

A COURSE SYLLABUS – DOCTORAL SCHOOL
REGARDING THE QUALIFICATION CYCLE FROM 2019 TO 2023
REGARDING THE QUALIFICATION CYCLE FROM 2020 TO 2024

GENERAL INFORMATION ABOUT COURSE	
Course title	Raw Materials in Prehistory
Name of the unit running the course	Doctoral School at University of Rzeszów
Type of course (<i>obligatory, optional</i>)	Optional
Year and semester of studies	Year – II i III; winter semester
Discipline	Archaeology
Language of Course	Polish
Name of Course coordinator	Dr hab. inż. Joanna Trąbska, UR assistant professor
Name of Course lecturer	Dr hab. inż. Joanna Trąbska, UR assistant professor
Prerequisites	None
BRIEF DESCRIPTION OF COURSE (100-200 words)	
<p>Various aspects of exploration, extraction and resource management of raw materials will be analyzed:</p> <ul style="list-style-type: none"> - discussion of specific deposits that were important in the past in a systemic perspective (successive users, mining techniques, commercial networks, products, by-products ...) Example: Krzemionki Opatowskie, Rio Tinto, Laurion, ... - discussion of specific products and indication of their places of exploitation together with the geological and historical context to show the diversity of geological environments. Example: pigments, water, alum - overview of the "principles of operation" of the geology of deposits: an indication of the relationship between the geological structure and (x) occurrence, (xx) mode of occurrence, (xxx) deposit profitability. These dependencies were very well known to former explorers. The issue of seemingly unique deposits. Examples - metallic raw materials, lapis lazuli - a discussion of the specific geological environment and the variety of raw materials, goods and associated risks. Example: volcanism. - discussion of the particularly important traditional resource regions Example: Cyprus, Danube Region ... - research on the provenance of raw materials (assumptions, methods, limitations) on selected examples. - sources of information about the former exploration and extraction activities (land morphology, inscriptions, treaties ...) - discussion on selected examples. - examples of contemporary resource conflicts. 	

COURSE LEARNING OUTCOMES AND METHODS OF EVALUATING LEARNING OUTCOMES				
LEARNING OUTCOME	The description of the learning outcome defined for the course	Relation to the degree programme outcomes (symbol)	Learning Format (Lectures, classes,...)	Method of assessment of learning outcomes (e.g. test, oral exam, written exam, project,...)
Knowledge (no.)				
1	To the extent enabling the revision of the existing paradigms - global achievements, covering theoretical foundations as well as general issues and selected specific issues - appropriate for archeology	P8S-WG/1	Lecture Classes	Essay Oral exam
2	Main development trends in the aspect of research on raw materials for the needs of archeology	P8S-WG/2	Lecture Classes	Essay Oral exam
3	The methodology of scientific research	P8S-WG/3	Lecture Classes	Essay Oral exam
Skills (no.)				
1	Use of knowledge from various disciplines (archeology and geology) for creative identification and innovative solving of complex problems or performing research tasks, in particular: - define the purpose and subject of research, formulate a research hypothesis, - develop methods, techniques and research tools and use them creatively, - make conclusions on the basis of scientific research	P8S-UW/1	Lecture Classes	Essay Oral exam
2	Make a critical analysis and evaluation of research results	P8S-UW/2	Lecture Classes	Essay Oral exam
3	Initiate a debate	P8S-UK/3	Lecture Classes	Discussion during classes
4	Participate in a scientific discourse	P8S-UK/4 P8S-UK/1	Lecture Classes	Discussion during classes

		P8S-UK/5		
5	Propagate the results of scientific activity, also in popular forms	P8S-UK/2	Lecture Classes	Discussion during classes Oral exam
Social competence (no.)				
1	Recognize the importance of knowledge in solving cognitive and practical problems	P8S-KK/3	Lecture Classes	Discussion during classes Oral exam
2	Critical evaluation of research	P8S-KK/1	Lecture Classes	Discussion during classes Oral exam
3	Initiating activities for the public interest	P8S-KO/2	Lecture Classes	Discussion during classes Oral exam

LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internship s	other s	ECTS
III IV	5h	10h				0

METHODS OF INSTRUCTION

*E.G, LECTURE: A PROBLEM-SOLVING LECTURE/A LECTURE SUPPORTED BY A MULTIMEDIA PRESENTATION
MAPS ANALYSIS AND DISCUSSION GROUP WORK (PROBLEM SOLVING, CASE STUDY, DISCUSSION, LEARNING AND RECOGNITION OF RAW MATERIALS)*

COURSE CONTENT

1. Lecture: Raw materials in a systemic approach - economic and cultural interdependencies for societies of the past. Contemporary raw material problems.
2. Lecture: Volcanism - multiple resource effects for societies of the past.
3. Lecture: Exploitation, processing and distribution of selected raw materials of the past.
4. Lecture: Raw material features of a selected region important for societies of the past.
5. Lecture: Selected aspects of deposit geology and the search for them in the past. Provenance studies.

Seminars:

1. analysis of geological, raw material, hydrogeological and geochemical maps of selected regions - 2 hours.
2. Macroscopic recognition of selected groups of raw materials - 2 hours.
3. Analysis of the characteristics of selected old deposits in terms of a system (location, methods of exploitation, methods of processing, the use of main and secondary raw materials, trade routes, economic and cultural effects of their use) - 2 hours.
4. Analysis of the characteristics of selected old deposits in terms of a system (location, methods of exploitation, methods of processing, use of main and secondary raw materials, trade routes, economic and cultural effects of their use) - 2 hours.
5. Analysis of the types of information on the former locations of raw materials - 2 hours.

COURSE ASSESSMENT CRITERIA

Lectures - credit

Classes - credit with a grade on the basis of an essay and an oral exam

Very good - a paper written on the basis of own knowledge / experience and current literature, the ability to perceive resource management in a broad context, the ability to read geological (various) maps and identify selected raw materials, knowledge of the basic deposit areas exploited in the past, issues regarding the research on the provenance of raw materials

Good plus - a paper written on the basis of own knowledge / experience and current literature, the ability to perceive resource management in a broad context, the ability to read most types of geological maps and recognize most of the selected raw materials, knowledge of most of the basic deposit areas exploited in the past, issues related to the research of selected provenance raw materials

Good - a paper written on the basis of own knowledge / experience and current literature, the ability to perceive resource management in a broad context, the ability to read parts of geological maps and identify some raw materials, knowledge of several basic deposit areas exploited in the past, issues related to the study of the provenance of several raw materials

Sufficient - a paper written on the basis of own knowledge / experience and current literature

TOTAL PhD STUDENT WORKLOAD REQUIRED TO ACHIEVE THE INTENDED LEARNING OUTCOMES – NUMBER OF HOURS AND ECTS CREDITS

Activity	Number of hours
Scheduled course contact hours	15h
Other contact hours involving the teacher (consultation hours, examinations)	2h
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	10h
Total number of hours	27h
Total number of ECTS credits	0

INSTRUCTIONAL MATERIALS

COMPULSORY LITERATURE:	Articles from current archaeological, archaeometric and geological journals as well as monographs on a specific resource, geological maps of various kinds
COMPLEMENTARY LITERATURE:	P. Frankopan. Silk routes. A new history of the world. 2018. D. S. Landes. The wealth and poverty of nations. 2018.