University of Gdańsk

Subject card

Subject name and code	Summer School - Interdisciplinary Research on Environmental Changes (Laboratory classes), PG_00206019		
Field of study	Physical geography and geoinformation		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	Master'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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	academic	Assessment form	credit
Conducting unit	Climate Research Laboratory -> Department of Physical Oceanography and Climate Research -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Janusz Filipiak	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	30.0	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	10.0	35.0	75

Subject objectives

Familiarization with the specifics of field geomorphological, hydrological and climatological studies.

Characterization of the elements and phenomena shaping the physical-geographic differentiation of the young glacial areas.

Demonstration of the advantages of an interdisciplinary approach in geographic research.

Demonstration of the trends and scenarios of environmental transformations on a local scale.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GFGMU2_U05] is able to integrate knowledge from the discipline of Earth and environmental sciences, explaining and interpreting the interrelationships between environmental processes and phenomena in order to solve research problems in physical geography and geoinformation	Student is able to integrate knowledge of earth and environmental sciences, correctly explaining and interpreting the interrelationships between processes and phenomena on a local scale.	[SU5] implementation of a problem task
[GFGMU2_U08] is able to plan and carry out specialized field measurements, either independently or while leading a group, observe processes and phenomena occurring in the natural environment, and interpret the results	Student is able to plan and perform specialized field measurements interacting in a group, as well as conduct observations of processes and phenomena occurring in the natural environment.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
[GFGMU2_K02] is prepared to undertake or co-organise initiatives in the public interest, fulfil its social responsibilities and organise activities promoting sustainable development	Student is ready to take an active role in raising awareness about changes in the natural environment and their consequences in human life.	[SK8] observation of student's independent or team work
[GFGMU2_K03] is prepared to fulfil professional responsibilities in both independent and team-based work by advancing the field of geography, upholding the profession’s ethos, adhering to and developing the principles of professional ethics, and ensuring compliance with these principles	Student is ready to work in a group assuming various roles in it, participate in the preparation of scientific projects, take responsibility for the equipment entrusted and work safety, as well as observe and develop professional ethics.	[SK2] presentation/project/paper/ report [SK5] implementation of a problem task [SK8] observation of student's independent or team work
[GFGMU2_W05] knows and understands to a deepened extent principles of planning field and laboratory research using techniques and research tools used in geomorphology, hydrology and climatology, as well as principles of operating equipment and devices used to obtain and process digital geographic information in accordance with health and safety principles	Student knows and understands the principles of planning field and laboratory investigations using research techniques and tools used in geomorphology, hydrology and climatology.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[GFGMU2_U06] is able to provide a comprehensive description of a selected area, explain the causes of physical-geographical diversity, and assess current changes taking place in the landscape, whilst attempting to forecast the future direction of these developments	Student is able to comprehensively characterize the selected area, explaining the causes of physical-geographic differentiation and assessing contemporary changes in the landscape with an attempt to provide a forecast of the further direction of development.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task

Subject contents

A1. Current problems in the study of transformation of the natural environment at the local scale. General principles of conducting field work.
A2. Analysis of archival cartographic materials - selected for the current topic of the class.
A3. Mapping of relief, surface formations and soils - selectedto the current topic of the class.
A4. Mapping of surface water - selectedto the current topic of classes.
A5. Mapping of climate at the local scale - selected for the current topic of classes.
A6. Mapping vegetation and land use - selectedfor current class topic.
A7. Advantages and challenges of interdisciplinary approaches.
A8. Peculiarities of environmental changes in young glacial areas.

Prerequisites and co-requisites

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Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
achieving a passing grade on the credit work	51.0%	50.0%
presentation prepared in accordance with the predetermined criteria	51.0%	50.0%

Recommended reading

Basic literature	Gutry-Korycka M., Werner-Więckowska H., 1989, Przewodnik do hydrograficznych badań terenowych. PWN, Warszawa. Richling A. (red.), 2007, Geograficzne badania środowiska przyrodniczego. PWN, Warszawa. Wyszkowski A., 2008, Przewodnik do ćwiczeń terenowych z meteorologii i klimatologii. UG, Gdańsk.

	Supplementary literature	Bociąg K., Chlost I., Cieśliński R., Gos K., Kujawa-Pawlaczyk J., Makles M., Pawlaczyk P., 2017, Torfowiska jako zbiorniki węgla zamierzenie renaturyzacji torfowisk w Słowńskim Parku Narodowym. Studia i materiały CEPL w Rogowie, R.19, Zeszyt 15 (2): 62-76. Chlost I., 2009, Kartograficzny zapis zmian sieci wodnej Niziny Gardneńsko-Łebskiej w okresie XIX i XX wieku [w:] Kaniecki A., Baczyńska A. (red.) Zmiany stosunków wodnych w czasach historycznych. Studia i Prace z Geografii i Geologii nr 9, Bogucki Wydawnictwo Naukowe, Poznań: 17-32. Filipiak J., Korzeniewski J., Wyszkowski A., 2006, Warunki topoklimatyczne rejonu rynny Jezior Raduńskich [w:] Miętus M. Filipiak J., Jakusik E., Korzeniewski J., Malik P., Malinowska M., Marosz M., Miętus M., Owczarek M., Sobieraj M., Wojtkiewicz A., Wyszkowski A., Klimat rynny Jezior Raduńskich, IMGW, Warszawa: 170-190. Pawlaczyk P., Wołejko L., Jermaczek A., Stańsko R., 2002, Poradnik ochrony mokradeł, Wydawnictwo Lubelskiego Klubu Przyrodników, Świebodzin. Poraj-Górska A., Żarczyński M.J., Ahrens A., Enters D., Weisbrodt D., Tylmann W., 2017, Impact of historical land use changes on lacustrine sedimentation recorded in varved sediments of Lake Jaczno, northeastern Poland. Catena, 153: 182-193.
	eResources addresses	
Example issues/ example questions/ tasks being completed	The transformation and role of wetlands (marshes, bogs) in the modern world	
Work placement	Not applicable	

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