UCLouvain

larko2234

2026

Archeometry

5.00 credits	22.5 h	Q2

This biannual learning is being organized in 2026-2027

Teacher(s)	Tomassini Paolo ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	This course introduces students to the main scientific analysis methods and techniques applied to archaeology and heritage sciences, with an emphasis on physical-chemical and computer-based techniques used to date and characterize archaeological materials (stone, glass, metal, ceramics, mortars, pigments). It provides an introduction to the fundamental principles of archaeometry and heritage science, presenting the main analytical approaches used to study movable and immovable remains.
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 Understand and explain the fundamental principles of the main methods used for dating and physically and chemically characterizing archaeological and heritage materials. 2 Select, justify, and critically apply analytical techniques appropriate to specific field and conservation issues. 3 Know how to interpret and communicate the results of scientific analyses from an interdisciplinary perspective, in relation to historical, technical, and heritage issues. 4 Learn to communicate effectively with specialists, asking the right archaeological questions and identifying the most appropriate methods depending on the context and materials being studied.
Evaluation methods	The course will be assessed by means of a written exam designed to test students' theoretical and methodological knowledge of the content presented. Emphasis will also be placed on examining real or fictional case studies, with a view to highlighting the questions that archaeologists must ask themselves and the types of answers that can be provided by the various methods and techniques covered in the course.
Teaching methods	The course combines lectures given by the teacher, conferences given by external experts, and practical applications requiring active student participation, making use of UCLouvain's equipment and the collections of the L Museum and CRAN. Excursions to Belgian and European laboratories are also planned. Through concrete case studies and practical applications, students will gain an understanding of the tools used to deepen their knowledge of archaeological and heritage materials and assess their state of preservation.
Content	The course will cover a wide range of physical and chemical techniques applied to the dating, characterization, and diagnosis of archaeological heritage. The first part is devoted to dating methods, which enable the establishment of absolute and relative chronologies for movable and immovable remains. The second part of the course focuses on the characterization of materials in order to identify their chemical and mineralogical composition, their origin, and their manufacturing techniques. These techniques make it possible to study the nature of the materials used in archaeological and heritage objects—ceramics, glass, metals, stones, or pigments—and to trace the operational chains and dynamics of exchange and production.The course will also cover conservation diagnostics, which play a key role in assessing alterations and deterioration in archaeological materials. Emphasis will be placed on identifying mechanisms of deterioration, whether chemical or physical in origin. The application of non-invasive and non-destructive techniques will be explored in particular. This course thus links scientific and technological advances with concrete issues in the field and scientific research, incorporating case studies and practical applications from archaeology and heritage sciences.
Inline resources	Dedicated Moodle space, including document files and useful resources depending on the activities organized.
Bibliography	Une bibliographie sélectionnée sera fournie sur l'espace moodle dédié.
Faculty or entity in charge	EHAC

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in History of Art and Archaeology : General	ARKE2M	5		
Master [60] in History of Art and Archaeology : General	ARKE2M1	5		