

## SUBJECT TEACHING GUIDE

### 225 - Analysis Techniques of Lithic and Bone Material

#### Master's Degree in Prehistory and Archaeology

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Master's Degree in Prehistory and Archaeology			Type and Year	Optional. Year 1
Faculty	Faculty of Humanities				
Discipline	Optional Subjects in Both Specialities				
Course unit title and code	225 - Analysis Techniques of Lithic and Bone Material				
Number of ECTS credits allocated	3	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. CIENCIAS HISTORICAS				
Name of lecturer	JESUS EMILIO GONZALEZ URQUIJO				
E-mail	jesuse.gonzalez@unican.es				
Office	Edificio Interfacultativo. Planta: + 1. DESPACHO PROFESORES (155)				
Other lecturers					

### 3.1 LEARNING OUTCOMES

- Training is intended in the technical, morphological and functional analysis of lithic or prehistoric bone and antler tools.

### 4. OBJECTIVES

The subject aims to train for the description and technical, morphological and functional analysis of lithic or bone and antler tools from Prehistory, Knowledge of the main systems for determining the origin of raw materials, technological readings, typological approaches and microscopic analysis of the prehistoric instruments. Knowledge of the main trends of temporal change in the production of tools during Prehistory.

6. SUBJECT PROGRAM	
CONTENTS	
1	<p>Block 1. Methods and techniques of analysis of lithic and bone material analysis: typology, technological analysis, functional analysis and residue analysis.</p> <p>Carrying out practical sessions aimed at learning analysis techniques with this type of materials.</p> <p>The contents will be articulated around varied teaching resources: master classes and/or text comments and/or seminars and/or reverse methodologies and/or multimedia elements and/or visits to laboratories, museums and sites, etc...</p>
2	<p>Block 2. New analytical perspectives of the 21st century.</p> <p>Carrying out practical sessions aimed at learning analysis techniques with this type of materials.</p> <p>The contents will be articulated around varied teaching resources: master classes and/or text comments and/or seminars and/or reverse methodologies and/or multimedia elements and/or visits to laboratories, museums and sites, etc...</p>

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Presentation of a work of review and critical spirit on an archaeological investigation, through the reading of manuscripts of other researchers, focused on the analysis of lithic or bone tools in Prehistory.	Work	Yes	Yes	80,00
Continuous evaluation and monitoring of the knowledge acquisition process based on the student's participation in the different activities proposed during the development of the subject, both in the classroom and in the laboratory.	Others	Yes	No	20,00
<b>TOTAL</b>				<b>100,00</b>
Observations				
<p>In accordance with the regulations of the University of Cantabria, those evaluation works in which evidence of plagiarism is detected will not be considered for correction and will result in a grade of "fail: 0". The literal reproduction of information obtained from other authors without indicating it with the corresponding references, quotations and quotation marks will be considered plagiarism.</p> <p>In the case of students with special needs recognized by SOUCAN, the teacher will assess the application of the recommendations of this body to the extent possible, in order to allow the evaluation of said students with the same guarantees as the rest of the students. .</p>				
Observations for part-time students				
<p>Part-time students must notify the teacher of this condition so that their situation is taken into account. The evaluation of students enrolled part-time will also be based on the written delivery of a review and critical work on an archaeological investigation, through the reading of manuscripts from other researchers and focused on the analysis of lithic or bone tools. in Prehistory. The grade for this work will account for 100% of the final grade in this subject. The minimum grade to pass this evaluation will be a 5 and said activity will be recoverable if this grade is not achieved. This recovery will be carried out upon delivery of a new version of this work.</p>				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

- Adán, G. (2103) Producciones óseas funcionales y decorativas. En García, M. y Zapata, L. (coord.) Métodos y técnicas de análisis y estudio en arqueología prehistórica: De lo técnico a la reconstrucción de los grupos humanos, pp. 511-552. Universidad del País Vasco.
- Baena, J. (2007) Más allá de la tipología lítica: tecnología y experimentación. En Ramos, M.; González, J. y Baena, J. (coord.) Bordes, L. ; Prinsloo, L. ; Fullagar, R. et al. (2017) Variability of Raman microscopy to identify micro-residues related to tool-use and modern contaminants on prehistoric stone artefacts. Journal of Raman Spectroscopy. Doi 10.1002/jrs.5202.
- Camps, G. 1979. Manuel de Recherche Préhistorique. Doin, Paris
- Eiroa, J.J.; Bachiller Gil, J.A.; Castro Pérez, L.; Lomba Maurandi, J.1999. Nociones de tecnología y tipología en Prehistoria. Ariel, Barcelona.
- Fano Martínez, M.A.; D, Errico, F.; Vanhaeren, M. 2005. Magdalenian bone industry from El Horno cave (Ramales, Cantabria, Spain) En: Industrie osseuse et parures du Solutréen au Magdalénien en Europe. Mémoire XXXIX de la Société préhistorique française.pp.177-196
- González Sainz, C. 2011. Industrias en hueso y asta de los niveles magdalenenses de Santimamiñe (excavaciones 2004-2007). En: López Quintana, J.C. (dir), La cueva de Santimamiñe: revisión y actualización (2004-2006). Kobie-BAI nº 1, Bilbao, pp.111-15
- González Urquijo, J. e Ibáñez, J.J. (2013) El análisis funcional de los instrumentos prehistóricos En García, M. y Zapata, L. (coord.) Métodos y técnicas de análisis y estudio en arqueología prehistórica: De lo técnico a la reconstrucción de los grupos humanos, pp. 499-510. Universidad del País Vasco.
- Goutas, N. 2009. Réflexions sur une innovation technique gravettienne importante: le double rainurage longitudinal. Bulletin de la Société préhistorique française 106, nº 3, pp.437-456.
- Goutas, N.; Lacarrière, J. 2013. L'exploitation des cervidés dans le Gravettien d'Isturitz. Une approche archéozoologique et technologique des ressources animales: de leur acquisition à leur utilisation. En: Heras, C. de las; Lasheras, J.A.; Arrizabalaga, A.; Rasilla, M. de la (coords.), 2013.Pensando el Gravetiense: nuevos datos para la región cantábrica en su contexto peninsular y pirenaico. (Santillana, octubre de 2011). Museo Nacional y Centro de Investigación de Altamira. Monografía nº 23. Santander. pp.593-620.
- Ibáñez Estévez, J.J.; González Urquijo, J.E. 1996. From Tool Use to Site Function. Use-wear analysis in some Final Upper Palaeolithic sites in the Basque country. BAR International Series 658, Oxford. Tixier, J.; Inizan, M.L.; Roche, H. (1980-1984)
- Merino, J.M.1969. Tipología lítica. Munibe, Suplemento nº 4, (2ª ed. 1980), San Sebastián. (3ª ed., Suplemento nº9, 1994).
- Mujika Alustiza, J.A. 2007-2008. La gestión de la materia prima ósea en la fabricación de objetos durante la Prehistoria. Veleia 24-25, Homenaje a Ignacio Barandiarán Maestu, vol. 1, pp.531-568.
- Pétilion, J-M. 2006. Des Magdaléniens en armes. Technologie des armatures de projectiles en bois de Cervidé du Magdalénien supérieur de la grotte d'Isturitz (Pyrénées-Atlantiques). Université Paris I, Thèse (2004). Centre d'études et de documentation archéologiques, Treignes, 2006. 302 pags. (Artefacts, 10).
- Pétilion, J.M. 2008. First evidence of a whale-bone industry in the western European Upper Paleolithic: Magdalenian artifacts from Isturitz (Pyrénées-Atlantiques, France). Journal of Human Evolution 54 (2008) pp.720-726.
- San Juan Foucher, C. 2013. Industria ósea decorada y arte mueble del Gravetiense pirenaico: perspectivas territoriales actualizadas. En: Heras, C. de las; Lasheras, J.A.; Arrizabalaga, A.; Rasilla, M. de la (coords.), 2013.Pensando el Gravetiense: nuevos datos para la región cantábrica en su contexto peninsular y pirenaico. (Santillana, Octubre 2011). Museo Nacional y Centro de Investigación de Altamira. Monografía nº 23. Santander, Pp.461-483.
- Tarriño, A. y Terradas, X. (2013) Materias primas líticas. En García, M. y Zapata, L. (coord.) Métodos y técnicas de análisis y estudio en arqueología prehistórica: De lo técnico a la reconstrucción de los grupos humanos, pp. 439-452. Universidad del País Vasco.
- Tejero Cáceres, J.M. 2013. La explotación tecnoeconómica de las materias óseas en el Auriñaciense Caracterización de las producciones del Paleolítico superior inicial en la Península Ibérica. BAR S2469.
- Vaquero, M. (2013) Tipología y tecnología lítica. En García, M. y Zapata, L. (coord.) Métodos y técnicas de análisis y estudio en arqueología prehistórica: De lo técnico a la reconstrucción de los grupos humanos, pp. 453-477. Universidad del País Vasco.

