



Subject card

Subject name and code	Electroceramics, PG_00039648						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	February 2022	Academic year of realisation of subject				2021/2022	
Education level	second-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	1	Language of instruction				Polish	
Semester of study	1	ECTS credits				4.0	
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. Tadeusz Miruszewski				
	Teachers						
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	15.0	45
	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	45		5.0		50.0	100
Subject objectives	Gaining knowledge in phenomena, technologies and applications of electroceramics						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K7_K01	Understands necessity of knowledge updating			[SK2] Assessment of progress of work		
	[K7_K82] is equipped to participate actively in lectures, seminars and laboratory classes conducted in foreign language	is prepared for activities carried out in English			[SK4] Assessment of communication skills, including language correctness		
	K7_W03	has wide and deep knowledge on electroceramics			[SW1] Assessment of factual knowledge		
Subject contents	<p>Introduction</p> <p>Technology of electroceramics</p> <p>Ion conducting electroceramics</p> <p>electronic electroceramics</p> <p>dielectric electroceramics</p> <p>Magnetic electroceramics</p> <p>electroceramics for energy conversion and storage</p> <p>examples</p>						
Prerequisites and co-requisites	no						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	seminar presentation	51.0%	30.0%
	praca pisemna	51.0%	70.0%
Recommended reading	Basic literature	scientific literature	
	Supplementary literature	jw	
	eResources addresses		
Example issues/ example questions/ tasks being completed	defects in ionic crystals		
	diffusion mechanisms		
	Kroger Vink notation		
	SOFC		
Work placement	Not applicable		