

Subject card

Subject name and code	Philosophy of Science, PG_00155378						
Field of study	Mathematics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Master'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	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Division of Aesthetics and the Philosophy of Culture -> Institute of Philosophy -> Faculty of Social Sciences -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Piotr Przybysz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		0.0		35.0	50
Subject objectives	Acquiring knowledge in the subject: philosophy of science, as well as in the field of research methods, the ability to properly formulate a research problem, and the selection and verification of sources.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[MATMU2_K04] is ready to understand and appreciate the importance of intellectual honesty in one's own and other people's actions; ethical conduct		Is ready to understand and appreciate the importance of intellectual honesty in one's own actions and those of others.		[SK3] text preparation/written work		
	[MATMU2_K01] is willing to acknowledge the limitations of his or her own knowledge and is willing to pursue further education		Is willing to acknowledge the limitations of his or her own knowledge and is willing to pursue further education.		[SK3] text preparation/written work		
Subject contents	1. What is science? Issues in the philosophy of science and other disciplines dealing with science 2. The demarcation debate. Science and metaphysics, science and pseudoscience. 3. Justification of scientific claims. Inductivism. The problem of induction. Confirmation. The hypothetico-deductive method. Inference to the best explanation. 4. Scientific laws and theories. Characterization and classification of scientific laws. Characterization of scientific theories. The debate over realism in the philosophy of science. The problem of logical valuation of theories. The problem of the existence of theoretical objects. Realism. Instrumentalism. Constructive empiricism. 5. The problem of the continuity of scientific development. The debate between cumulative and anti-cumulative views. Popper's approach to the development of science. 6. Lakatos' methodology of scientific research programs. Kuhn's theory of scientific revolutions. 7. Factors determining the development of science: the autonomous and heteronomous models of scientific development. 8. The rationality of science. The problem of defining the purpose of science. Relativism in the philosophy of science.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	observation of the student's attitude	51.0%	0.0%
	essay	51.0%	100.0%
Recommended reading	Basic literature	1. A. Chalmers, Czym jest to, co zwiemy nauką?; 2. A. Grobler, Metodologia nauk, 3. M. Heller, Filozofia nauki. Wprowadzenie, 4. C. G. Hempel, Filozofia nauk przyrodniczych; 5. W. Krajewski, Prawa nauki. Przegląd zagadnień metodologicznych i filozoficznych; 6. J. Losee, Wprowadzenie do filozofii nauki.	
	Supplementary literature	none	
	eResources addresses		
Example issues/ example questions/ tasks being completed	not included		
Work placement	Not applicable		

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