Course Syllabus - Multidisciplinary Research in Archaeology

Language of Instruction: English/Spanish

Professors: Stefano Biagetti, Carla Lancelotti, Marco Madella*, Laura Trelliso, Debora Zurro (*Coordination)

Professor’s Contact and Office Hours: For general questions about the course you can contact the Coordinator at: marco.madella@upf.edu / office: 24.537 - Mon to Thu 17:00-17:30. For specific subject questions you can contact the other instructors.

Course Contact Hours: 30 hours

Recommended Credit: 4 ECTS credits

Weeks: 3

Course Prerequisites: None

Language Requirements: Mostly in English with some lectures in Spanish

Time modules - 3 weeks organised as follows: Monday to Thursday 17:30 - 20:00

Course Description
The course “Multidisciplinary Research in Archaeology” has been developed to provide students with the skills and abilities needed to thrive in the increasingly multidisciplinary research environment of Archaeology, where theoretical and methodological approaches from the Humanities, Social Sciences, Geosciences, Biosciences and Digital Sciences are all brought together. The course is constructed to develop research and applicative skills giving access to both academic and professional settings (e.g. professional that want to acquire deeper understanding of post-excavation analyses). A key feature of the course is hands-on research training in multiple areas within Archaeology. Students will also be given extensive training in research skill, and engage directly with and learn from outstanding local and international researchers.

Keywords: Archaeology, ethnoarchaeology, environmental archaeology, archaeobotany, landscape archaeology, earth observation, gis, social dynamics, resilience, traditional agriculture, traditional ecological knowledge.

Learning Objectives
At the end of the course the student will have:
- Gained an understanding of the theory of multidisciplinarity when applied to a Humanities subject such as Archaeology;
- Learned how methods and practices from other disciplines can be used in Archaeology to forward an understanding of past societies;
- Gained an understanding of how current archaeological research can be useful and sometime indispensable for today pressing social problems (e.g. climate change).

Course Workload
The course is divided into lectures, discussions, and presentations. Since this is an intensive summer course, students should be prepared to read between 100 to 200 pages per week (most literature will be in English).
Methods of Instruction:
The course will be structured in two hours lectures/seminars, some of which might be conducted by visiting speakers. Students will be expected to have read on particular assigned references so that they can make active and informed contributions to discussions. The course includes also practical sessions. Students are expected to treat practicals in the same manner as lectures, by taking notes and assuming the requisite academic responsibilities.

In addition, students will be required to undertake one field study on their own. They will be required to visit the archaeological excavations at Born Cultural Centre (http://elbornculturaimemoria.barcelona.cat/en/the-center/) or the Museum of History of Barcelona (http://ajuntament.barcelona.cat/museuhistoria/en) (for which the entrance fee will be reimbursed). Students will have to form two groups with an equal number of people with each group visiting one of the suggested sites. This activity has to be done outside the lecturing calendar and will be self-managed by the students. Instruction on how to develop this "practical" will be supplied in Lecture 1 and Lecture 6. The final presentation work will be based on the field study.

Method of Assessment
Attending class is mandatory and will be monitored daily by professors. Students will be required to produce a final essay on a topic of choice, which will have to be delivered at the latest 15 days after the end of the course. Students will need to present a project proposal (in the form of power-point presentation) on a given research question related to the autonomous field study visit. Each week the students will be given material to read, some of which will be mandatory, some optional. The amount of reading will be assessed.

Class Participation: 20%
Practicals Participation: 30%
Fieldtrip Assessment: 20%
Final Paper: 30%

Absence Policy
Attending class is mandatory and will be monitored daily by professors. The impact of absences on the final grade will be announced soon.

The BISS attendance policy does not distinguish between justified or unjustified absences. The student is deemed responsible to manage his/her absences.

Emergency situations (hospitalization, family emergency, etc.) will be analysed on a case-by-case basis by the Academic Director of the BISS.

Classroom Norms
· No food or drink is permitted in the classroom.
· No video or audio recording of the lectures is permitted.
· There will be a fifteen-minute break during the class.
· Students must come to class fully prepared.

Course Contents
Course will be organized in twelve 135 minutes lectures/practical sessions. Instructors for each session are indicated in parenthesis (SB: S Biagetti; CL: C Lancelotti; MM: M Madella; LT: L Trelliso; DZ: D Zurro).

1) Theory and Methods in Multidisciplinary Archaeology

Lecture 1a (09/07/18) - Introduction to the course and to the main themes in multidisciplinary archaeology (MM)
Lecture 1b (09/07/18) - A gender Perspective to Archaeology (DZ) - This lecture will provide the students with some notions about scientific paradigms and androcentrism in the Social Sciences and specifically in History and Archaeology. Different theoretical approaches to the “gender issue” will be discussed as well as some empirical examples about the effects of androcentrism in Archaeology, and how gender research is being developed in the discipline.

- Further reading will be suggested during the lecture.

2) Cultures and Socio-Ecological Dynamics - Environmental Archaeology

Lecture 2 (10/07/18) - Geoarchaeology and Landscape in Archaeology (MM) - This lecture will introduce students to study of archaeological evidence within the settings of the Earth landscapes (e.g. settlement patterns, ecological areas and human resources) as well as how approaches used in the Earth Sciences can help understanding depositional processes, preservation and interpretation of archaeological realities.

- Chapters from above volumes and further reading will be suggested during the lecture.

Lecture 3 (11/07/18) - Archaeobotany, Vegetation and Foodways (MM) - This lecture will focus on how we study the human use of vegetal resources. The students will familiarise with the theories and methods in archaeobotany and some specific themes will be approached, such as the origin of agriculture, the human modification of past vegetations (e.g. land use, deforestation, etc) and the role of food in human societies.

- Chapters from above volumes and further reading will be suggested during the lecture.

Practical 1 (12/07/18) - Hands on Geoarchaeology and Archaeobotany (reference collections and microscopy) (MM + CL) - Students will have the opportunity of looking at reference collection material, both macro- and micro remains, in a laboratory of microscopy. The session will be organised as a small research project where students will be encouraged to try the identification and interpretation of archaeobotanical/geoaheological materials. Note: this will be at Campus del Mar.

- Practical hand-outs will be supplied during the practicals.

3) Approaches to Ethnoarchaeology
Lecture 4 (16/07/18) - Ethnoarchaeological Research: Theory and Practice (DZ) - The study of the ethnographic present to improve the interpretation of the archaeological past is probably the aim underlining ethnoarchaeology worldwide. Ethnoarchaeology does not provide analogical settings to be used to reconstruct the past but rather it constitutes an important source for building theoretical models that can then be used to make more sophisticated inferences about the archaeological record and to understand the relationships between material culture and human behaviour. As a research strategy, ethnoarchaeology has been used to investigate all the aspects of the archaeological record, including technology, material culture, settlement patterns, or burial customs.


4) Approaches to Quantitative and Computational Archaeology

Lecture 5 (17/07/18) - Anthropic Markers and Quantitative Archaeology (CL) - The recurrent use of space leaves in the archaeological record microscopic traces of the activities that were performed. Ethnoarchaeology and experimental archaeology guide the inferential reasoning that allows the construction of models linking combined analytical proxies to the activity that produced them. In this module students will see how the rigorous application of statistical and geostatistical methods to the analyses of microscopic biological, physical and chemical proxies can overcome the limitations of a single line of enquire and help construct generalised model of the use of space in the past.


Lecture 6 (18/07/18) - Modeling and Simulation in Archaeology (CL) - From agent-based simulations to network analysis, modelling and simulation have become increasingly used in archaeological research. This lecture will present an overview of the most common techniques through practical examples of case studies that have been addressed from a simulation perspective. The lecture will also touch on the available tools to develop archaeological simulation.

5) How to Write and Showcase in Sciences

Lecture 7 (19/07/18) - Project Design, Writing and Implementation (including RRI) (MM + CL) (also instruction for the field trip) - In this lecture students will learn how to conduct academic research, from project writing to how to communicate effectively in oral and written form. This will include some notions and concepts of Responsible Research and Innovation. This lecture should serve as guide for the work to be presented during Practical 3 that will result from the autonomous field trip.
  • https://caw.ceu.edu/online-writing-resources#Publishing
  • European Union. 2012. Responsible Research and Innovation: Europe’s ability to respond to societal challenges.

Practical 2 (23/07/18) - Bioarchaeology (Physical Anthropology) (LT) - Human remains are a significant part of the archaeological record providing unique insights into the lifeways of past populations. Through the analysis of human bones and teeth, bioarchaeologists can interpret a wide variety of evidences regarding demography, social responses to cultural and environmental changes (patterns of health and care), mobility as well as attitudes toward death in past societies.

6) Earth Observation and Digital Approaches in Archaeology

Lecture 8 (24/07/18) - Earth Observation Techniques and GIS (SB) - In this lecture, students will be guided through the latest applications in the use of remotely sensed data for archaeological purposes and their integration in Geographic Information Systems.

Lecture 9 (25/07/18) - Digital Archaeology: Heritage Reconstruction and Preservation (SB) - Sophisticated and breath-taking 3D rendering characterizes many archaeological projects worldwide, but entail remarkable costs and time. This lecture will illustrate current research where low-cost / high-effective
approaches are revolutionizing the way we digitally record items and buildings, paving the way to a democratization of heritage.

- Lercari N, Shiferaw E, Forte M, Kopper R 2017. Immersive Visualization and Curation of Archaeological Heritage Data: Çatalhöyük and the Dig@IT App. Journal of Archaeological Method and Theory. DOI: 10.1007/s10816-017-9340-4

7) Presenting your work and closing of the course

Practical 3 (26/07/18) - Presentation of the work arising from the visit at the two chosen archaeological sites and feedback (MM)

Required Readings: The professors will assemble a coursepack/or indicate mandatory textbooks. Further readings will be suggested during the course at least one week in advance of the lecture/practical for which the literature is need it.

Last revised, April 2018