

SUBJECT TEACHING GUIDE

219 - Dating Methods and spatial archaeology

Master's Degree in Prehistory and Archaeology

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Master's Degree in Prehistory and Archaeology			Type and Year	Compulsory. Year 1
Faculty	Faculty of Humanities				
Discipline	Obligatory Subjects				
Course unit title and code	219 - Dating Methods and spatial archaeology				
Number of ECTS credits allocated	3	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. CIENCIAS HISTORICAS				
Name of lecturer	PABLO ARIAS CABAL				
E-mail	pablo.arias@unican.es				
Office	Edificio Interfacultativo. Planta: + 1. DESPACHO PROFESORES (146)				
Other lecturers	MARCO ADOLFO VIDAL CORDASCO				

3.1 LEARNING OUTCOMES
- Acquisition of the fundamentals of the dating techniques used in Archaeology
- Knowledge of the basic resources for the spatial analysis in Archeology
- Capacity for planning dating programs in Archaeological projects
- Acquisition of the basic tools for the spatial analysis in Archaeology

4. OBJECTIVES
Train the student in the critical use of the dating methods
Introduce the students to the methods of Spatial Archaeology

6. COURSE ORGANIZATION	
CONTENTS	
1	Dating methods in Archaeology 1.1. General view of the dating methods 1.2. Method derived from Geological processes 1.3. Methods derived from Biological phenomena 1.4. U Series and related methods 1.5. Radiocarbon 1.6. Calibration of the Radiocarbon determinations 1.7. Statistical processing and graphic representation of dates
2	Spatial Archaeology 2.1. Introduction: the Archaeological space in the understanding of the historical processión 2.2. Scales of analysis: From microspace to territory 2.3. Methods of qualitative and quantitative analysis
3	1. Datation methods in Archaeology 2. Spatial Archaeology

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
Statistical analysis and graphic representation of a group of dates	Work	No	Yes	50,00
Development of a practical exercise of spatial analysis	Work	No	Yes	50,00
TOTAL				100,00
Observations				
Observations for part-time students				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

- AITKEN, M.J., 1990. *Science-based Dating in Archaeology*. London: Longman.
- BLANKHOLM, H.P. (1991). *Intrasite Spatial Analysis in Theory and Practice*. Aarhus University Press.
- BOWMAN, S., 1990. *Radiocarbon Dating*. London: British Museum Publications.
- BRONK RAMSEY, C. 2009, "Bayesian analysis of radiocarbon dates", *Radiocarbon*, vol. 51, no. 1, pp. 337-360.
- CLARKE, D.L., ed. (1977). *Spatial archaeology*. Academic Press, Nueva York.
- HIETALA, H. (1984): *Intrasite spatial analysis in archaeology*, Cambridge University Press. Cambridge.
- HILLIER, B. y HANSON, J. (2001). *The social logic of space*. Cambridge University Press.
- HODDER, I. y ORTON, C., ed. (1990). *Análisis espacial en Arqueología*. Crítica, Barcelona.
- LIBBY, W.F., 1970. *Datación radiocarbónica*. Barcelona: Labor.
- MANNING, S.W. 1995. *The absolute chronology of the Aegean Early Bronze Age*. *Archaeology, Radiocarbon and History*. Sheffield: Sheffield Academic Press.
- LITTON, C.D. y C.E. BUCK, 1995. Review article: The Bayesian approach to the interpretation of archaeological data. *Archaeometry* 37 (1): 1-24.
- RUSS, J.L., 1994. *Radiocarbon Dating of Prehistoric Rock Paintings*. Ann Arbor: UMI Dissertations Service.
- TAYLOR, R.E., 1987. *Radiocarbon Dating. An Archaeological Perspective*. Orlando: Academic Press.
- VAN STRYDONCK, M., NELSON, D.E., CROMBÉ, P., BRONK RAMSEY, C., SCOTT, E.M., VAN DER PLICHT, J. & HEDGES, R.E.M. 1999, "What's in a 14C date" in 3ème Congrès International 14C et Archéologie. Lyon 6-10 avril 1998, eds. J. Evin, C. Oberlin, J. Daugas & J. Salles, Société Préhistorique Française (Mémoire XXVI)-Groupe des Méthodes Pluridisciplinaires Contribuant à l'Archéologie (G.M.P.C.A.), Rennes, pp. 433-448.
- VAQUERO, M. (2013) *Análisis micro-espacial: áreas domésticas, variabilidad funcional y patrones temporales*. En García, M y Zapata, L. (ed.) *Métodos y técnicas de análisis y estudio en arqueología prehistórica: De lo técnico a la reconstrucción de los grupos humanos*, pp. 245-271. Universidad del País Vasco.
- WHEATLEY, D. y GILLINGS, M. (2002): *Spatial Technology and Archaeology: a Guide to the Archaeological Applications of GIS*. Taylor & Francis. London.
- ZAMORA, M. y BAENA, J. (2010) *Los SIG en la arqueología española: una valoración 'CAA' del contexto actual*. *Cuadernos de Prehistoria y Arqueología de la Universidad de Granada* 20, 49-64.