MSc Environmental Archaeology

The programme is made up of both compulsory (130 credits) and optional modules (50 credits) organised under Geoarchaeology, Bioarchaeology (min 30 credits), or Social and Careers options. Students can elect to specialise in geoarchaeology or bioarchaeology by following a single stream. Students are required to take a total of 180 credits overall. Our current modules are:

Compulsory Modules (Total 130 credits)

Dissertation 80
Issues and Debates in Environmental Archaeology 10
Research Skills and Career Learning 10
Quantitative Methods 10
Field Methods and Experimentation 10
Field Course: Earth Science & Archaeological Investigations 10

Optional Modules (Total 50 credits)

Geoarchaeology Stream
Geochemistry in Quaternary Science and Archaeology (20)
Climate Change and Human Communities (10 or 20)
Quaternary Climate Change (20)
Coastal and Maritime Geoarchaeology (20)
Tropical Rainforests, Climate and Land Use Through Time (20)
Applications of Micromorphological Analysis (10 or 20)

Bioarchaeology Stream
Human Bioarchaeology (20)
Food and Culture (10)
Zooarchaeology (10 or 20)
Vegetation History and Archaeobotany (20)
Molluscan Biostatigraphy (20)
Our Closest Cousins? Archaeology of the Neanderthals (20)

Placements and Careers
Erasmus Scheme (involves 1 term in Europe)
Research and Enterprise Placement (20)
Research and Enterprise Micro-Placement (10)
Management of Heritage Assets (20)

Our list of Social Archaeology modules can be viewed on the MA Archaeology page.
Dissertation
Module Convenor: Prof Grenville Astill
Comprises a series of Dissertation workshops, a Masters Conference and a sustained period of independent supervised research in the writing of a Masters Level Dissertation. Develops advanced high-level skills in critical evaluation and understanding of current research problems, and method and theory, and in designing, planning and implementing a major independent research project, through writing a dissertation of 10-15,000 words. You may opt to submit part of their dissertation in the form of a peer-reviewed journal article.
Assessment: Research design, conference presentation, Dissertation.

Issues and Debates in Environmental Archaeology
Module Convenor: Dr Gundula Müldner
Provides you with a deeper understanding of the types of data used, and a critical awareness of central issues within environmental archaeology that can be applied to both the optional modules and the dissertation.
Assessment: Monograph critique

Quantitative Methods in Environmental Archaeology
Module Convenor: Dr Rob Hosfield
Teaches quantitative analytical methods appropriate to environmental archaeological techniques and approaches. The module is designed to familiarise you with univariate and multivariate statistical principles and a range of core statistical analytical methods and techniques, prior to undertaking Masters degree-level dissertation work. The practical sessions will also familiarise you with standard statistical software packages (Microsoft Excel, SPSS and PAST). In addition you will learn how to prepare environmental archaeological statistical data-sets for analysis and presentation/publication, primarily through the assessed project.
Assessment: Project Report

Field Methods and Experimentation
Module Convenor: Prof Martin Bell
Reviews the techniques used in assessing the geoarchaeological and environmental potential of sites as part of the planning and development process. Practical field skills are developed in using key techniques. You will learn how to write an assessment report, and argue the contribution of field experiment and methods to the investigation of geoarchaeological and palaeoenvironmental problems.
Assessment: Field Assessment Report.

Field Course: Earth Science and Archaeological Investigations in the Field
Module Convenor: Dr Nick Branch
Develops your knowledge and understanding of the field study of sediments, landforms, soils and archaeological sites based on visits to a wide range of case studies. Provides skills in field observation, recording and data analysis and field skills in relation to the following key aspects of archaeological and environmental assessment: Pleistocene sediments, wetland sediments and environments, coastal processes and sediment types, the use of geological resources. You also gain skills in the recognition of archaeological sites and artefacts in a field context.
Assessment: Field Notebook

Research Skills and Careers Learning
Module Convenor: Dr Rob Bachelor
Provides a comprehensive knowledge of the resources, techniques and skills required for conducting independent research and critical analytical writing at Masters Level, and for future study and employment within and beyond the discipline. Topics include: presenting conference posters and papers, writing an academic paper, writing professional report, CV and Interview skills, applying for a PhD.
Assessment: article critique, mock job application
Geoarchaeology Stream

Geochemistry in Quaternary Science and Archaeology
Module Convenor: Prof. Dominik Fleitmann
Techniques borrowed from geochemistry are now widely applied to reveal climatic and environmental changes in the past, and to solve archaeological problems ranging from the chemical composition of artefacts, bones and matrix in which those artefacts were recovered. Thus, isotope and trace-element geochemistry plays an increasingly important role in a wide variety of environmental and archaeological investigations. This module provides you with an introduction to the methods, techniques and main applications of Geochemistry in Quaternary science and archaeology.
Assessment: Essay

Climate Change and Human Communities
Module Convenor: Prof. Dominik Fleitmann
Over the last 20 years paleoclimatologists have developed precise records of climate change for many key-regions. By comparing these records with archaeological and historical data, there is mounting evidence that human societies respond in a variety of ways to climatic changes, including adaptation, demise, collapse, migration and invention of new technologies. Although still subject of controversial discussions (“climate determinism”), it becomes increasingly clear that changing climate is one of the most important, if not the most important factor behind societal evolution. This module aims to provide an overview how climate and environment have varied over the course of the Holocene (last 11.500 years before present). It aims to encourage you to critically appraise relationships between climatic and societal changes.
Assessment: Essay, article critique

Coastal and Maritime Geoarchaeology
Module Convenor: Prof. Martin Bell
Develops an understanding of the distinctive nature of coastal archaeology and its contribution to our understanding of the past. This includes the main types of site and evidence, the geomorphological and sedimentary contexts in which that evidence occurs, the methods employed and how archaeology relates to other aspects of coastal zone management. Assessment: essay, specialist report, oral presentation

Quaternary Climate Change
Module Convenor: Dr Stuart Black
Understanding past climates is critical to our understanding of how the current climate system operates and how it might evolve in the future. This module focuses on climate change through the Quaternary Period (the past 2.6 million years), what evidence can be used to reconstruct these climates and the causes for climate change. Assessment: essay (20-credit), practical reports, article critique

Applications of Micromorphological Analysis
Module Convenor: Dr Wendy Matthews
Description: Provides in-depth practical knowledge and critical understanding of the application of micromorphological techniques to the study of landscapes and settlements. Themes include: human-environment inter-relations; plant taphonomy and use; early agriculture; material culture, architecture and the built environment; and site formation processes, post-depositional alterations and management.
Assessment: Essay (20-credit option), specialist report, practical laboratory test

Tropical Rainforests, Climate and Land Use through Time
Module Convenor: Prof. Frank Mayle
This module aims to unravel the long-term (multi-millennial scale) history of tropical forests using a range of complimentary approaches and disciplines – e.g. palaeoecology, archaeology and anthropology. This inter-disciplinary perspective integrates physical and human geography, ecology, and archaeology. The module focuses on tropical Latin America and revolves around several key questions: 1) What have been the interrelationships between climate change, human land use (e.g. burning and agriculture), and tropical
forest ecosystems through the Holocene, i.e. the last ca. 11,000 years? 2) What is the origin of current patterns of biodiversity? 3) What are the implications of this historical perspective for conservation policy and understanding the fate of tropical forests over the 21st century? 4) To what extent have past cultures/civilisations been constrained by, or benefited from, their tropical surroundings and why did they collapse?


Bioarchaeology Stream

Food and Culture
Module Convenor: Dr Gundula Müldner
This module introduces the theoretical framework of nutritional anthropology and its application to archaeology. We will discuss the methodology, strengths and drawbacks of various approaches to reconstructing past diets, including artefactual, osteological (human and animal bones) and biochemical evidence. In a series of seminars you will become acquainted with and discuss key issues and debates in palaeodietary analysis, including the role of diet in human evolution, the Mesolithic-Neolithic transition, feasting and conspicuous consumption, cannibalism, migration and colonisation (Roman Britain), social status and social change (medieval period), gender and taboos.

Assessment: essay, oral presentation.

Human Bioarchaeology
Module Convenor: Dr Mary Lewis
This highly practical module will introduce the key methods employed in the examination of human remains from archaeological sites and utilise skeletal collections held by the Department of Archaeology. The theory and application of estimates of sex, age, stature and pathological indicators will be explored and the way in which such information has been used to understand past populations, using the biocultural approach, will be identified and discussed.

Assessment: essay, professional skeletal report, practical test.

Zooarchaeology
Module Convenor: Dr Aleks Pluskowski
This highly practical module will develop your understanding of the study of animal remains recovered from archaeological contexts. Fundamental identification and recording techniques, including ageing, sexing, osteometric recording and quantification methods will be covered, providing a working knowledge of the value of faunal assemblages recovered from archaeological sites, with a focus on historical periods. You will also develop an understanding of skeletal modifications resulting from pathology, processing and taphonomic factors. The module focuses on mammals, but introduces the identification of bird, fish, and reptile and amphibian skeletons.

Assessment: Short essay (20-credit option), practical test, specialist report.

Molluscan Biostratigraphy
Module Convenor: Prof. Martin Bell
This module introduces the application of mollusc analysis in archaeology and the study of Quaternary environments. Evidence from land, freshwater and marine molluscs is considered in terms of their role in environmental reconstruction and exploitation as a food source, represented by middens. The formation of the molluscan palaeoenvironmental record, the contribution of modern ecological studies and problems of interpretation are considered in reviewing previous work. The application of these techniques will be explored through a laboratory practical project which will involve the preparation of a report.

Assessment: Lab Report, two Practical Mini-reports.
Vegetation History and Archaeobotany  
Module Convenor: Dr Nick Branch  
Provides you with a detailed account of the theoretical and practical approaches used to reconstruct vegetation history, climate change, and past plant economies and diet, using sub-fossil micro- and macroscopic plant remains. Taught through lectures, laboratory practical classes, seminars and a field trip demonstrating how palaeobotanical and archaeobotanical records provide information on the human environment, resource exploitation and subsistence.  
Assessment: Field notebook, oral presentation, laboratory report.

Our Closest Cousins? Archaeology of the Neanderthals  
Module Convenor: Dr Rob Hosfield  
This module provides you with a comprehensive knowledge of the evolution and behaviour of the Neanderthals (H. neanderthalensis) as reconstructed from the archaeological and fossil records. You will develop your knowledge of the methods used for analysing and interpreting evidence from the early prehistoric archaeological record, and will examine how different sources of evidence are used in combination to reconstruct Neanderthal technology, subsistence, environments, lifestyles and cognition. You will also acquire an understanding of the history of Neanderthal studies and appreciate how issues involved in Neanderthal palaeoanthropology and archaeology encapsulate general problems and challenges relating to the study of human evolution. The module is taught through a combination of introductory lectures, directed reading-based discussion and presentation seminars, practical artefact-based sessions, and field trips.  
Assessment: Essay, Critique, Presentation

Research and Enterprise Placement or Micro-Placements  
Module Convenor: Dr Rob Batchelor  
Helps students apply their academic training within a research and/or enterprise environment. Research placements will provide the opportunity of working with a member of staff on a current project based in the UK or internationally. Enterprise positions would allow students to work with a developer-funded archaeological unit/specialist, consultancy or government organisation to gain experience of professional commercial archaeology.  
Assessment: grant application/tender document, oral presentation.

Management of Heritage Assets  
Module Convenor: Dr Ashley Dabson (Henley Business School)  
This module is a joint module between Real Estate and Planning and Archaeology. It is about understanding the cultural, architectural and historic importance of a site and its management in terms of protection, conservation, presentation, education and commercialisation. It is about understanding the issues and tensions between competing interests and identifying creative and sustainable solutions. The module is a mix of site visits, lectures, seminars and self-directed learning.  
Assessment: Heritage Assessment Project