



## Subject card

Subject name and code	, PG_00052092						
Field of study	Nanotechnology						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2024/2025		
Education level	first-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	4	Language of instruction			Polish		
Semester of study	7	ECTS credits			1.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Zakład fizyki nanomateriałów -> Instytut Nanotechnologii i Inżynierii Materiałowej -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Wojciech Sadowski				
	Teachers		prof. dr hab. inż. Wojciech Sadowski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	15.0	15
	E-learning hours included: 0.0						
	Additional information: <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33617">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33617</a>  specialized lectures						
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		1.0		9.0	25
Subject objectives	Preparation for preparing and writing a diploma thesis.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_K05		The student is able to analyze and present the results of his or her work.		[SK4] Assessment of communication skills, including language correctness [SK2] Assessment of progress of work		
	K6_U08		The student is able to present basic facts in the field of materials engineering and nanotechnology in a popular way.		[SU3] Assessment of ability to use knowledge gained from the subject		
	K6_U11		The student has the ability to prepare works, written studies and oral presentations on issues related to broadly understood materials engineering.		[SU5] Assessment of ability to present the results of task		

Subject contents	<p>1. Selected research issues of modern nanotechnology.</p> <p>2. Selected aspects of scientific work (topic, analysis of literature and external sources, purpose of research, selection research methodology and techniques)..</p> <p>3. Methodology and formal requirements for the preparation of a diploma thesis</p> <p>4. Selected aspects of intellectual property protection.</p> <p>5. Presentation of research results.</p> <p>6. Preparation for the defense of the diploma thesis.</p>														
Prerequisites and co-requisites	Choosing the topic of the diploma thesis.														
Assessment methods and criteria	<table border="1" data-bbox="448 725 1487 864"> <thead> <tr> <th data-bbox="448 725 794 763">Subject passing criteria</th> <th data-bbox="794 725 1141 763">Passing threshold</th> <th data-bbox="1141 725 1487 763">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 763 794 792"></td> <td data-bbox="794 763 1141 792">100.0%</td> <td data-bbox="1141 763 1487 792">40.0%</td> </tr> <tr> <td data-bbox="448 792 794 822"></td> <td data-bbox="794 792 1141 822">100.0%</td> <td data-bbox="1141 792 1487 822">30.0%</td> </tr> <tr> <td data-bbox="448 822 794 864"></td> <td data-bbox="794 822 1141 864">50.0%</td> <td data-bbox="1141 822 1487 864">30.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade		100.0%	40.0%		100.0%	30.0%		50.0%	30.0%
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Recommended reading	Basic literature	<ol style="list-style-type: none"> <li>1. <b>Introduction to Nanotechnology</b>. Ch.P. Poole Jr., F.J. Owens. Wiley. 2003.</li> <li>2. <b>The Oxford Handbook of Nanoscience and Technology</b>. Oxford Univ. Press. V.1,2,3. 2010.</li> </ol>													
	Supplementary literature	<p><b>The Oxford Handbook of Nanoscience and Technology</b>. Oxford Univ. Press. V.1,2,3. 2010.</p> <p>Scientific journals related to nanotechnology available from the GUT Library.</p>													
	eResources addresses	Adresy na platformie eNauczanie:													
Example issues/ example questions/ tasks being completed															
Work placement	Not applicable														