

# DIGITAL HERITAGE (LM85)

(Università degli Studi)

## Teaching DIGITAL MANAGEMENT OF ARCHAEOLOGICAL DATA

GenCod A007778

Owner professor CAROLA GATTO

**Teaching in italian** DIGITAL MANAGEMENT OF ARCHAEOLOGICAL

**Teaching** DIGITAL MANAGEMENT OF ARCHAEOLOGICAL DATA

**SSD code** L-ANT/07

**Reference course** DIGITAL HERITAGE

**Course type** Laurea Magistrale

**Credits** 6.0

**Teaching hours** Front activity hours: 30.0

**For enrolled in** 2025/2026

**Taught in** 2025/2026

**Course year** 1

**Language** ENGLISH

**Curriculum** PERCORSO COMUNE

**Location**

**Semester** Second Semester

**Exam type** Oral

**Assessment** Final grade

[Open Course timetable](#)

### BRIEF COURSE DESCRIPTION

The course begins with an introduction to the **theories, methods, and practices of archaeology**, providing the conceptual and methodological framework necessary to understand how archaeological knowledge is produced. Building on this foundation, the course focuses on the principles, methods, and tools for the digital management of archaeological data. It addresses the entire data lifecycle, from data acquisition and documentation to organization, analysis, long-term preservation, and dissemination. Particular attention is given to data standards, interoperability, metadata, databases, GIS, 3D documentation, and digital repositories, as well as to issues of data quality, sustainability, ethics, and open science in archaeology. Practical examples and case studies are included to illustrate current best practices in digital archaeology.

### REQUIREMENTS

No specific prior skills are required.

### COURSE AIMS

The course aims to provide students with a solid theoretical and practical foundation for the effective digital management of archaeological data. By the end of the course, students will be able to understand different types of archaeological data, apply appropriate digital tools and standards for their management, critically assess data workflows, and design coherent strategies for data documentation, analysis, preservation, and sharing in compliance with international guidelines and research ethics.

### TEACHING METHODOLOGY

Lectures and group activities.

### ASSESSMENT TYPE

Oral exam and discussion of a project work.

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OTHER USEFUL INFORMATION Available by appointment at the Department of Cultural Heritage. Please send an email to [carola.gatto@unisalento.it](mailto:carola.gatto@unisalento.it) to arrange a meeting.  
**Lessons start on Tuesday, 10th March 10:00AM**

1. History of Archaeology
  - Archaeology as a Discipline
  - From first scholars to Modern Archaeology
  - Classification and Consolidation
  - The New Archaeology
  - The Pluralization of the Past
  - Decolonizing the Pasts
2. Diversity of Archaeological Evidence
  - Categories of Evidence
  - Formation Processes and Taphonomy
  - Natural Formation Processes
  - Experimental Archaeology
3. Survey and Excavation of Archaeological Sites
  - Site Localization
  - Assessment of Site Layout and Conditions
  - Excavation Techniques
  - Classification of Artifacts
4. Archaeology and the Public
  - Identity and Heritage
  - Ethics in Archaeology
  - Public Outreach
  - Professional Responsibility
5. The Future of Heritage
  - Management
  - Publication, Archiving, and Resources
  - Strategic Planning and Future Perspectives
6. Computing for Archaeology
  - History of Archaeological Computing
  - Fundamental Concepts of Computing Applied to Archaeology
  - Digital Accessibility Standards
  - Geographic Information Systems (GIS, WebGIS, Google Earth, Arts & Culture)
7. From 3D Modeling to Site Visualization
  - Introduction to 3D Modeling in Archaeology
  - Creation of 3D Models of Artifacts and Archaeological Sites
  - Practical Exercises with Modeling Software
  - Virtual Restoration in Archaeology
  - Use of Extended Reality (XR) for Site Visualization
8. Digitalization for Archaeology
  - Principles and Techniques of Photogrammetry
  - Image Acquisition for Photogrammetry
  - Generation of Detailed 3D Models from Photographs
  - Practical Exercises with Photogrammetry Software
9. Digital Curation and Storytelling

- Introduction to Digital Communication for Cultural Heritage
- Principles of Digital Curation in Archaeology
- Theory and Techniques of Digital Storytelling for Archaeological Contexts
- Case Studies and Best Practices in Digital Heritage Dissemination
- Group Exercise: Creating Digital Narratives for Archaeological Contexts

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## REFERENCE TEXT BOOKS

1. **Renfrew, C., & Bahn, P. G. *Archaeology: theories, methods, and practice*. Zanichelli, 2024**
2. **Lecture slides, referred to the following bibliography:**

- *Plan for the Digitalization and Innovation of Museums*, MiBACT, 2018
- *Framework Convention of the Council of Europe on the Value of Cultural Heritage for Society (Faro Convention, 2005)*
- *National Plan for the Digitalization of Cultural Heritage*, MiBACT, 2022
- *Accessibility Notebooks*, General Directorate for Museums
- *The London Charter*
- *Technology Glossary*, ICOM, 2020
  - Il museo oggi. Modelli museologici e museografici nell'era della digital transformation, L. Cataldo, M. Paraventi, Hoepli, Milan, 2023
  - Limoncelli, M. *Il restauro virtuale in archeologia*. Carocci, 2012.
  - Digital Humanities. Metodi, strumenti, saperi: P. Moscati, *Archaeological Informatics in the Post-Digital Era*, 2023.