GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Nanotechnology and the human environment, PG_00055425		
Field of study	Nanotechnology		
Date of commencement of studies	February 2023	Academic year of realisation of subject	2023/2024
Education level	second-cycle studies	Subject group	Humanistic-social subject group
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Solid State Physics -> Faculty of Applied Physics and Mathematics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Marek Chmielewski	
	Teachers	prof. dr hab. inż. Jarosław Rybicki dr inż. Marek Chmielewski	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	15.0	15.0	30

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	30	2.0	18.0	50

Subject objectives

The aim of the course is the answer on the question of ethics influence on the accuracy of the science investigation procedure and presentation in the public results of the research and measurement results.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_K09	The student learns the issue of ethics in scientific research and is able to effectively verify their validity and can apply them in practice. Student will able to enforce ethical standards in the research work.	[SK5] Assessment of ability to solve problems that arise in practice
K7_W03	The student will know: the physical basis of the description of the magnetic properties with a particular emphasis on the properties of hysteresis, definitions and description of the mechanical waves propagating in solid materials,will know influence of the permanent or changed in time magnetic field on the conductive materials.	[SW1] Assessment of factual knowledge
K7_W07	The student learns the issue of ethics in scientific research and is able to effectively verify their validity and can apply them in practice. Student will able to enforce ethical standards in the research work.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation

Subject contents

The content of the course is the analysis and verification of existing codes of the ethics in the subjects of the research and development in science. Understanding and analyzing the ethic code in the field of nanotechnology. The analysis is also the history and evolution of content included within the applicable codex. In addition, the lecture will be analyzed as current controversial statements and publications in the field of science and especially nanotechnology.

Prerequisites and co-requisites

not required

<table>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Grade</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 colspan="2">The Ethics of Nanotechnology, Andrew Chen</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">not required</td></tr>
<tr><td>eResources addresses</td><td colspan="2">Adresy na platformie eNauczanie:
Nanotechnologia a srodowisko człowieka - Moodle ID: 36929
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=36929</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Ethics in nanotechnology.

The impact of research on the economy.

The impact of research on policy.</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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