

COURSE OFFERED

Name of the course	Polish	Metody statystyczne
	English	Statistical methods

1. LOCATION OF THE COURSE OF STUDY WITHIN THE EDUCATION SYSTEM

1.1. Section ¹	Section of Exact and Natural Sciences
1.2. Discipline ²	Physical Sciences
1.3. Type of education	Full-time
1.4. Level of education	Doctoral School (PQF Level 8)
1.5. Person preparing the course description	Dr hab. Aldona Kubala-Kukuś, prof. UJK
1.6. Contact	aldona.kubala-kukus@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Type of course ³	ELECTIVE SUBJECTS
2.2. Language of the course	English

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Type of classes ⁴	Lecture (L)
3.2. The number of hours ⁵	15
3.3. Location of classes	Classroom at Jan Kochanowski University in Kielce
3.4. Type of assessment	Graded pass based on the written test
3.5. Didactic methods	Problem-based lectures, derivations and worked examples; guided discussion and independent reading
3.6. Literature	basic Hill, T., Lewicki, P. (2006). Statistics: Methods and Applications. StatSoft, Tulsa. Montgomery, D. C., Runger, G. C. (2018). Applied Statistics and Probability for Engineers. 7th ed., Wiley.
	supplementary Devore, J. L. (2015). Probability and Statistics for Engineering and the Sciences. 9th ed., Cengage Learning. Walpole, R. E., Myers, R. H., Myers, S. L., Ye, K. (2016). Probability & Statistics for Engineers & Scientists. 9th ed., Pearson.

¹ Section of Humanities; Social Sciences, Section of Exact and Natural Sciences, Section of Medical and Health Sciences, Section of Arts.

² History, Linguistics, Literary Studies, Medical Sciences, Health Sciences, Political and Administrative Sciences, Legal Sciences, Security Sciences, Pedagogy, Communication and Media Studies, Management and Quality Studies, Biological Sciences, Chemical Sciences, Physical Sciences, Earth and related Environmental Sciences, Visual Arts and Artwork Conservation, Musical Arts.

³ General courses, domain specific subjects in the section, disciplinary subjects in the sections, specialized subjects in the discipline.

⁴ Classes, lecture, seminar.

⁵ Consistent with the education program at the Doctoral School Jan Kochanowski University in Kielce.

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDEND LEARNING OUTCOMES

4.1. Course objectives (including the form of classes) Lecture C1 – To provide students with knowledge of the basic mathematical foundations necessary for describing and solving statistical problems. C2 – To provide students with knowledge of selected statistical methods, including parameter estimation, uncertainty assessment, and goodness-of-fit testing. C3 – To provide students with knowledge of applications of statistical methods to selected physical problems. C4 – To develop the ability to apply selected statistical methods to data analysis and interpretation. C5 – To develop the ability to use selected statistical methods with the support of statistical software.
4.2. Syllabus content Statistical methods: estimation of parameter uncertainties and assessment of goodness of fit. Mathematical foundations necessary for describing statistical problems. Development of problem-solving skills.

5. SUBJECT LEARNING OUTCOMES

Learning outcomes	A doctoral student who has passed the subject:	Reference to the learning outcomes of Doctoral School (according to the training program at the Doctoral School)
in the area of KNOWLEDGE:		
W01	The doctoral student possesses in-depth knowledge of the latest scientific achievements, encompassing theoretical foundations, general issues, and selected specific topics relevant to the scientific discipline in which the doctoral dissertation is being prepared	SD_W01
W02	The doctoral student has advanced knowledge of development trends in disciplines related to the research theme being pursued	SD_W02
W03	The doctoral student is able to formulate significant, current, and unresolved issues in the field of science or art in which they are studying, particularly in the discipline where the doctoral dissertation is being prepared, including in a foreign language.	SD_W07
in the area of SKILLS:		
U01	The doctoral student can define the goal and subject of research activities, as well as formulate research hypotheses in the discipline where the doctoral dissertation is being prepare	SD_U01
U02	The doctoral student is capable of utilizing knowledge from various disciplines to identify, formulate, and creatively solve complex problems or undertake research tasks.	SD_U03
U03	Is able to use English-language statistical terminology and literature necessary for understanding and applying statistical methods in an academic and professional context.	SD_U07
in the area of SOCIAL COMPETENCE:		
K01	The doctoral demonstrates entrepreneurial thinking and actively takes initiative.	SD_K04

6. METHODS OF ASSESSMENT OF THE INTENDED LEARNING OUTCOMES

	METHOD OF ASSESSMENT (+/-)
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SUBJECT LEARNING OUTCOMES	Oral/written exam			Kolokwium			Project			activity in class			Own work			Group work			Others		
	<i>The type of classes</i>			<i>The type of classes</i>			<i>The type of classes</i>			<i>The type of classes</i>			<i>The type of classes</i>			<i>The type of classes</i>			<i>The type of classes</i>		
	L	C	S	L	C	S	L	C	S	L	C	S	L	C	S	L	C	S	L	C	S
W01				X																	
W02				X																	
W03				X																	
U01				X																	
U02				X																	
U03				X																	
K01				X																	

7. CRITERIA OF ASSESSMENT OF THE INTENDED LEARNING OUTCOMES

Form of classes	Grade	Criterion of assessment
Lecture (L) ⁶	3,0	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4,0	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5,0	more than 90% of the total number of available points

Accepted for execution

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⁶ Niepotrzebne usunąć.