



Subject card

Subject name and code	Industrial engineering plastics, PG_00035234						
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				3.0	
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 inż. Paulina Parcheta-Szwindowska dr inż. Marcin Włoch 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	15.0	0.0	0.0	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		8.0		37.0	75
Subject objectives	Familiarization with the essence of the design process of industrial plastics. Understanding the rules of creating process and technology projects. Familiarization with the operation and selection of equipment at Industrial engineering plastics. Understanding the production lines of major bulk plastics artificial. Understanding the principles of operation and control of industrial installations						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K7_W03		Knows the ways of monitoring of industrial installations		[SW2] Assessment of knowledge contained in presentation		
	K7_U01		Knows the operation of selected devices at industrial installations		[SU2] Assessment of ability to analyse information		
	K7_K01		Knows the working principles of selected industrial installations for mass plastic production		[SK3] Assessment of ability to organize work		
K7_W04		Knows the way of designing industrial installations for the plastic technical articles production		[SW2] Assessment of knowledge contained in presentation			
Subject contents	The essence of design processes The concept of chemical and technological processes Selected achievements and development trends of modern industrial engineering plastics Management Systems production quality Issues of industrial property protection						
Prerequisites and co-requisites	General knowledge of polymer materials. Know equipment and machines used in the plastics industry artificial. Fundamentals of mass and heat balancing.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	written test		50.0%		50.0%		
	discussion, report		90.0%		50.0%		

Recommended reading	Basic literature	<p>Synoradzki L., Wisiański J.(red). Projektowanie procesów technologicznych. Od laboratorium do instalacji przemysłowej. Warszawa, 2006</p> <p>Synoradzki L., Wisiański J.(red). Projektowanie procesów technologicznych. bezpieczeństwo procesów chemicznych, Warszawa 2012</p> <p>Szarawara J., Piotrowski J., Podstawy teoretyczne technologii chemicznej, Warszawa, 2010</p> <p>Pikoń J., Aparatura chemiczna, Warszawa 1983.</p>
	Supplementary literature	<p>Bogoczek R., Kociołek-Balawejder E.: <i>Technologia chemiczna organiczna. Surowce i półprodukty</i>, Wrocław 1992</p> <p>Florjańczyk Z., Penczek S. (red.): <i>Chemia polimerów T.1. oraz T.2.</i>, Warszawa 2001</p> <p>Rabek J.: <i>Współczesna wiedza o polimerach</i>, Warszawa 2008</p> <p>Sikora R.: <i>Przetwórstwo tworzyw wielkocząsteczkowych</i>, Warszawa 1993</p>
	eResources addresses	
Example issues/ example questions/ tasks being completed	Present the diagram Industrial installation for PVC production using the suspension polymerization method and discuss its operation. Industrial installation for PUR production - present the main elements of the installation. What analytical techniques can be used to control the polymer production process (at its various stages)	
Work placement	Not applicable	