



## Subject card

Subject name and code	, PG_00037599						
Field of study	Green Technologies and Monitoring						
Date of commencement of studies	October 2019	Academic year of realisation of subject			2022/2023		
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			English		
Semester of study	7	ECTS credits			2.0		
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		dr hab. inż. Justyna Kucińska-Lipka				
	Teachers		dr hab. inż. Justyna Kucińska-Lipka				
Lesson type and method 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						
2022 Ecological aspects of polymer package recycling - Moodle ID: 25488 <a href="https://enauzanie.pg.edu.pl/moodle/course/view.php?id=25488">https://enauzanie.pg.edu.pl/moodle/course/view.php?id=25488</a>							
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 to familiarize students with the ecological aspects of recycling of packaging materials used in the pharmaceutical, medical and food industries, with issues related to the recycling of packaging materials, types of plastics used in various industries, as well as with legal acts normalizing the recycling process of these materials. Students will gain knowledge of ecological alternatives used in industry						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
Subject contents	As part of the course, students carry out the following issues. Types of packaging waste and places of their formation. Packaging waste generated in the Republic of Poland and the possibility of preventing its formation. Methods of recovery of post-consumer packaging. New biodegradable packaging materials. Recycling technologies of various types of packaging. National processing capacity of packaging materials. EU directives and regulations concerning the management of packaging waste. National system of packaging waste management.						
Prerequisites and co-requisites	The student knows the basic materials used in the packaging industry						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	test lecture		60.0%		60.0%		
	laboratory		60.0%		40.0%		
Recommended reading	Basic literature		Luciano Piergiovanni Sara Limbo Food Packaging Materials (2016)				
	Supplementary literature		<ul style="list-style-type: none"><li>European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste</li><li>Directive 2004/12/EC of the European Parliament and of the Council of 11 February 2004 amending Directive 94/62/EC on packaging and packaging waste</li></ul>				
	eResources addresses						
Example issues/ example questions/ tasks being completed	What is waste Please list methods for recycling packaging What are biodegradable materials						

Work placement	Not applicable
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