

ARCHAEOLOGICAL EXCAVATION MSc In Field Archaeology In Greece

COURSE DESCRIPTION

This graduate level course looks into the techniques and methods of archaeological excavation and field practices, with a special focus on integrating modern digital technologies into archaeological work (born-digital field recording, GIS, photogrammetry and 3D modelling, relational database). Students will learn how excavations are planned (aims, design and preliminary fieldwork), conducted (recording practicalities and methods, photography, architectural drawing and database construction) and interpreted (object analysis, establishing chronological horizons, digital processing and dissemination of the finds). Traditional stratigraphic excavation techniques and meticulous context recording are emphasized in the order that one would normally carry out archaeological excavations. By the end of the course, students will understand not only how to excavate and document material remains, but also how new technologies are critical for interpreting the past in a scientifically rigorous manner.

COURSE GOALS

- Develop the skills necessary to plan and design an archaeological excavation project.
- Explain and apply stratigraphic excavation principles.
- Learn practical applications of digital platforms in archaeological fieldwork, such as integrating excavation data and managing a project database.
- Develop and encourage proficiency in archaeological GIS.
- Ask critical questions on how and why excavations help us understand past societies.
- Acquire expertise in analyzing and interpreting excavation data, as well as an understanding of relevant ethical issues in the discipline.

SUGGESTED READING

Balme, J., and A. Paterson (eds.), 2014. Archaeology in Practice: A Student Guide to Archaeological Analyses (2nd edition), Hoboken: Wiley-Blackwell.

Barker, P. 1993. Techniques of Archaeological Excavation (3rd edition). New York: Routledge.

Conolly, J. and M. Lake. 2006. Geographical Information Systems in Archaeology, Cambridge: Cambridge University Press.

Renfrew, C., P. Bahn, and E. DeMarrais. 2024. Archaeology: Theories, Methods and Practice (9th edition), New York: Thames & Hudson.

Sanders, G.D.R., S.A. James, and A.C. Johnson. 2017. Corinth Excavations: Archaeological Manual, Grand Forks: The Digital Press at the University of North Dakota.

COURSE OUTLINE

WEEK #1: INTRODUCTION TO ARCHAEOLOGY AND EXCAVATION

TUESDAY, 7 OCTOBER 2025

Overview of archaeology as a discipline of scientific inquiry, the aims and objectives of excavations, what constitutes an archaeological site and the concept of archaeology as a destructive process that requires careful recording. The history of the field and techniques applied are explored from the earliest excavations to current scientific methods using cutting-edge digital platforms.

WEEK #2: RESEARCH DESIGN AND SITE DISCOVERY

TUESDAY, 14 OCTOBER 2025

How do archaeologists decide where to dig? This week covers designing an excavation project and the preliminary steps before breaking ground – excavations are often a later phase of site analysis not the first! Topics include forming research questions, the use of remote sensing (satellite, aerial, LiDAR) and survey methods (pedestrian field survey, geophysics) for site detection, as well as geo-morphological studies (coring) to understand processes of deposition. Emphasis is on how non-invasive survey data guide excavation strategy by revealing subsurface features and artifact distributions of potential interest.

***Workshop: Using **Google Earth Pro** for remote sensing analysis.

WEEK #3: EXCAVATION PLANNING AND TECHNIQUES

TUESDAY, 21 OCTOBER 2025

Once a site is chosen, how do we excavate it? This week we discuss excavation strategies such as Wheeler's box-grid method, open-area excavations, trench layout and sampling tactics. Practical considerations such as setting up a site grid, establishing datums and elevation benchmarks, and methods of artifact recovery (hand collection, sieving, flotation) and strategies for sampling soil for micromorphology are considered. Students learn the different methods of properly recording coordinates and elevations of the material being excavated using specialized equipment (Total Station, GNSS) and why this is important in the documentation process.

WEEK #4: STRATIGRAPHY, CONTEXT AND RECORDING SYSTEMS

TUESDAY, 28 OCTOBER 2025 (DATE LATER IN THE WEEK TBD**)**

The focus of this week is twofold. One part is to examine how natural and cultural formation processes create archaeological layers which then must be excavated by maintaining stratigraphic control, i.e. digging in identifiable contexts. Students are taught to identify discrete contexts (deposits, features, cuts) and excavate in reverse chronological order. The

second part focuses on different recording systems (e.g., excavation journals vs. born-digital approaches) and the modeling of stratigraphic sections using tools such as the Harris Matrix.

***Workshop: students will learn the basics of using **iDig** for archaeological recording.

WEEK #5: GIS IN ARCHAEOLOGY: A PRACTICUM (PART I)

TUESDAY, 4 NOVEMBER 2025

Three lessons are devoted to the principles and practical applications of Geographical Information Systems (GIS) in archaeological research. GIS is at the forefront of the digital revolution in Archaeology, and it is now a core component of how we as archaeologists investigate and document past landscapes and societies – therefore, it is crucial to learn some basic applications of GIS! Our first practicum provides an overview of GIS and its current uses in Archaeology followed by an introduction to coordinate systems and vector and raster formats.

***Workshop: We will work with **QGIS** in the computer lab and exercises will be assigned to be completed at home.

WEEK #6: FIELD DOCUMENTATION: PHOTOGRAPHY AND PHOTOGRAMMETRY

TUESDAY, 11 NOVEMBER 2025

Accurate documentation is vital since excavation is unrepeatable. This class covers both traditional and recent photographic recording methodologies. Techniques for archaeological photography are discussed, i.e., how to take context shots and artifact photos. Students will learn how digital cameras and photogrammetry are used for creating 3D models of trenches or features as well as drone photography for site mapping.

WEEK #7: GIS IN ARCHAEOLOGY: A PRACTICUM (PART II)

TUESDAY, 18 NOVEMBER 2025

The second GIS practicum focuses on learning to work with archaeological data in a GIS environment. This includes importing, organizing and editing data, an overview of geo-rectifying datasets, and the all-important task of designing and publishing site plans and thematic maps.

***Workshop: We will work with **QGIS** in the computer lab and exercises will be assigned to be completed at home.

WEEK #8: DATABASE CONSTRUCTION (A GIS PRACTICUM, PART III)

TUESDAY, 25 NOVEMBER 2025

Archaeology is inherently a field of data acquisition. Great! But how best to organize all of this? For this class we explore different methods and software packages for data management on excavations. We will use this as an opportunity, as our third GIS practicum, to learn the function of attribute tables and metadata in GIS, and methods for data management.

***Workshop: We will work with **QGIS** in the computer lab and exercises will be assigned to be completed at home.

WEEK #9: ARTEFACT ANALYSIS

TUESDAY, 2 DECEMBER 2025

This week considers what happens after artefacts come out of the ground with a particular focus on ceramics and their importance in establishing chronological horizons and the interpretive use of space. Students will visit the Department's study collection to see examples of artifact types (e.g. prehistoric vs. historical pottery) and discuss what analyses can be done such as typology, dating techniques and pottery fabric analysis.

***Workshop: Ceramic analysis using the Department's study collection.

WEEK #10: FIELD DOCUMENTATION: ARCHITECTURAL DRAWINGS

TUESDAY, 9 DECEMBER 2025

A summary of how site architects draw scale plans of excavation units and stratigraphic profiles by hand, using tape measures and planning frames, as well as how specialized software (CAD: Computer-aided design) is employed for documenting the excavations and publishing the results.

***Student presentations (Part I).

WEEK #11: FROM EXCAVATION TO PUBLICATION

TUESDAY, 16 DECEMBER 2025

With excavation data collected, how do archaeologists analyze and publish their findings? This class deals with the post-excavation phase of study seasons (specialist study, interpretation, conservation), biases and uncertainties in the data, and the dissemination of interim site reports and final publications (printed and digital) to both scholarly and public audiences.

***Student presentations (Part II).

WEEK #12: ETHICS AND NEW FRONTIERS

TUESDAY, 13 JANUARY 2026

The focus this week is on the ethical and cultural heritage dimensions of archaeological excavations. We discuss who 'owns' the past and the responsibilities archaeologists have toward local communities for site awareness, tourism and preservation for future generations (backfilling, preservation in situ, public accessibility, open-air museums). Also, what are the emerging trends especially concerning the use of AI in archaeology as a research tool and means of attracting broader interest.

***Student presentations, if necessary (Part III).

STUDENT PERFORMANCE EVALUATION

Class participation based on weekly readings and topics (20%)

One (1) oral class presentation (30%)

One (1) final essay writing on a research topic (50%)