University of Gdańsk

Subject card

Subject name and code	Soil science and geography - lecture, PG_00119838		
Field of study	Geography		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
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	3	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Palaeoenvironmental Research -> Department of Geomorphology and Quaternary Geology -> Faculty of Oceanography and Geography -> Rector		
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	20.0	0.0	0.0	0.0	0.0	20

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	20	5.0	10.0	35

Subject objectives

- soil-forming processes and factors and their influence on soil formation.
- knowledge of methods for analysing individual soil properties, soil fertility and fertility.
- understanding the importance of soils for the natural environment, agriculture.
- knowledge of the systematics of soils in Poland.
- The ability to recognise and describe the main types, structure, properties, quality, agricultural usefulness and economic importance.
- knowledge of the distribution of soils of Poland and the world.
- understanding the role of microorganisms in terrestrial ecosystems

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GEOGRL3-W05] Has advanced knowledge of the environment Earth's geographic environment, understood as a unified system of interrelated and interacting each other's components; its diversity, functioning and dynamics of change, including the mutual interaction of environmental components in the area of South Baltic Coastal and Lake Districts	The student has advanced knowledge of the soil environment, understood as a system of interactions of the lithosphere, atmosphere, hydrosphere and biosphere.	[SW4] test/exam - oral or written
	[GEOGRL3-U03] use theoretical knowledge of geographic sciences and available sources of information to correctly interpret basic natural, social, economic and political processes	Students are able to use theoretical knowledge of soil science to correctly interpret the morphology of basic soil types occurring in Poland and in the world.	[SU4] test/exam - oral or written
	[GEOGRL3-U02] formulate and analyze basic problems concerning changes in physical and geographic conditions and the social, economic and political situation in local, regional and global scales	Students are able to identify and analyse basic problems concerning the human impact on the soil environment and the resulting consequences related to the agricultural use of soils.	[SU4] test/exam - oral or written
	[GEOGRL3-W06] interactions between the natural and anthropogenic environment at different spatial and temporal scales, in particular the processes and phenomena occurring in the area of the South Baltic Coastal and Lake District and the determinants of these interactions	Students know and understand the natural conditions of the soil environment favourable to its agricultural use, especially in relation to soils occurring in the South Baltic Coast and Lakeland and other areas of Poland.	[SW4] test/exam - oral or written
	[GEOGRL3-W03] in an advanced degree the processes and phenomena occurring in the natural environment of the Earth, with particular emphasis on the processes and phenomena occurring on the territory of Poland, especially the Coastal and South Baltic Lake Districts	To an advanced degree, knows and understands the factors and processes affecting the formation of soils and their distribution on Earth.	[SW4] test/exam - oral or written
	[GEOGRL3-W02] key concepts in geography and theories on spatial variation and distribution of processes and phenomena on the Earth's surface	Knows and understands key soil science concepts and theories on the determinants of soil distribution on Earth	[SW4] test/exam - oral or written

<table>
<tr><td>Subject contents</td><td>- Characteristics of soil.

- Forming processes and factors and their influence on soil formation.

- Methods of analysing individual soil properties, soil fertility and fertility.

- Review of research methods used in soil science.

- The importance of soils in the natural environment.- The role of soil microorganisms.

- The most important types, subtypes and types of soils of Poland, their genesis, structure, properties, qualification, agricultural usefulness and economic importance.

- Distribution of soils of Poland.

- The importance of fossil soils in palaeoenvironment reconstructions.

- Problems of soil degradation and reclamation.- Importance of peatlands.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Test</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Schealtz R., Anderson S., 2007, Soils, Genesis and Geomorphology. Cambridge University Press</td></tr><tr><td>Supplementary literature</td><td>White, R. E. 2005. Soil Science & Geoarchaeology. Principles and Practice of Soil Science: The Soil as a Natural Resource, 4th Edition.</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>List the main soil components and describe them.

Main soil horizons according to the Systematics of soils of Poland, 2019.

Difference between mineral and organic soils.

Basic soil-forming processes.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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