

MSc Archaeological Sciences

<https://www.bradford.ac.uk/courses/pg/archaeological-sciences/>

Table A: Programme Specification

Programme Catalogue	Programme Details
Academic Year:	2025-26
Degree Awarding Body:	The University of Bradford
Target and interim awards:	Master's Degree of Science; or exit with Postgraduate Diploma; Postgraduate Certificate [Framework for Higher Education Qualifications (FHEQ) Level 7]
Programme Admissions:	September
Programme duration:	1 year full-time

Please note: This programme specification has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but changes may occur given the interval between publishing and commencement of teaching. Any change which impacts the terms and conditions of an applicant's offer will be communicated to them. Upon commencement of the programme, students will receive further detail about their course and any minor changes will be discussed and/or communicated at this point.

Minor Modifications Schedule

1. March 2024: Annual changes for 2024 academic year.
2. July 2025: Annual Changes for the 2025 academic year, including changes to academic regulations
3. September 2025: Fixed publication errors with document reformat

Introduction

Archaeology engages the entire human past in all its temporal and spatial dimensions. It is fundamental to our understanding of how we evolved, and our communities developed, and how we study, preserve and interpret our past.

The MSc Archaeological Sciences is designed to give graduates in Archaeology and related subjects a systematic training in the application of modern scientific methods in archaeology. It provides the necessary practical, analytical and interpretative skills to apply a wide range of specialist approaches in archaeology. At Bradford, our distinctive approach emphasises the integration of the natural and physical sciences in this enquiry. We aim to provide excellence in a comprehensive range of archaeological topics, with emphasis on both teaching and research, believing the two activities to be mutually dependent. In 2021 the University of Bradford was

awarded a coveted Queen's Anniversary Prize¹ for its research in archaeological technology, techniques and its influence on practice, policy and society. We have also attracted over £6M funding for research capabilities, which are available for use during the MSc. Among the distinctive features of this programme are hands-on experience in our laboratories, a range of option choices which allow specialisation, and a substantial individual research dissertation.

The programme aims to prepare students not only for research in archaeological science, but also to further career prospects in all areas of mainstream archaeology. The programme is well-suited both to students who wish to use it as a foundation from which to commence further research or as vocational training to enhance employment prospects in archaeology.

Programme Aims

The programme is intended to:

- A1. Provide graduates in archaeology and related subjects with a systematic training in the application of modern scientific methods to archaeology.
- A2. Provide a flexible programme of study that reflects areas of staff expertise.
- A3. Encourage development of independent learning skills, by providing a supportive, structured environment.
- A4. Develop high-level subject knowledge and understanding and provide training in discipline skills to enable graduates to pursue further research or careers in archaeological science.
- A5. Develop critical and analytical problem- solving skills and personal transferable skills to prepare students for careers in non-cognate fields.

Programme Learning Outcomes

On successful completion of the programme students will be able to:

- 1. Demonstrate a critical awareness of practical, analytical and interpretative approaches in archaeological science.
- 2. Use a selected range of methods and techniques within archaeological science and interpret the generated data.
- 3. Apply critical understanding in the wider context of the discipline.
- 4. Possess advanced laboratory and/or field skills in the study of (according to module selection): artefacts, biological evidence, archaeological prospection, scientific dating methods and cultural resource management.

¹ <https://www.bradford.ac.uk/research/queens-anniversary-prize/>

5. Critically evaluate professional literature in a chosen area and related disciplines
6. Communicate conclusions in writing and orally to specialist and non-specialist audiences, working effectively in groups, manage and appraise their own learning and research.
7. Manage time effectively when undertaking complex and extended tasks.
8. Confidently use information technology to critically review, synthesise and carry forward professional research in a specialised area.
9. Identify individual learning needs and carry out an achievable learning plan to meet them.
10. Apply instrumental techniques to the analysis of archaeological materials.
11. Use mathematical and statistical approaches to interpret archaeological data.
12. Design and complete a substantial work of independent study.

Curriculum

The programme comprises a core of compulsory modules to provide appropriate background in theory and application of scientific methods in archaeology and option choices to develop specialist skills.

The emphasis of the programme is on the learning of fundamental scientific principles across a number of disciplines (e.g. quantitative methods, statistics, physics, chemistry, biology and materials science) and applying these to archaeological contexts, drawing on areas of staff expertise.

In addition to undertaking core modules in 'Nature of Matter and Instrumental Analysis' and 'Chronology, Isotopes and Biomolecules', students typically take at least 20 credits of modules that cover specific analytical techniques, which include a strong hands-on element. These modules are chosen to suit the student's specific interests, in discussion with the programme leader.

Students can also choose from a variety of optional modules and may choose to focus on specific pathways:

- Human Bioarchaeology which focuses on subsistence and health through studies of biomarkers in human and non-human hard tissue and environmental issues which impact on humans, including environmental change.
- Landscape Archaeology which focuses on understanding and interpreting landscapes in the past using scientific methods.
- Biomolecular Archaeology which allows students to specialise in the use of biomolecular methods to study both human remains and artefacts.

The pathways are intended to guide students through appropriate modules; they are indicative rather than prescriptive and students may choose to take the optional modules offered in any combination, subject to timetabling.

The module in 'Professional Development' starts by guiding students to identify their own learning needs, and the resources to address them, and goes on to prepare students for their research project, including planning of research, research design, time management, ethics, and health and safety.

Programme Modules

Students study 120 core credits and select 3 optional modules for the remaining 60 credits - taken as one optional module in Semester 1 and two optional modules in Semester 2.

Table B: MSc Archaeological Sciences Modules

Module Code	Module Title	Type	Credits	Level	Semester
ARC7045-B	Nature of Matter and Instrumental Analysis	Core	20	7	1 & 2
ARC7041-B	Professional Development	Core	20	7	1 & 2
ARC7058-B	Human Bioarchaeology	Option	20	7	1
ARC7044-B	Archaeological Prospection and Visualisation	Option	20	7	1
ARC7056-B	Chronology, Isotopes and Biomolecules	Core	20	7	2
ARC7048-B	Site Evaluation Strategies and GIS	Option	20	7	2
ARC7059-B	Separation Science and Mass Spectrometry	Option	20	7	2
CFS7028-B	Imaging	Option	20	7	2
ARC7036-B	Grave Concerns: Investigating the Archaeology of Death and Burial	Option	20	7	2
ARC7034-E	Dissertation	Core	60	7	3

Students will be eligible to exit with the award of Postgraduate Certificate if they have successfully completed 60 credits and achieved the award learning outcomes (LO1-8).

Students will be eligible to exit with the award of Postgraduate Diploma if they have successfully completed 120 credits and achieved the award learning outcomes (LO1-11).

Students will be eligible to exit with the award of Degree of Master if they have successfully completed 180 credits and achieved the award learning outcomes (LO1-12).

It is expected that students who successfully complete the entire programme will be fully prepared to undertake research at MPhil or PhD level.

Learning and Teaching Strategy

The learning and teaching strategy takes into consideration the learning outcomes, the nature of the subject, and the need for students to take responsibility for their own learning as part of this advanced taught programme.

The thematic modules are delivered in a combination of formal lectures, student-led intensive seminars/tutorials, and extensive practical instruction. Coursework (laboratory and field reports, worksheets, essays) is geared towards demonstrating relevant knowledge, understanding and professional skills in principal approaches to the application and use of scientific methods in archaeology. Elements of group work are part of core specialist modules; communication skills are tested in both written and oral form in several modules.

The degree progresses through a spiral curriculum, with each teaching/assessment block developing and building on prior learning. The underlying knowledge and understanding is then drawn upon in the Dissertation (around 15000 words) which encompasses a substantial piece of original research, ultimately assessed for its publishable merit.

Assessment Strategy

The assessment strategy is designed to support the learning outcomes of each specific module. It uses a wide range of assessment methods, including coursework (worksheets, critiques, laboratory reports, research design, essays), exams (practical tests), and oral presentations. Assessment elements are regularly structured in a way that allows students to benefit from formative learning towards summative assessment.

Assessment, Continuation and Award Regulations

This programme follows the Assessment, Continuation and Award regulations published on the University's website (<https://www.bradford.ac.uk/about/legal-and-governance/governance/regulations/>) for postgraduate courses (Regulation 9).

Admission Requirements

The University welcomes applications from all potential students and most important in the decision to offer a place is our assessment of a candidate's potential to benefit from their studies and of their ability to succeed on this particular programme. Consideration of applications will be based on a combination of formal academic qualifications and other relevant experience.

The standard entry requirements for the programme are as follows:

- A first degree in Archaeology or another relevant discipline, normally with a second class degree, or equivalent is required for UK students. Other relevant qualifications and past experience will also be considered for admission to the programme.

- Admission will be judged on an individual basis for overseas students, at an equivalent level to UK entry requirements. For North American students, normally a GPA of at least 2.5 on a scale of 4.0 is required, or an equivalent.
- Students whose first language is not English must have IELTS at 6.0, with no subtest less than 5.0, or the equivalent. Students who do not meet the IELTS requirement can take a University of Bradford pre-sessional English course.

Admissions are made on the basis of demonstrated ability, qualifications, experience, references, and, occasionally, interviews. A completed application form, references, official transcripts, or a list of programmes/modules and grades/marks stamped by the applicant's undergraduate department or student registry are required of all applicants.

Applications are welcome from students with non-standard qualifications or mature students (those over 21 years of age on entry) with significant relevant experience. Assessment of this evidence will usually be in the form of submitting a portfolio. Complete an enquiry form to speak to someone about your situation in the first instance: <https://your.bradford.ac.uk/form/enquiry>

Recognition of Prior Learning: If applicants have prior certificated learning or professional experience which may be equivalent to parts of this programme, the University has procedures to evaluate and recognise this learning in order to provide applicants with exemptions from specified modules or parts of the programme. Search our website for **Prior Learning** for more information.

Information in this document is for the contemporary recruitment cycle and was accurate at time of publication. The current tariff and accepted qualifications for entry onto the programme is published at the online course page: <https://www.bradford.ac.uk/courses/pg/archaeological-sciences/>

The University has a set of terms and conditions for all students accepting an offer to study on a course here at Bradford. This is called the Student Contract. This document sets out the Terms and Conditions which apply when you accept an offer of a place on a programme of study at the University of Bradford. View our Student Contract for further details: <https://www.bradford.ac.uk/student-contract/>