

Subject card

Subject name and code	Palaeoecology with the elements of Archaeobotany, PG_00168060						
Field of study	Archaeology						
Date of commencement of studies	October 2025		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	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		3.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Institute of Archaeology -> Faculty of History -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Joanna Świąta-Musznicka				
	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		2.0		45.0	77
Subject objectives	To provide knowledge on research methods for reconstructing changes in the natural environment in the past, including bio-indicative methods used in the context of settlement studies. To provide knowledge on climate and vegetation changes in the Quaternary period (characterisation of the natural environment at the end of the last glaciation and in the Holocene and the role of settlement). To provide knowledge about the history of human use of plants in the past. To develop knowledge of the conditions for effective cooperation with natural scientists at archaeological sites.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[ARCHL3_U08] Can independently plan and implement his/her own lifelong learning	Be able to formulate research problems independently in the context of collaboration with a palaeoecologist and archaeobotanist.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[ARCHL3_K02] Is ready to recognize the importance of knowledge in solving cognitive and practical problems and to consult experts in case of difficulties in solving the problem on his own in aspect of office analyses and field work	He is ready to recognise the knowledge of palaeoecologists and archaeobotanists and to consult experts when planning research and addressing questions about botanical materials.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
	[ARCHL3_K01] Is ready to critically evaluate his/her knowledge and received content	Be able to undertake a critique of data on basic palaeoecological and archaeobotanical information.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
	[ARCHL3_U04] Can take part in a debate – present and evaluate various opinions and positions and discuss them using correctly professional terminology in the field of archeology	Discusses with palaeoecologists and archaeobotanists the problems of environmental research on archaeological and natural sites.	[SU1] oral statement/conversation/discussion
	[ARCHL3_W01] Knows and understands to an advanced level selected facts, objects and phenomena, as well as the methods and theories concerning them that explain the complex relationships between them, constituting basic general knowledge in the humanities	Knows and understands the chronology and periodisation of the Polish lands, as well as theories explaining the influence of climate change and vegetation changes on the development of settlement in Poland and Europe.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[ARCHL3_U07] Is able to cooperate with other people as part of team work (also of an interdisciplinary nature) both at the stage of fieldwork and development of results	Be able to undertake role-based teamwork.	[SU1] oral statement/conversation/discussion [SU5] implementation of a problem task
	[ARCHL3_W06] Knows and understands at an advanced level the most important theories, research methods and tools of the archaeology workshop	Characterises the research methods and tools of the palaeoecologist and archaeobotanist's workshop to enable effective work on an archaeological site.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
Subject contents	An overview of palaeoecological methods. Principles of bioindication in natural environment reconstructions. Lithological description and physico-chemical analyses of sediments as a source of information on the past environment. Genetic and non-genetic classifications of sediments. Absolute dating. Basics of dendrochronology. Reconstructions of environmental change based on interdisciplinary studies. Climate and vegetation change in the late Vistulian and Holocene against the background of Iversen's theory of climatic-edaphic cycles. Record of human activity and the nature of the economy in pollen diagrams and palynological anthropogenic indicators. Natural conditions of prehistoric settlement. Anthropogenic changes of the environment under the influence of the activity of prehistoric cultures in Pomerania. Aims and methodology of archaeobotanical research. Tafonomic processes and types of fossilisation of plant remains. Reconstructions of elements of the economy based on palaeoecological and archaeobotanical data. Cultivated and wild- collected plants in the prehistoric and medieval economy. Archaeobotanical research in urban areas.		
Prerequisites and co-requisites	Course pass: Elements of Earth Sciences in Archaeology. Knowledge of earth sciences at high school level, knowledge of Quaternary stratigraphy, knowledge of the most important methods of absolute dating.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	oral exam	51.0%	100.0%
Recommended reading	Basic literature Berglund B.E. 1986. Handbook of Holocene Palaeoecology and Palaeohydrology. Wiley & Sons, Chichester-New York Dybova-Jachowicz S., Sadowska A. 2003. Palinologia. Instytut Botaniki im. W. Szafera PAN, Kraków. Lityńska-Zajac M., Wasylkowa K. 2005. Przewodnik do badań archeobotanicznych. Vademecum Geobotanicum. Sorus, Poznań. Tobolski K. 2000. Przewodnik do oznaczania torfów i osadów jeziornych. PWN, Warszawa		

	Supplementary literature	Makohonienko M., Makowiecki D., Kurnatowska Z. 2007. Studia interdyscyplinarne nad środowiskiem i kulturą człowieka. Środowisko-Człowiek-Cywilizacja 1. Ser. Stowarzyszenia Archeologii Środowiskowej, Wyd. Bogucki, Poznań. Birks H.J.B., Birks H.H. 1980. Quaternary Palaeoecology. E. Arnold, London. Jacomet S., Kreuz A. 1999. Archäobotanik. Aufgaben, Methoden und Ergebnisse vegetations- und agrargeschichtlicher Forschung, Eugen Ulmer, Stuttgart. Lindner L. 1992. Czwartorzęd. Osady, metody badań, stratygrafia. Wyd. PAE, Warszawa. Roberts N. 1998. The Holocene. An Environmental History. Blackwell, Oxford.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Bioindication in palaeoecological reconstructions - selected examples of bioindicators and their role in reconstructing environmental conditions. Division of the Holocene into periods, characteristics of climatic conditions, Bond cycles. Ways of fossilisation of macroscopic remains and their informative value in archaeobotanical research.. Impact of Neolithic cultures on the environment (pre- and post-settlement environmental conditions, scale of environmental transformation, farming, gathering, crops).	
Work placement	Not applicable	

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