

COURSE SYLLABUS

Course title: Recent interdisciplinary techniques and methods in archaeological research

Course tutor: Adina Boroneanț

Year of study: 1

Number of hours per week/Examination/Credits		
Course	Assessment	Credits
	Colloquium	15

A. COURSE OBJECTIVES (derived from the specific competences acquired)

General objective of the course	Acquisition of general, theoretical and practical knowledge regarding the archeology of medieval built structures. Methods, techniques, research history, the relevance of archeology in the process of conservation and restoration of built heritage.
Specific objectives:	The application of interdisciplinary methods specific to archaeological research in the research projects of doctoral students; <ul style="list-style-type: none"> • Knowledge of bibliographic research methods and evaluation of the quality of sources • Carrying out comparative analyses/studies. • Improving communication skills (written and oral), interpretation, analysis, evaluation and self-assessment • Providing some useful working tools in the preparation of the doctoral research project in order to support it before the guidance

B. CONDITIONS (if necessary)

Course attendance	<input type="checkbox"/> Providing some useful working tools in the preparation of the doctoral research project in order to support it before the guidance committee. <ul style="list-style-type: none"> • Dissemination of scientific research results
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C. ACQUIRED SPECIFIC COMPETENCES

Professional competences	Knowledge and use of research methods specific to the field of archeology and other related sciences <ul style="list-style-type: none"> • Development of good professional practices and participation in the development of research projects, respecting specific methodological principles and norms. • Ability to prepare archaeological and archeometric papers and reports.
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Transversal competences	<ul style="list-style-type: none"> • The application of the principles and rules of professional deontology based on explicit value options specific to the specialist in archeology and archaeometry. • • Effective cooperation in interdisciplinary professional teams specific to archeology and related projects and programs. • • Continuous development of oral and written communication skills • • Respect and development of professional values and ethics • • Adaptation to new research technologies and techniques through continuous professional and personal development.
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D. CONTENT

a) Course

Chapter	Content	Hours
1.	The activity is dedicated to presenting the subject sheet, materials, design and subject requirements. At the same time, it will be presented the teaching staff - doctoral students communication system and the way of organizing the course	4
2.	Types of archaeological approaches and the most important currents in the field of modern archaeology.	8
3.	<ul style="list-style-type: none"> • Scientific investigation (nondestructive and destructive methods) of the compositional and microstructural characteristics of some artifacts. • Study methods in archaeometry: SEM, XRF, PIXE, RAMAN, CT, microscopy with polarizing light. Applications of these methods to various types of archaeological materials. Case studies. 	12
4.	Dendochronology; Radiocarbon dating; Thermoluminescence: OSL. Importance of isotopic studies	12
5.	<p>Past climate changes (Pleistocene and Holocene): types, period, consequences.</p> <ul style="list-style-type: none"> • Basic methods in paleoclimate research and reconstruction (studying its effects on different segments of the paleo-physico-geographical and paleo-socio-human environments through sporo-pollinic analyses, characteristic fossils, botanical remains, etc.), • Possible links between climate change and historical events 	4
6.	<p>Fundamental aspects related to the origin, biodiversity, ecology, stratigraphy, phytogeography and evolution of the main groups of plants.</p> <ul style="list-style-type: none"> • Paleodiet elements based on isotopic studies. 	4

7.	Metode tradiționale • Metode geofizice aplicate în arheologie: magnetometrie, electrometrie, georadar, metode electromagnetice de inducție,	8
9.	Acquiring some notions of evaluation and types of reporting of research projects. • The need to develop research questions, adopt models and methodological options suitable for archaeological research.	4
Total hours		56

E. ASSESSMENT

Type of activity	Assessment criteria	Assessment methods	Weight in the final grade
Course	1. Attendance at the course. 2. Acquiring the knowledge acquired during the course - activity within the course. 3. The accuracy and quality of the presentation of the research project at the colloquium. 4. Going through the indicated bibliography.	Permanent, within the course • Colloquium (session).	1. 25% 2. 25% 3. 50%
The results of the assessment are expressed by the following grades: „ <i>Very good</i> ”; „ <i>Good</i> ”; „ <i>Sufficient</i> ”; „ <i>Insufficient</i> ”. Grades „ <i>Very good</i> ”, „ <i>Good</i> ” și „ <i>Sufficient</i> ” are passing grades.			

F. METHODOLOGICAL REMARKS

Lectures combined with dialogue. Use of modern teaching aids (ppt). Course support.

E. CORROBORATION OF THE COURSE CONTENT WITH THE EXPECTATIONS OF THE REPRESENTATIVES OF THE EPISTEMIC COMMUNITY, PROFESSIONAL ASSOCIATIONS AND MAIN EMPLOYERS IN THE FILES RELATED TO THE PROGRAM

The content of this discipline is corroborated with the expectations of the community, professional associations and representative employers in the field related to the program. The course aims to provide students with better training in the field, understanding of the phenomena related to the topic, as well as the acquisition of specific professional skills.

G. BIBLIOGRAPHY

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• Bonsall, C., R. J. Lennon, K. McSweeney, C. Stewart, D. D. Harkness, V. Boroneanț, R. W. Payton, L. Bartosiewicz, and J. C. Chapman 1997 Mesolithic and Early Neolithic in the Iron Gates: A Palaeodietary Perspective. *Journal of European Archaeology* 5(1):50–92.

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• Raymond S. Bradley, *Paleoclimatology. Reconstructing Climates of the Quaternary*, Academic Press, 1999

• Cook, G. T., C. Bonsall, R. E. M. Hedges, K. McSweeney, V. Boroneanț, and P. B. Pettitt, 2001 A Freshwater Diet–Derived ¹⁴C Reservoir Effect at the Stone Age Sites in the Iron Gates Gorge. *Radiocarbon* 43:453–460.

• Feurdean A. 2005 Holocene Forest Dynamics in Northwestern Romania. *The Holocene* 15:435–446.

• Norman Herz, Ervan G. Garrison, *Geological Methods For Archaeology*, Oxford University Press, 1998

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• Macklin, M. G., J. Lewin, and J. C. Woodward 2012 *The Fluvial Record of Climate Change*.

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• Rodica Povară, *Climatologie generală*, București, Editura Fundației România de Măine, 2004,

• Colin Renfrew, Paul Bahn, *Archaeology. The Key Concepts*, Routledge, 2005

• Anna O. Shepard, *Ceramics for the archaeologist*, Carnegie Institution of Washington, 1980

• Mike Walker, *Quaternary Dating Methods*, Wiley & Sons, 2005

• Weninger, B., O. Jöris, and U. Danzeglocke 2007 *CalPal-2007 Cologne Radiocarbon Calibration & Palaeoclimate Research Package*. <http://www.calpal.de/>.