



Subject card

Subject name and code	Climate change consequences, PG_00062785						
Field of study	Mathematics						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2023/2024		
Education level	second-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		e-learning		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Energy Conversion and Storage -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Anna Dettlaff				
	Teachers		dr inż. Anna Dettlaff				
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	0.0	30
	E-learning hours included: 30.0						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=19108						
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	To familiarise students with the scientific explanation of currently occurring climate change and to familiarise students with the environmental and social consequences.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U71] is able to apply knowledge from humanistic, social, economic or legal sciences in order to solve problems		The student has advanced knowledge of solutions used to reduce the impact on global warming; the student is able to search, select and critically analyze the available sources of information on climate change and to make their creative interpretation		[SU4] Assessment of ability to use methods and tools		
	[K7_K71] is able to explain the need to apply knowledge from humanistic, social, economic or legal sciences in order to function in a social environment		The student has an extended knowledge of the phenomena, mechanisms and feedbacks occurring in the Earth's climate system		[SK5] Assessment of ability to solve problems that arise in practice		
	[K7_W71] has general knowledge in humanistic, social, economic or legal sciences, including their fundamentals and applications		The student is aware of the social, economic and psychological consequences of climate change in the world		[SW1] Assessment of factual knowledge		

Subject contents	The concept of the greenhouse effect		
	The climate as a public good		
	Psychological consequences of climate change		
	Barriers to pro-environmental behaviour		
	Social and political aspects of the climate crisis		
	Climate change mythsNatural and anthropogenic causes of climate change		
	Carbon cycle in natureMechanisms and feedbacks controlling climate change		
	Environmental consequences of climate change		
	The concept of biodiversity		
	Scientific methods for assessing and monitoring climate change		
	Scenarios for changes in temperature, sea level, precipitation		
	Climate models		
	Discussion of recent reports published by the Intergovernmental Panel on Climate Change		
	Mitigation of climate change		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Course assessment	60.0%	85.0%
	Quizzes during lectures	0.0%	15.0%
Recommended reading	Basic literature	Popkiewicz M., Kardaś A., Malinowski S., Nauka o Klimacie, Wydawnictwo Nieoczywiste, 2023 M. Budziszewska, A. Kardaś, Z. Bohdanowicz, Klimatyczne ABC. Interdyscyplinarne podstawy współczesnej wiedzy o zmianie klimatu, Wydawnictwa Uniwersytetu Warszawskiego, 2023	
	Supplementary literature	Thunberg G., Książka o klimacie, Wydawnictwo Agora, 2023	
	eResources addresses	Uzupełniające Adresy na platformie eNauczanie: Zmiany klimatyczne i ich skutki środowiskowe - Moodle ID: 23975 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=23975	
	Example issues/ example questions/ tasks being completed		
	List and explain the barriers to pro-environmental behaviour.		
	List the anthropogenic causes of the greenhouse effect?		
	What is the mitigation of climate change?		
	What social consequences of climate change do you know?		

Work placement	Not applicable
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