

Bioarchaeology

Code: 106856
ECTS Credits: 6

2025/2026

Degree	Type	Year
Archaeology	OB	3

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Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

The course "Introduction to Archeology" should have been taken previously.

Objectives and Contextualisation

The course is part of the subject area "Field and Laboratory Methods and Techniques" of the degree in Archaeology. There are 36 ECTS of compulsory courses related to this subject area (Methods and field techniques in prehistoric archaeology, Methods and techniques in historical archaeology, Analysis of artifacts, Analysis and study of archaeological materials, Bioarchaeology and Quantitative Archaeology) aiming at providing basic knowledge on methodology and field and laboratory techniques in archaeology.

The Bioarchaeology course emphasizes those methods and techniques associated with archaeozoological, archaeobotanical and ancient human remains. The methods for describing and analysing the variability of the data are presented, introducing aspects such as the testing of statistical hypotheses or the analysis of

qualitative and quantitative relationships. The contents of this subject are aimed at giving students the basic tools that are necessary for dealing with archaeological materials as a category of historical documents. The course relies in practical training and is designed to provide a problem-oriented approach with the help of practical sessions in the teaching lab.

Learning Outcomes

1. CM09 (Competence) Plan the work processes of archaeology, specifically information processing in the field and laboratory analysis activities, organising work teams and distributing different tasks among their members to achieve the expected goals.

Content

Block 1.- Archaeobotany

- *Nature and specificity of archaeobotanical remains*
- *Formation of the archaeobotanical record.*
- *Methods and techniques for recovering botanical remains*
- *The determination of archaeobotanical remains*
- *Seed and fruit remains: food resources and products, processing and consumption*
- *Anthracology and dendrology: the management of forest resources*
- *Palynology: the vegetal landscape*

Block 2.- Archaeozoology

- *Fauna analysis in the framework of archaeological research projects. Goals, trends and key concepts in archaeozoology. Integrating archaeozoological problems to archaeological research.*
- *The nature of the paleofaunistic record. Micromammals, fish, molluscs and birds. Other categories of remains: amphibians, reptiles, insects and mites*
- *The formation of fauna remains: archaeotaphonomy. The incorporation of animal remains to the archaeological sites: agents and conditions. Archaeotaphonomy assessment.*
- *The recovery of fauna remains: units and conditions. Representativeness of faunal assemblages: the problem of sampling.*
- *Anatomical and taxonomic classification of fauna remains. The reference collection. The handbooks. Problems with the determination of morphologically close species. Biometry. DNA. Categories and classification units used in archeozoology. Databases and recording methods.*

- *Determination of the structure of the slaughtered animal populations. The estimation of age: tooth wear and epiphyseal closure assessment. X-rays. Sex determination. Morphology and osteometric criteria.*
- *Anthropic modifications. Traces linked to processing, distribution and consumption of animal resources. Identification of work processes through the analysis of changes in bone surfaces. Techniques involved in the preparation of food for consumption: identification and characterization based on the analysis of thermal alterations. Analysis of fracture patterns and their relationship with the processing and consumption of animals and animal products.*
- *The spatial analysis of fauna remains. Bone breakage, refitting and anatomical articulations.*
- *Quantification and statistical treatment. Sample representativity. Number of remains and minimum number of individuals. Skeletal parts frequencies. Evaluation of potentially supplied biomass.*
- *The interpretation: management of animal resources. Different trends in Archaeozoology.*

Block 3.- Human Osteoarchaeology (Physical Anthropology)

- *Bone tissues, anatomical standards, human variability and osteological determination.*
- *Human bones of the axial skeleton*
- *Human bones of the appendicular skeleton*
- *Principles of demographic analysis (1): age-at-death estimation.*
- *Principles of demographic analysis (2): sex estimation.*
- *Tomb excavation & record: orientation, position, sequencing and funerary taphonomy.*
- *Human bones in funerary practices research.*

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Practical sessions	50	2	CM09, CM09
Type: Supervised			
Exercices based on ICT	15	0.6	CM09, CM09
Type: Autonomous			
Written assingments	80	3.2	CM09, CM09

The course is of a practical nature and it will be taught in the teaching laboratories of the Department of Prehistory.

Basic procedures for the analysis of archaeological remains will be learned by means of case study applications and practical exercises.

Distribution of hours per block:

- Archaeozoology: 21 hours

- Archaeobotany: 21 hours

- Human osteoarchaeology: 12 hours

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

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Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Delivery of practical exercises	64%	3	0.12	CM09
Exams	36%	2	0.08	CM09

Attendance to practical classes is compulsory; exercises and practical work will be required for each one of the three blocks.

Written tests will also be required for some of the contents of the course.

To pass the course it is mandatory to pass each one of the three thematic blocks.

Weighting evaluation activities:

Archaeobotany: delivery of practical exercises 24% (4 deliveries, each represents 6%), final written test 16%

Archaeozoology: delivery of practical exercises 20%, final written test 20%

Human osteoarchaeology: delivery of practical exercise 20%

Re-evaluation:

A second evaluation is foreseen for those students not having passed the first one if the following requirements are met:

- All tests for each one of the three blocks must have been taken.
- All practical sessions must have been attended.

At the time of completion/delivery of each assessment activity, the teacher will inform (Moodle, SIA) of the

procedure and date of revision of the grades.

The student will be classified as Non-evaluable when he or she: 1.) has not passed all three thematic blocks; 2.) has not delivered at least 30% of the evaluation activities.

In the event of a student committing any irregularity that may lead to a significant variation in the grade awarded to an assessment activity, the student will be given a zero for this activity, regardless of any disciplinary process that may take place. In the event of several irregularities in assessment activities of the same subject, the student will be given a zero as the final grade for this subject.

This course does not incorporate single assessment.

Bibliography

Bloc 1.- Archaeobotany

Handbooks and general works

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BUXÓ, R.; PIQUÉ, R. (dir.) 2003 La recogida de muestras en arqueobotánica: objetivos y propuestas metodológicas. Museu d'Arqueologia de Catalunya, Barcelona, 71 pp.

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DIGITAL RESOURCES

<http://www.wsl.ch/land/products/dendro/>

<http://seeds.eldoc.ub.rug.nl/>

<http://http://www.plantatlas.eu>

<https://ipna.unibas.ch/archbot/pdf/index.html>

<http://http://insidewood.lib.ncsu.edu>

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Bloc 2. Archaeozoology

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USEFUL WEBSITES

Virtual comparative specimens:

<http://vzap.iri.isu.edu/ViewPage.aspx?id=230>

<http://hbs.bishopmuseum.org/frc/types.html>

Zooarch e-mail list:

<http://www.jiscmail.ac.uk/lists/ZOOARCH.html>

Zooarchaeological organizations:

Archeozoo - <http://www.archeozoo.org/en>

International Council for Archaeozoology <http://www.alexandriaarchive.org/icaaz/>

Bone Commons (ICAZ) - <http://www.alexandriaarchive.org/bonecommons/>

Sites to buy skeletons and casts:

<http://www.animalskeletons.net/>

<http://www.skullsite.co.uk/lists.htm>

<http://theevolutionstore.com/>

ArchNet: Faunal Resources (Links related to identification of animal remains):

http://archnet.asu.edu/topical/Selected_Topics/Faunal%20&%20Zooarchaeology.php

Bioarchaeological References:

<http://www.utep.edu/leb/baref/biblio.htm>

Computerised Bone Templates (presents an approach to the computerized recording of graphical zooarchaeological data using digital image templates and graphic software packages):

<http://www.archaeographica.com>

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<http://www.archaeographica.com>

ICAZ Animal Palaeopathology Working Group:

<http://www.apwg.supanet.com/>

Zooarchaeology Information and Resources:

<http://www.zooarch.com>

Bloc 3.- Human osteoarchaeology

a. Human osteology, physical anthropology, taphonomy and palaeopathology

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b. Bioarchaeological applications

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c. Digital resources

TERMCAT *Diccionari d'anatomia*

<https://www.termcat.cat/es/diccionaris-en-linia/182>

The London Atlas of Human Tooth Development - aplicació en línia per a l'estimació de l'edat dental segons protocol d'AlQahtani *et al* 2010.

<http://www.ibossolutions.com/qmul/v3/>

Explorador d'anatomia humana *Inner Body* amb secció específica sobre el sistema esquelètic

<http://www.innerbody.com/image/skelfov.html>

The University of Texas: osteologia i anatomia primatològica comparada; inclou vistes 3D i moviment

<http://eskeletons.org/boneviewer/nid/12537/region/skull/bone/cranium>

Estimació del sexe a partir de marcadors múltiples - Software MorphoPASSE

<https://www.morphopasse.com/>

Exercicis d'Osteologia Humana

<http://www.free-anatomy-quiz.com/skeletalsystem.html>

Jocs d'Osteologia Humana *Whack-a-Bone*

<http://www.anatomyarcade.com/games/WAB/WAB.html>

Osteoware, Smithsonian Institution (2011): software lliure per el registre digital de restes humanes (protocol dels *Standards* de Buikstra & Ubelaker - inclou manual)

<http://osteoware.si.edu/>

Skeleton Keys (Jeffrey H. Schwartz)

<http://global.oup.com/us/companion.websites/9780195188592/student/>

Museum of London Archaeological Archive - Centre for Human Bioarchaeology - Osteological Research Database

<https://www.museumoflondon.org.uk/collections/other-collection-databases-and-libraries/centre-human-bioarchaeology>

L'ètica en les restes osteoarqueològiques - Jornada al Museu d'Arqueologia de Catalunya (8 de novembre de 2024) <https://loom.ly/6odx9LE>

Mòmies *guanches* en 3D - El Museo Canario - Mòmia nº 20

Mòmia nº 20 - <https://sketchfab.com/3d-models/momia-no-20-b11be945cc3249b7bd47fda342b111ea>

Momia nº 5 - <https://sketchfab.com/3d-models/momia-no-5-c1a2c18f95644038865f830093f7b28d>

Detecció del consum de drogues en teixits prehistòrics (Guerra *et al.* 2023)

<https://www.uab.cat/web/detall-de-noticia/evidencies-directes-del-consum-de-drogues-en-cabells-prehistorics-de>

<https://theconversation.com/como-detectamos-el-uso-de-drogas-miles-de-anos-despues-de-su-consumo-204314>

"Com es troben? Antropòlegs i forenses en la cerca de desapareguts", taula rodona amb Francisco Etxebarria i Francisco Ferrándiz, Palau Robert (Barcelona, 18 de gener de 2023)

https://www.youtube.com/watch?v=ztwX3zdRO9Y&ab_channel=departamentjusticia

Desenterrando la represión de género: análisis de la violencia ejercida sobre las mujeres. Conferència de Laura Muñoz Encinar (Palma de Mallorca, 20 de novembre de 2021)

<https://www.youtube.com/watch?v=gNp1C5Emfm8>

Museu Virtual de la Guerra Civil Espanyola

<https://www.vscw.ca/es/node>

Software

Standard: word processor, spreadsheet, slideshow, image editor and PDF.

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PLAB) Practical laboratories	11	Catalan/Spanish	first semester	morning-mixed
(PLAB) Practical laboratories	12	Catalan/Spanish	first semester	morning-mixed
(TE) Theory	1	Catalan/Spanish	first semester	morning-mixed