University of Gdańsk

Subject card

Subject name and code	Contemporary problems of environmental geography, PG_00091055		
Field of study	Geography		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2026/2027
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study 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	3	Language of instruction	English
Semester of study	5	ECTS credits	3.0
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 Maurycy Żarczyński	
	Teachers		

Lesson types

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: 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	5.0	40.0	75

Subject objectives

Presentation of selected issues and research directions in contemporary physical geography, specifically: past and contemporary global environmental changes forcing factors, mechanisms, processes and future consequences.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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	Can identify the most substantial contemporary problems of the global environment.	[SU4] 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	Knows functional connections and processes occurring on the interface of different spheres of the Earth.	[SW4] test/exam - oral or written
[GEOGRL3-U08] use scientific language and express themselves and discuss topics concerning geographic issues in Polish and in a foreign language	Can use the proper scientific terminology to describe the global problems of the environment.	[SU4] test/exam - oral or written

<table>
<tr><td>Subject contents</td><td>1. Past global changes: international research programmes and scientific organizations;
2. Ocean scientific drilling: investigating the seafloor through scientific ocean drilling;
3. Geological and cryosphere archives: studying past global climate changes using ice cores;
4. Continental scientific drilling: examining environmental history recorded in terrestrial sediment archives;
5. Human-environment interactions in the past: addressing erosion, landscape evolution, and pollution;
6. Monitoring and Modeling the water cycle: assessing watershed resources and aquifer layers;
7. Addressing Water scarcity and quality: collecting and analyzing hydrological data;
8. Ecology and hydrology: balancing ecohydrological structure with sustainable development;
9. International climate dialogue: considering political, financial, and organizational aspects;
10. Climate Change and Natural/Anthropogenic Ecosystems: observing and forecasting changes and consequences;
11. Extreme climate, weather, and hydrologic events: implementing early warning systems;
12. Management efforts: developing mitigation and adaptation actions for natural and anthropogenic ecosystems.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>B+ efficiency in English</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>Written 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>• Fischer H., Kull C., Kiefer T., Ice core science, PAGES news, 14(1), 1-44, https://doi.org/10.22498/pages.14.1, 2006
• Intergovernmental Panel on Climate Change, Special Report: Global Warming of 1.5°C (Summary for Policymakers and chapters), www.ipcc.ch, 2018
• Intergovernmental Panel on Climate Change, Special Report: the Ocean and Cryosphere in a Changing Climate (Summary for Policymakers and chapters), www.ipcc.ch, 2019
• Intergovernmental Panel on Climate Change, Special Report: Climate Change and Land (Summary for Policymakers and chapters), www.ipcc.ch, 2019
• International Continental Scientific Drilling Program, ICDP Science Plan 2020-2030, https://www.icdp-online.org/media/icdp-science-plan, 2020
• Mann M.E., Nowa Wojna Klimatyczna - Jak ocalić naszą planetę?, Wydawnictwo Dolnośląskie, 2021
• Popkiewicz M., Kardaś A., Malinowski S., Nauka o klimacie, Wydawnictwo Sonia Draga, 2019
• Koppers A.A.P., Coggon R., ed., Exploring Earth by Scientific Ocean Drilling: 2050 Science Framework, 124 pp., https://doi.org/10.6075/J0W66J9H, 2020</td></tr><tr><td>Supplementary literature</td><td>• Intergovernmental Panel on Climate Change, Sixth Assessment Report (Summary for Policymakers and chapters), www.ipcc.ch, 2021
• Intergovernmental Panel on Climate Change, Special Report: Climate Change and Land (Podsumowanie dla Decydentów i rozdziały), www.ipcc.ch, 2019</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>1. Explain negative effects of the human impact on the climate;
2. Describe countermeasures for waterbodies eutrophication.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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