



## Subject card

Subject name and code	Monographic lecture, PG_00048716						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject	2022/2023				
Education level	first-cycle studies	Subject group	Optional subject group				
Mode of study	Full-time studies	Mode of delivery	at the university				
Year of study	3	Language of instruction	Polish				
Semester of study	6	ECTS credits	1.0				
Learning profile	general academic profile	Assessment form	assessment				
Conducting unit	Department of Polymers Technology -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Janusz Datta					
	Teachers	prof. dr hab. inż. Janusz Datta dr hab. inż. Justyna Kucińska-Lipka dr hab. inż. Michał Strankowski dr inż. Paulina Parcheta-Szwindowska dr inż. Marcin Włoch dr hab. inż. Łukasz Piszczyk dr inż. Ewa Głowińska					
Lesson types and methods of instruction	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	5.0		10.0	30	
Subject objectives	To introduce students with research techniques used to characterize polymers and plastics by using selected examples.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_U07	The student is able to obtain information from the literature, databases also in English			[SU4] Assessment of ability to use methods and tools		
	K6_K02	The student is able to think and act creatively; can cooperate with the team			[SK3] Assessment of ability to organize work		
	K6_U03	The student is able to analyze the existing technical solutions			[SU2] Assessment of ability to analyse information		
	K6_W08	The student has a basic knowledge of the directions of development in materials engineering			[SW1] Assessment of factual knowledge		
Subject contents	Przedmiot realizowany jest w formie 1 godz wykładu co-tygodniowego. Podczas zajęć omawiane są, w sposób bardzo przystępny, główne techniki badań materiałów polimerowych oraz prezentowane przykładowe dane pomiarowe w postaci wykresów wytrzymałościowych, termogramów, widm, chromatogramów czy zdjęć mikroskopowych) oraz ich interpretacje i zależności.						
Prerequisites and co-requisites	Basic knowledge of polymer synthesis, identification of polymers; functional groups in the structure of the polymer, standards						
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	written test	50.0%			100.0%		

Recommended reading	Basic literature	<p>1) Broniewski Tadeusz i inni , Metody badań i ocena właściwości tworzyw sztucznych,2000, WNT, Warszawa</p> <p>2) Rabek J.F, Polimery. Otrzymywanie, metody badawcze i zastosowania, 2013, <a href="#">Wydawnictwo Naukowe PWN</a>, Warszawa</p> <p>3) Gottfried Wilhelm Ehrenstein, Materiały polimerowe.Struktura, właściwości zastosowanie, 2016, <a href="#">Wydawnictwo Naukowe PWN</a>, Warszawa</p>
	Supplementary literature	<p>W. Przygocki - Fizyczne metody badań polimerów - WNT Warszawa . - 1990</p> <p>W. Szlezyngier - Metody badań tworzyw sztucznych - Polit. Rzeszow.. - 1992</p>
	eResources addresses	<p>Adresy na platformie eNauczanie:</p> <p>2023 Wykład monograficzny (PG_00048716) - Moodle ID: 30159  <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30159">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30159</a></p>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	