GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	The history of philosophy with elements of mathematics, PG_00021029		
Field of study	Mathematics		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2022/2023
Education level	first-cycle studies	Subject group	Humanistic-social subject group
Mode of study	Full-time studies	Mode of delivery	blended-learning
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Philosophy and Science Methodology -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Andrzej Lisak	
	Teachers	dr hab. Andrzej Lisak	

Lesson types and methods of instruction

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: 2.0

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	15.0	50

Subject objectives

Familiarizing with the basic concepts of history of philosophy, philosophy of science, philosophy of nature and history of mathematics.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_K03	Student learns the basics of philosophy, history of science and history of mathematics, is able to take a critical stance toward certain conceptions, is aware of ethical entanglement of science and technology and can embed them in the wider socio-cultural contexts.	[SK5] Assessment of ability to solve problems that arise in practice
K6_K04	Student is able to point at the importance of given mathematical formulae within the context of the general history and evolution of science.	[SK2] Assessment of progress of work
K6_K01	Student is able to point at the metatheoretical conditioning of science, is fully aware of axiological, ontological and epistemologigal implications of a given world-view.	[SK5] Assessment of ability to solve problems that arise in practice
K6_W01	Student learns about the historical context of the application of mathematics to the theoretical problems of natural sciences as well as practical problems of technology and engineering.	[SW1] Assessment of factual knowledge

<table>
<tr><td>Subject contents</td><td>1. Basic divisions within the field of philosophy and its fundamental concepts; 2. History of ancient philosophy - pre-socratic period. Mathematics in ancient Greece; 3. Philosophical systems of Plato and Aristotle. Aristotle's physics; 4. Philosophy of middle ages, philosophy of renessaince; 5. Galileo and Bacon. mathematization of science, birth of experiment; 6. Metaphysical systems of XVIIth century: Descartes, Pascal, Spinosa, Leibniz; 7. The birth of classical physics: Newton, atomism, mechanicism. The origins of mathematical analysis; 8. Kant's transcendentalism; 9. History of mathematics and science in XIXth century. Positivism. 10. Philosophical meaning of the general theory of relativity; 11. Three main schools of philosophy of mathematics in XXth century: logicism, formalism, intuitionism; 12. General methodology of science: from Poincare to Feyerabend; 13. Mathematics and chaos theory; 14. Contemporary investigations within the field of the philosophy of mathematics; 15. Introduction to the sociology of knowledge and social studies of science.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
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<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Final exam</td><td>50.0%</td><td>80.0%</td></tr>
<tr><td>Participation in the lecture</td><td>80.0%</td><td>20.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>1. Roman Murawski, Filozofia matematyki. Antologia tekstów klasycznych, Poznań: Wydawnictwo Naukowe UAM, 2003; 2. Wojciech Sady, Spór o racjonalność naukową od Poincarego do Laudana, Wrocław: Fundacja Na Rzecz Nauki Polskiej, 2000. 3. Władysław Tatarkiewicz, Historia filozofii, trzy tomy, Warszawa: PWN: 2007.</td></tr>
<tr><td>Supplementary literature</td><td>Roman Murawski, Filozofia matematyki: zarys dziejów, Poznań: Wydawnictwo Naukowe UAM, 2008.</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>Enumerate and brifely discuss the main periods in the history ogf philosophy; What are the three main schools of philosopohy of mathematics in XXth century; Describe briefly what is conventionalism in the general methodology of science; Describe the world-view of classical physics.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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