T., "Statystyka z pakietem komputerowym STATISTICA PL", Warszawa 2008</p> <p>Kot S.M., Sokołowski A., Jakubowski J. Statystyka, Difin, Warszawa, 2007.</p> <p>Bartos J., Dyczka W., Krysicki W. "Rachunek prawdopodobieństwa i statystyka matematyczna w zadaniach część 1 i 2", PWN, Warszawa 2004</p> <p>Elektroniczny Podręcznik Statystyki PL, Krakow, StatSoft (2006) https://www.statsoft.pl/textbook/stathome.html</p>	
	Supplementary literature	<p>Jóźwiak J., Podgórski J., "Statystyka od podstaw", PWE, Warszawa 2009</p> <p>Pułaska-Turyńska B., "Statystyka dla ekonomistów", Difin, Warszawa 2005.</p> <p>Online Statistics Education http://onlinestatbook.com/</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<p>Laboratory - solving statistical problems using dedicated applications</p> <ol style="list-style-type: none"> 1. Accounting task in the field of point and interval estimation. 2. Testing parametric hypotheses. 3. Testing nonparametric hypotheses <p>Exam - theoretical issues.</p>		
Work placement	Not applicable		