

Subject card

Subject name and code	Geomorphology and science of soil, PG_00033326						
Field of study	Environmental Protection						
Date of commencement of studies	October 2026		Academic year of realisation of subject			2027/2028	
Education level	Bachelor's studies		Subject group			Obligatory subject group in the field of study 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	2		Language of instruction			Polish	
Semester of study	4		ECTS credits			1.0	
Learning profile	academic		Assessment form			credit	
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Sambor Czerwiński				
	Teachers						
Lesson types	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		2.0		8.0	25
Subject objectives	1. To learn about the main research methods used in geomorphology and soil science. 2. To understand the general laws concerning the genesis and evolution of the forms of relief of the Earth's surface. 3. To know the main soil-forming processes and factors and their influence on the spatial distribution on the globe. 4. To know the determinants and negative transformations of anthropogenic transformation of the pedosphere.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OŚL3_W01] Discusses the basic concepts of mathematics, physics, chemistry and biology. Describes physical, chemical and biological phenomena occurring in nature as well as geological, geomorphological and climatic conditions of the functioning of nature.	Knows and classifies techniques to protect soils from degradation. Recognises the relationship of geomorphology and soil science with other scientific disciplines. Defines the basic concepts of geomorphology and soil science. Explains the physical and chemical determinants of the most important soil-forming processes. soil-forming processes. Characterises the basic geomorphological processes and factors and their influence on soil formation. Characterises the importance of geomorphological and palaeopedological studies in reconstructing changes in the natural environment. Characterises the multiplicity of anthropogenic impacts on soils in different climatic zones.	[SW4] test/exam - oral or written
	[OŚL3_K05] Identifies the level of her/his knowledge and skills, demonstrates the need to update knowledge about the environment and its protection, demonstrates the need for continuous professional training and personal development.	Demonstrates readiness for individual and social action, including for the preservation of ecological balance and protection of the Earth's resources. Uses theoretical knowledge of geomorphology and soil science to correctly interpret the distribution of crops on Earth.	[SK4] test/exam - oral or written
	[OŚL3_K06] Knows and appreciates the practical application of the acquired knowledge and skills in solving problems.	Demonstrates a willingness to take individual and social action, including to maintaining ecological balance and protecting the Earth's resources.	[SK4] test/exam - oral or written
Subject contents	1. Characteristics of factors shaping the Earth's surface forms (fluvial, glacial and periglacial forms and processes, aeolian processes and forms, sea shore processes and forms, lake and peat accumulation sediments and forms).2. Human influence on relief and geomorphological processes.3. Threats of geomorphological extreme events.4. Characteristics of soil-forming processes and factors and their influence on soil formation.5. Major types, subtypes and genera of soils of the world, their genesis, distribution, structure, agricultural suitability.6. Protection of the lithosphere, potential threats to the soil environment.7. The role of soil microorganisms.8. Basics of palaeoenvironmental reconstructions.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	51.0%	100.0%
Recommended reading	Basic literature	Huggett R. J. 2011, Fundamentals of Geomorphology. Routledge.	
	Supplementary literature	Davies T., Korup R., Clague J. (red), 2021. Geomorphology and Natural Hazards: Understanding Landscape Change for Disaster Mitigation, AGU Advanced Textbooks, John Wiley & Sons	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Characteristics of the upper, middle and lower course of the river Lateral erosion Major threats to the functioning of river systems Main soil components Elementary soil-forming processes		
Work placement	Not applicable		