

**Advanced Use of Digital Tools for the Study of  
Antiquity**

Code: 104223  
ECTS Credits: 6

**2025/2026**

Degree	Type	Year
Ancient Studies	OT	4

## Contact

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## Teachers

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## Teaching groups languages

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

## Prerequisites

Basic knowledge of the main office software systems.

## Objectives and Contextualisation

This course is the advanced continuation of the basic training subject "Digital instruments and tools for the study of antiquity".

The digital humanities have already become an essential requirement in the various professional fields in which a graduate in Ancient Sciences will work, whether they are related to dissemination from museums, archaeological sites, cultural centers and media communication, as like teaching at any educational level, archiving or research. In this subject, mainly practice-oriented, the students will have the opportunity to train in the use of a wide variety of tools to cover the different needs that they will face in their professional career, as well as to learn to critically assess existing resources.

Within this frame of reference, students will achieve the following objectives:

- Obtain an updated overview of the use and objectives of computer tools applied to the study of the sciences of antiquity.
- Use part of this tools in specific cases, related to the world of the Humanities.

## Competences

- Carry out projects on aspects of the ancient world using a holistic approach.
- Dominate the use of specific instruments, with special attention to digital tools, for analysing the ancient world.
- Make a critical evaluation of work carried out.
- Use techniques of compilation, organisation and use of information and documentation related to Antiquity with precision.

## Learning Outcomes

1. Explain the singular contributions made by digital tools that could not have been made using conventional means.
2. Handle and critically assess the digital resources needed to acquire and disseminate knowledge in Ancient Studies.
3. Use digital resources, suited to different audiences and/or objectives, to disseminate the material and immaterial heritage left by antiquity in a way that is meaningful for present-day society.
4. Use digital tools to gather, classify, interpret and publish significant data for studying antiquity.

## Content

1. History of Computer Science for the Sciences of Antiquity
2. Overview of digital resources available in the Sciences of Antiquity.
3. The texts
  - 3.1 Advanced text and bibliography processing
  - 3.2 Standard text file formats: txt, markdown and html
  - 3.3 Text processing and analysis
4. The databases
  - 4.1 Tables, elements and records. Relational databases.
  - 4.2 Recent developments: non-relational databases, big data.
5. Statistics
  - 5.1 Numerical processing of information
  - 5.2 Quantification and descriptive statistics
6. Image
  - 6.1 Graphic formats: vector, raster, point cloud, meshes
  - 6.2 Methods of obtaining the image

## Photogrammetry practice

### 7. Geography, territory and historical sciences

7.1 Geographic Information Systems applied to Historical Heritage: relating databases to cartographic information.

Practice with a GIS platform

### 8. Management and conservation.

8.1 Management of cultural information: portals, projects and institutional communities

8.2 Dissemination of cultural heritage: virtual and augmented reality, virtual museum spaces.

8.3 Use of mobile devices

### 9. Evaluation of digital applications.

9.1 Logins

9.2 Cybermetry

9.3 Accessibility and usability

### 10. Dissemination and teaching

10.1 Presentation of works, projects, research.

10.2 Publication on the Internet: types of applications, collaborative work, legal conditions.

10.3 Social networks.

10.3 Tools for teaching.

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Practical sessions	25	1	4, 3
Theory	20	0.8	1, 2, 3
Type: Supervised			
Tutorship	30	1.2	
Type: Autonomous			
Study of real cases and elaboration of work	75	3	1, 4, 2, 3

The contents of the subject will be treated, first of all, from the theoretical point of view, providing the students with an updated knowledge base.

Secondly, an important part of the course is oriented towards the practical side, deepening and putting into practice the leading digital techniques applied to real case studies. Most of the learning activities will take place during class 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.

## Assessment

### Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Class attendance and participation	20	0	0	1, 4, 2, 3
Individual exercises solving	40	0	0	1, 2
Project and work presentation and digital publication	40	0	0	4, 3

#### I. Assessment exercises and tests

The evaluation of the student will be done from:

Class attendance and participation (20%)  
Resolution of practical exercises (40%)  
Elaboration and digital publication of works and projects (40%)

#### II. Necessary requirements for the student to be evaluated

*Not assessable.*

Students who don't attend to at least 30% of the assessments criteria above described, will be marked as "non-assessable".

*Assessable.*

The assessable students will be evaluated on the "fail to excellent (Distinction)" scale, according to the percentages mentioned in the corresponding section.

#### III. Reassessment terms

To be able to present to the reassessment exam, the student:

- must have an average mark of at least 3.5
- must have previously been evaluated in a set of activities, the weight of which is equal to a minimum of 70% of the total qualification.

#### IV. Mark review procedure

The student has the right to review all the periodic exercises, the partial and final exams and the assignments, in class and / or in the tutorial hours.

The day for the revision of the provisional final mark and the revision of the reassessment test, will be announced in the minutes.

The student has the obligation to check the minutes of the marks before its validation, in order to ensure that

there has been no error in the transfer of marks by the faculty.

#### V. Plagiarism.

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.

Those assessment acts in which there have been irregularities (copying, misuse of AI, etc.) are not recoverable.

#### VI. Artificial intelligence

This subject allows the use of AI technologies exclusively for support tasks indicated by the teacher. Other specific situations may be contemplated, as deemed appropriate by the teacher.

The student must clearly (i) identify which parts have been generated using AI technology; (ii) specify the tools used; and (iii) include a critical reflection on how these have influenced the process and final outcome of the activity.

Lack of transparency regarding the use of AI in the assessed activity will be considered academic dishonesty; the corresponding grade may be lowered, or the work may even be awarded a zero.

In cases of greater infringement, more serious action may be taken.

This subject does not incorporate single assessment.

## Bibliography

Despite the fact that a basic reference bibliography is provided below, the texts for this subject, of an eminently practical nature, are constantly updated to follow the continuous development of the different technologies. For this reason, bibliography or other more specialized resources will be indicated for each topic throughout the course.

Barceló, Joan A., Pallarés, María (1998), Beyond GIS: The archaeology of social spaces.  
[http://www.archcalc.cnr.it/indice/PDF9/09\\_05\\_Barcelo.pdf](http://www.archcalc.cnr.it/indice/PDF9/09_05_Barcelo.pdf)

Cortés Gabaudan, Francisco, González Marín, Susana (2020), Recursos en red para Filología Clásica <  
[https://www.clasicasusal.es/portal\\_recursos](https://www.clasicasusal.es/portal_recursos) > (Accessed: 28 June 2021).

Falloon, G. (2020), From digital literacy to digital competence: the teacher digital competency (TDC) framework. *Education Tech Research Dev* 68, 2449-2472. <https://doi.org/10.1007/s11423-020-09767-4>

Hemsley, James, Cappellini, Vito, Stanke, Gerd (2016) *Digital Applications for Cultural and Heritage Institutions*. London: Routledge. Available at:  
<http://search.ebscohost.com.are.uab.cat/login.aspx?direct=true&db=edsebk&AN=1480697&site=eds-live> (Accessed: 28 June 2021).

Linder, Wilfried (2006), *Digital photogrammetry: a practical course*. New York: Springer.

Pierazzo, Elena (2015), *Digital Scholarly Editing: Theories, Models and Methods*, Farnham, Surrey: Ashgate.

Van den Akker, Chiel, and Susan Legêne, editors (2016), *Museums in a Digital Culture*. Amsterdam University Press. JSTOR, [www.jstor.org/stable/j.ctt1s475tm](http://www.jstor.org/stable/j.ctt1s475tm). Accessed 1 July 2021.

Van den Akker, Chiel, and Susan Legêne, editors (2016), *Museums in a Digital Culture*. Amsterdam University Press. JSTOR, [www.jstor.org/stable/j.ctt1s475tm](http://www.jstor.org/stable/j.ctt1s475tm). Accessed 1 July 2021.

Schreibman, Susan, Siemens, Ray, Unsworth, John (2004), A Companion to Digital Humanities, Malden - Oxford - Blackwell - Carlton, <https://onlinelibrary.wiley.com/doi/book/10.1002/9780470999875> (accessed 29 June 2022).

Steinberg, Steven J., Steinberg, Sheila L. (2006), GIS : geographic information systems for the social sciences : investigating space and place. SAGE Publications.

Whitehorn, Mark, Marklyn, Bill (2001), Inside relational databases. London: Springer.

## Software

Although along the course students will use several types of software that will be illustrated throughout the course, they are not required to have previously installed software. Anyway, it would be convenient to have access to Word and PowerPoint.

## 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
(PAUL) Classroom practices	1	Catalan	second semester	morning-mixed
(TE) Theory	1	Catalan	second semester	morning-mixed