GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Philosophy of Science, PG_00049197		
Field of study	Chemistry		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2020/2021
Education level	first-cycle studies	Subject group	Optional subject group Humanistic-social subject group
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	general academic profile	Assessment form	assessment
Conducting unit	Department of Social Sciences and Philosophy -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Andrzej Karalus	
	Teachers	dr Andrzej Karalus	

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: 0.0

Adresy na platformie eNauczanie:
Filozofia przyrody - Moodle ID: 4990
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=4990

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	2.0	18.0	50

Subject objectives

Getting acquainted with the basic notions of philosophy. Course provides a basic introduction to the philosophical problems, focusing especially on science, philosophy of technology and philosophy of nature.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K05] can identify the dilemmas (also ethical) associated with the practising of chemical engineer profession	Student is fully aware of the axiological and metatheoretical conditioning of knowledge, is able to point at the particular rootedeness of the given interpretation of the world.	[SK5] Assessment of ability to solve problems that arise in practice
[K6_K01] understands the need for lifelong learning, can inspire and organize the process of teaching other people	Student is able to evaluate the influence of the particular worldview on the reality and is able to discuss the ethical and anthropological implications of acceptance of certain epistemological view of reality.	[SK4] Assessment of communication skills, including language correctness

Subject contents

1. Main conceptions and concepts in philosophy; 2. Distinction between the philosophy of nature, philosophy of science and general methodology of science; 3. History of philosophy of nature: from Aristotle to Galileo and Copernicus. The idea of mathematization of nature. 4. The world-view of classical physics. Dispute between Leibniz and Newton; 5. Basic problems of general methodology of science I: positivism, Kant, conventionalism, Popper; 6. General methodology of science II: Lakatos, Kuhn, Fayerabned, Bas van Fraasen; 7. Contemporary philosophy of science: general theory of relativity and quantum mechanics; 8. Contemporary philosophy of nature: non-linear dynamics, ergodic theory and chaos theory; 9. Basic problems of philosophy of technology. Difference between technique and technology. Frankfurt School, Heidegger, ecophilosophy; 10. Science and technology in the discourse of sociology of knowledge I: classical and non-classical sociology of knowledge; 11. Science and technology in the discourse of sociology of knowledge II: actor-network theory and social studies of sience; 12. Science and technology and trhe risk society (Ulrich Beck, Anthony Giddens); 13. Phenomenology of technology: technology and daily experience; 14. Ethical dimension of science practice; 15. Philosophical status of science and technology nowadays.

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table><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>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>1. Michał Tempczyk, Fizyka a świat realny. Elementy filozofii fizyki, Warszawa: PWN, 1991.

2. Wojciech Sady, Spór o racjonalność naukową od Poincarego do Laudana, Wrocaw: Fundacja Na Rzecz
Nauki polskiej, 2000;

3. Marian Grabowski, Elementy filozofii nauki, Toruń: Wydawnictwo UMK, 2000.

4. Alasdair MacIntyre Krótka historia
etyki, Warszawa: PWN, 2000</td></tr>
<tr><td>Supplementary literature</td><td>Michał Tempczyk, Teoria chaosu dla odważnych, Warszawa: PWN, 2002.</td></tr>
<tr><td>eResources addresses</td><td>Filozofia przyrody - Moodle ID: 4990
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=4990</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Describe the main divisions in philosophy; Enumerate main divisions in philosophy and main problems of ethics; Discuss the main conceptions of the general methodology of science; What philosophical interpretation of reality was developed within the classical physics; Discuss what are the fundaemntal ethical challenges and dilemmas faced by science and technology nowadays; Elucidate the concepts of conventionalism and falsificationism.</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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