University of Gdańsk

Subject card

Subject name and code	Palaeoecology, PG_00207346		
Field of study	Biology		
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 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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Paleoecology and Archaeobotany -> Department of Plant Ecology -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Joanna Święta-Musznicka	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	15.0	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	3.0	7.0	25

Subject objectives

To provide knowledge on research methods for reconstructing long-term changes in the natural environment, with particular emphasis on bio-indicative methods. Transfer of knowledge on changes in climate and vegetation in the Quaternary period, with particular emphasis on the characteristics of the natural environment at the end of the last glaciation and in the Holocene. To develop knowledge of the positive and negative effects of human impact on the natural environment. Developing skills of planning interdisciplinary research on palaeoecological sites.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLMU2_W05] has an in-depth knowledge and understanding of the dynamic development of the biological sciences and is well versed in new research trends and disciplines	learns about the application of new methods in environmental research	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
[BIOLMU2_W01] has a deep knowledge and understanding of natural phenomena and processes at various levels of complexity	understands the need for long-term research that takes into account the historical and geological time scale	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[BIOLMU2_U07] is able to critically compare biological information from various sources and draw justified conclusions on this basis	is able to formulate a research question in relation to the information that can be obtained from a particular palaeoecological site	[SU1] oral statement/conversation/ discussion [SU6] demonstration of practical skills
[BIOLMU2_K07] is ready to systematically update biological knowledge and information on its practical applications	is open to interdisciplinary cooperation, valuing expertise	[SK6] demonstration of practical skills [SK8] observation of student's independent or team work

Subject contents	Differentiation of post-glacial relief and characterisation of the composition of selected plant communities in the Holocene in northern Poland. Assessment of the degree of transformation of the natural environment under the influence of various forms of anthropopression. Types of palaeoecological sites. Methods of collecting palaeoecological material in the field (drilling on peatland). Basics of description and determination of palaeoecological sediments (lithological description by Troels-Smith method). Basics of planning palaeoecological research (site selection, method selection, sampling) and interpretation of results.Field classes are organised within the Tricity area in the form of block classes at the end of the summer semester (two meetings of 7 and 8 lesson hours).
Prerequisites and co-requisites	basics of biology and ecology

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
report 1	51.0%	50.0%
report 2	51.0%	50.0%
attendance	85.0%	0.0%

Recommended reading

Basic literature	Lindner L. 1992. Czwartorzęd. Osady, metody badań, stratygrafia. Wyd. PAE, Warszawa. Starkel L. (red.). 1999. Geografia Polski. Środowisko Przyrodnicze. PWN, Warszawa. Tobolski K. 2000. Przewodnik do oznaczania torfów i osadów jeziornych. PWN, Warszawa. Berglund B.E. 1986. Handbook of Holocene Palaeoecology and Palaeohydrology. Wiley & Sons, Chichester-New York. Birks H.J.B., Birks H.H. 1980. Quaternary Palaeoecology. E. Arnold, London.
Supplementary literature	Dybova-Jachowicz S., Sadowska A. (red.). 2003. Palinologia. Wyd. IB PAN, Kraków. Lityńska-Zając M., Wasylikowa K. 2005. Przewodnik do badań archeobotanicznych. Sorus, Poznań. Elias i in. 2005-2007. Encyclopedia of Quaternary Sciences. Elsevier. Makohonienko M., Makowiecki D., Kurnatowska Z. (red.), 2007. Studia interdyscyplinarne nad środowiskiem i kul-turą w Polsce. Środowisko[1]Człowiek-Cywilizacja, tom I. Bogucki Wyd. Naukowe, Poznań.
eResources addresses	

Example issues/ example questions/ tasks being completed	Positive and negative effects of human impact on the environment. Selection of a site for palaeoecological studies - assessment of the state of preservation of the biogenic reservoir, degree of transformation of the catchment under the influence of human activities, selection of a site for fossil sediment collection. Description of peat sediments.
Work placement	Not applicable

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