University of Gdańsk

Subject card

Subject name and code	Philosophy of Science, PG_00193480						
Field of study	Quantum Information Technology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Humanistic-social subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English		
Semester of study	3		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Patryk Dziurosz-Serafinowicz				
	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	This course introduces students to the central problems discussed within philosophy of science. On the whole, the course gives students a robust understanding of how science works. Additionally, we will discuss some problems pertaining to philosophy of probability.						

<table>
<tr><td>Learning outcomes</td><td>
<table>
<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[QITL3_W03] knows and understands the economic, legal, social and ethical conditions of activities related to quantum information technologies, including the principles of intellectual property protection and information security, basic principles of creating and developing various forms of entrepreneurship,, as well as the fundamental dilemmas of modern civilization</td><td></td><td></td></tr>
<tr><td>[QITL3_K01] is ready to critically evaluate the knowledge they possess and the content they receive, including in the field of quantum physics and technologies, is ready to recognize the importance of knowledge in solving cognitive and practical problems, and is ready to seek expert advice in the event of difficulties in solving a problem independently</td><td></td><td></td></tr>
<tr><td>[QITL3_K02] is ready to responsibly fulfill the role of of a quantum technologies specialist, taking into account the changing needs of society, including developing the professional achievements, maintaining the professional ethos, and adhering to and developing the principles of professional ethics
and working to ensure compliance with these principles</td><td></td><td></td></tr>
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<tr><td>Subject contents</td><td>1. Induction and inductivism
2. Falsificationism
3. Kuhns Scientific Revolutions
4. Realism and Anti-Realism in Science
5. Philosophy of Probability
6. Bayesian Confirmation Theory
7. Observation Selection Effects</td></tr>
<tr><td>Prerequisites
and co-requisites</td><td></td></tr>
<tr><td>Assessment methods
and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>exam</td><td>50.0%</td><td>100.0%</td></tr>
</table>
</td></tr>
<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>J. Ladyman. Understanding Philosophy of Science. Routledge, 2002. (selected chapters)
M. Strevens. The Knowledge Machine. How Irrationality Created Modern Science. Liveright, 2020. (selected chapters)
I. Hacking. An Introduction to Probability and Inductive Logic. CUP, 2001. (selected chapters)
P. Godfrey-Smith. Theory and Reality. The University of Chicago Press, 2003. (selected chapters)
E. Sober. Evidence and Evolution. The Logic Behind the Science. CUP, 2008. (selected chapters)
A. F. Chalmers. What Is This Thing Called Science. Hackett, 1976. (selected chapters)
Hájek, A., Hitchcock C. (editors), The Oxford Handbook of Probability and Philosophy, Oxford: Oxford University Press, 2016. (selected chapters)</td></tr>
<tr><td>Supplementary literature</td><td>-</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/
example questions/
tasks being completed</td><td>-</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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