Attatchment no. 4

SUBJECT/MODULE SYLLABUS*

1.	Subject/module name Bioarchaeology
2.	Discipline archaeology
3.	Lecture language Polish
4.	The entity conducting subject Institute of Archaeology
5.	Subject/module code 22-AR-S1-02-Bioarch
6.	Type of subject/module *(obligatory or optional)* obligatory
7.	Field of study (specialization)* archaeology
8.	Level of studies *(1st degree*, 2nd degree*, long-cycle master's studies*, name of the Doctoral College*)* 1st degree
9.	Year of studies *(if applicable*) 1st year
10.	Semester *(winter or summer)* summer
11.	Form of classes and number of hours (including number of hours of online classes*) lecture 20 hours, seminar 20 hours
12.	Prerequisites in terms of knowledge, skills and social competences for the subject/module knowledge of the environment from secondary school
13.	Learning objectives for the subject The role of animals in the life of ancient societies. Learning the types and methods of examining animal remains from archaeological sites. Determination of breeding types and reconstruction of individual variability within the studied archaeofauna. To familiarize students with the paleogeography of the Quaternary in Poland against the background of Central Europe, models of stratigraphic divisions of Pleistocene and Holocene formations, and problems of stratigraphic correlation. To familiarize students with paleobotanical methods and the principles of interpreting the results of spore and pollen records. Understanding the importance of palynological research in understanding and reconstructing the natural paleoenvironment, the ability to

	read the natural and anthropogenic changes that have occurred in the natural environment from the pollen record. Recognizing human interference in the environment and the type of economic activity in the pollen record. Recognizing the connection between the course of geological processes and changes in the natural environment, including evolution and human impact on nature. Understanding the need to update your knowledge and the need to transfer it.
14.	Program content: Lecture: 1. History of archaeozoology. 2. Types and types of animal remains found in archaeological sites. Basics of taphonomy of bone remains. 3. Archaeozoological research methods. 4. Basics of reconstruction of the natural environment in the Quaternary, with particular emphasis on the Middle and Late Pleistocene and Holocene. 5. Paleoecological methods: palynology and examples of the use of various groups of organisms to reconstruct elements of land and aquatic environments. 6. Quaternary sedimentary environments. Organic sediments - genetic and non-genetic classifications, sediments as a source of information about the former environment. 7. Basics of chronostratigraphy and climatostratigraphy of the Quaternary - research methods and recording in pollen diagrams. 8. Characteristics of selected warm units (interglacials) and cooler units (interstadials); vegetation succession, climate change and changes. 9. Recording human activity and the nature of the economy in pollen diagrams - palynological anthropogenic indicators.

	10. Anthropogenic changes in the environment under the influence of the activity of prehistoric cultures at selected research sites. Seminar: methodology of drilling with a hand auger, obtaining cores, packaging, sampling and describing. Getting to know the basics of the description and determination of organic sediments. Learning to interpret pollen diagrams; practical recognition of various pollen successions - cool, warm, Holocene.	
	Assumed learning outcomes	Appropriate directional symbols learning outcomes
	Has structured methodological knowledge and knowledge of theories used in archaeology and in various directions of archaeological, archaeological-natural and natural science research. Knows the theoretical foundations of paleopalynological research and understands their importance in the paleoenvironmental context. Interprets palynological results in the paleoenvironmental context.	K_W03
	Has basic knowledge of the connections between archaeology and scientific fields and disciplines that are the basis for specializations developed within them, such as environmental archaeology (bioarchaeology), underwater archaeology, architectural archaeology, conservation of archaeological monuments. The student learns	K_W05

	knowledge about the role of animals in the lives of ancient societies. Is able to determine the types of animal remains in archaeological materials, as well as the basic research methods used in archaeology, including the role of genetic research in reconstructing the history of domesticated species. Becomes familiar with issues related to the taphonomy of bone remains. Understands issues related to animal domestication. It can reconstruct the history of animal use from the Paleolithic to modern times and the history of human influence and growing impact on the natural environment. Knows phenomena and processes occurring in nature in the Pleistocene and Holocene.	K_U01
	Is able to search, analyze, evaluate, select and use information using various sources and methods. The student is able to make taxonomic identification of animal remains found during archaeological research and apply basic research analyzes used in archaeozoology.	K_U13
	Has the ability to work in a team, solving simple problems in the field of archaeological research and presenting their results, using instructions and procedures developed for the team. Ability to work analytically and work in a research team	K_K01

	Understands the need for lifelong learning. Strives to constantly expand their knowledge and work skills. Correctly identifies and resolves dilemmas related to the profession. Is able to assess the threats related to the work of a geologist in the field and strives to create safe working conditions.	K_K04
15.	Required and recommended literature (sources, studies, textbooks, etc.) Bocheński Z., Lasota-Moskalewska A., Bocheński Z., Tomek T. 2000. Podstawy archeozoologii. Ptaki, Warszawa: PWN. Dybova-Jachowicz S., Sadowska A., 2003. Palinologia. Kraków: Wydawnictwo Instytutu Botaniki PAN. Lasota-Moskalewska A. 2005. Zwierzęta udomowione w dziejach ludzkości, Warszawa: Wydawnictwo UW. Lasota-Moskalewska A. 2008. Podstawy archeozoologii. Szczątki ssaków, Warszawa: PWN. Lindner L. (ed.) 1992. Czwartorzęd. Osady, metody badań, stratygrafia, Warszawa: PAE. Makohonienko M., Makowiecki D., Kurnatowska Z. 2007. Studia interdyscyplinarne nad środowiskiem i kulturą człowieka w Polsce, Poznań: Bogucki Wydawnictwo Naukowe. Mojski J.E. 1993. Europa w plejstocenie. Ewolucja środowiska przyrodniczego, Warszawa: PAE. Mojski J.E. 2005. Ziemie polskie w czwartorzędzie. Zarys morfogenezy, Warszawa: Państwowy Instytut Geologiczny. Reitz E.J., Wing E.S. 1999. Zooarchaeology, Cambridge: Cambridge University Press. Lityńska-Zając M., Wasylikowa K. 2005. Przewodnik do badań archeobotanicznych, Poznań: Sorus. Stankowski W. 1996. Wstęp do geologii kenozoiku (ze szczególnym odniesieniem do terytorium Polski), Poznań: Wydawnictwo UP.	
16.	Methods of verifying the assumed learning outcomes: - lecture: written exam - seminar: final test	
17.	Conditions and form of passing individual components of the subject/module: - lecture – written exam - seminar: final test	
18.	Student/PhD student workload	

	the form of carrying out classes by the student*/doctoral student*	the number of hours allocated to carry out a given type of classes
	classes (according to the study plan) with the instructor: - lecture: - seminar:	 20 20
	student/doctoral student's own work (including participation in group work), e.g.: - reading the indicated literature: - preparation for tests and exam	 50 60
	Total number of hours	150
	Number of ECTS points (*if required*)	5

(T) – implemented in a traditional way
(O) – implemented online

* remove unnecessary