

MSc Geoarchaeology

Awarding institution: The University of Reading
Teaching Institution: The University of Reading
Faculty of Science
Programme length: 12 months full-time, 24 months part-time
For students entering in Oct 2003 Date of specification: Dec 2003
Programme Director: Dr W. Matthews and from January 2004, Dr Petra Dark
Board of Studies: MSc Geoarchaeology
Accreditation: Not appropriate

Summary of programme aims:

The programme aims to provide a thorough grounding in the underlying principles and methods of earth science with reference to their application in archaeology and palaeoenvironmental studies, and to develop a comprehensive understanding of the main field and laboratory techniques in geoarchaeology. The programme aims to develop the technical and field skills, the critical, writing and presentational skills for future independent work and research. This may be in the field of professional geoarchaeology, or research leading to further academic qualifications. There is also particular emphasis on the archaeological assessment of ancient landscapes buried within sediment sequences and the planning context of this work. The programme is designed to meet the growing needs of commercial and heritage organisations in relation to environmental assessments and field projects.

Transferable skills:

Transferable skills include:

- working as part of a team through participation in field and laboratory group work projects.
- report writing through reports on field and laboratory projects.
- accurate recording in the field and laboratory.
- data presentation, analysis, graphical representation and interpretation.
- an understanding of environmental assessment.
- the ability to prepare a paper, in a format and to a standard, suitable for publication.
- development of skills in oral and poster presentation to facilitate the communication of research to specialist and non-specialist audiences.

Programme content

Modular code	Module title	Credits	Level
ARMS1	Geoarchaeology: principles and practice	10	M
ARMS4	Field methods in Geoarchaeology	10	M
ARMS6	Field	10	M
GOMAG	Analytical geochemistry	10	M
ARMS2	Archaeological sediments and bioarchaeology	10	M
ARMS3	Soils in Archaeology	10	M
ARMR1	Research resources and skills	10	M
Various	Options and technical modules	20	H/M
ARMDIS	Dissertation	90	M
Total		180	

Part-time / modular arrangements

The programme can be taken part-time over 2 years. The programme in each year is by agreement with the programme director.

Progression requirements

To progress from the taught elements to the dissertation, students must have gained an average mark of 50 or more overall *and have no mark below 40 in both coursework assessment and examination assessment for the modules ARMS1 Principles and Practice, GOMAG Analytical Geochemistry and ARMS3 Soils In Archaeology*. This will be assessed by the Board of Studies after the examinations in April/May.

Summary of teaching and assessment

Teaching is through a combination of lectures, seminars, practicals and field visits.

Assessment is through a combination of exams, assessed practicals, essays, scientific reports and presentations. Exams are held in April/May.

The University's taught postgraduate marks classification is as follows:

<u>Mark</u>	<u>Interpretation</u>
70-100%	Distinction
60-69%	Merit
50-59%	Good standard (Pass)
<u>Failing categories:</u>	
40-49%	Work below threshold standard
0-39%	Unsatisfactory work

For Masters Degrees

To pass the MSc students must gain an average mark of 50 or more overall including a mark of 50 or more for the dissertation *and have no mark below 40 in both coursework assessment and examination assessment for the modules ARMS1 Principles and Practice, GOMAG Analytical Geochemistry and ARMS3 Soils In Archaeology*. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must be less than 60 credits.*

Students who gain an average mark of 70 or more including a mark of 70 or more for the dissertation and have no mark below 40 will be eligible for a Distinction. Those gaining an average mark of 60 or more overall including a mark of 60 or more for the dissertation and have no mark below 40 will be awarded eligible for a Merit.

For PG Diplomas

To pass the Postgraduate Diploma students must gain an average mark of 50 or more *and have no mark below 40 in both coursework assessment and examination assessment for the modules ARMS1 Principles and Practice, GO215 Analytical Geochemistry and ARMS3 Soils In Archaeology*. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must be less than 60 credits.*

Students who gain an average mark of 70 or more and have no mark below 40 will be eligible for the award of a Distinction. Those gaining an average mark of 60 or more and have no mark below 40 will be awarded eligible for a Merit.

For PG Certificate

To pass the Postgraduate Certificate students must gain an average mark of 50 or more *and have no average mark below 40 in both coursework assessment and examination assessment for the modules ARMS1 Principles and Practice, GOMAG Analytical Geochemistry and ARMS3 Soils In Archaeology*. In addition the total credit value of all modules marked below 40 must not exceed 10 credits.*

*The provision to permit a candidate to be passed overall with a profile containing marks below 40 is made subject to the condition that there is evidence that the candidate applied his

or herself to the work of those modules with reasonable diligence and has not been absent from the examination without reasonable cause.

Admission requirements

Entrants to this programme are normally required to have obtained a first degree normally upper-second (2:1) or above in a subject providing an appropriate foundation for a substantial component of the programme. Suitable degree subjects include: Archaeology, Earth Science, Geology, Environmental Science, Physical Geography, Botany, Oceanographic Science. All candidates are normally interviewed by two members of staff including the admissions tutor.

Support for students and their learning

University support for students and their learning falls into two categories. Learning support includes IT Services, which has several hundred computers and the University Library, which across its three sites holds over a million volumes, subscribes to around 4000 current periodicals, has a range of electronic sources of information and houses the Student Access to Independent Learning ([S@IL](#)) computer-based teaching and learning facilities. There are language laboratory facilities both for students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme. Student guidance and welfare support is provided by Programme Directors, the Careers Advisory Service, the University's Special Needs Advisors, Hall Wardens and the Student's Union.

Career prospects

The programme was established in response to a Survey of Science Training Needs conducted by the Council for British Archaeology. This showed that there was inadequate provision for training in geoarchaeology in Britain. The programme enables those with a training in Earth or Environmental Sciences to move into Archaeology, and those with a training in the scientific aspects of archaeology to develop their knowledge of Earth Sciences. Career opportunities are available in archaeological units, heritage organisations, environmental consultancies, local authorities, and research laboratories and organisations.

Opportunities for study abroad or for placements

There is the opportunity to do the fieldwork part of the dissertation project abroad. However, students are expected to make the necessary arrangements for this with advice from staff.

Educational aims of the programme

The programme aims to provide a thorough grounding in the underlying principles and methods of earth science with reference to their application in archaeology and palaeoenvironmental studies. Students will develop a knowledge and understanding of current practice and problems in the discipline. It aims to develop a knowledge of the main field and laboratory techniques. These are given particular emphasis through practical projects within the taught part of the programme, an 8 day conducted field class and the dissertation. The range of techniques acquired, the critical, writing and presentational skills developed will provide effective foundations for a wide range of PhD research on archaeological science and palaeoenvironmental topics. There is also particular emphasis on the archaeological assessment of ancient landscapes buried within sediment sequences and the planning context of this work. The programme is designed to meet the growing needs of commercial and heritage organisations in relation to environmental assessments and field projects.

Programme outcomes

A. Knowledge and understanding of:

- (1) The range of Earth Science principles and methods employed in Archaeology.
- (2) A general knowledge of the range of field and analytical techniques employed in Geoarchaeology.
- (3) A comprehensive knowledge and understanding of a selection of field and analytical techniques.

Teaching/learning methods and strategies

- (1) *Geoarchaeology: principles and practice* and all other teaching.
- (2) *Field methods in Geoarchaeology*
Field course
Analytical geochemistry
Archaeological sediments and bioarchaeology
- (3) *Geoarchaeology: principles and practice*
Field course project report
Archaeological sediments and bioarchaeology with mini projects
Analytical Geochemistry with project
Soils in Archaeology (practicals)
Option choices
Dissertation

B. Intellectual skills – students will be able:

- (1) to outline the objectives of a piece of geoarchaeological research, identify accurate methodology, make and record accurate observations, interpret and critically review the results in written and verbal form.
- (2) to present a report on work in a good standard of written English and with a good standard of illustration in the form of a short paper of a format and standard suitable for publication.
- (3) to develop self direction and originality in tackling and solving problems.
- (4) to critically evaluate and debate the work of others.
- (5) to synthesise and integrate evidence from archaeological and earth science sources including the integration of humanities and science based approaches to research problems.

Teaching/learning methods and strategies

- (1) Skills acquired through a series of mini field and laboratory projects (with feedback) and developed through the dissertation.
- (2) as above
- (3) as above
- (4) *Geoarchaeology: principles and practice* module and seminars, dissertation critiques, field discussions and notebook
- (5) *Geoarchaeology: principles and practice* module and many of the case-studies used in core, option and field methods and course module teaching.

C. Practical skills – Students will be able:

- (1) to achieve a good standard in accurate field recording
- (2) to use a microscope, analyse mineralogy, sediment thin sections and biological evidence.
- (3) to assess archaeological sites and landscapes in the field.
- (4) to understand soils, soil forming processes and soil analytical techniques.
- (5) to have an awareness of the range of laboratory analytical techniques appropriate to the study of sediments and rocks.
- (6) to have an awareness of the range of field and laboratory techniques employed in geoarchaeology and should have developed skills in a selection of those techniques as a result of project and dissertation work.
- (7) to organise, conduct and write up a piece of research and present the results to a specialist audience in the form of a paper.

Teaching/learning methods and strategies

- (1) A guide-mark and comments are provided on notes on the first (un-assessed) field visit. Notebooks are prepared on field classes.
- (2) These skills are developed in *Archaeological sediments and bioarchaeology* and *Analytical Geochemistry*.
- (3) These skills are developed in *Field methods* and the *Field course*.
- (4) These skills are developed in *Soils in Archaeology*
- (5) These skills are developed in *Analytical Geochemistry*
- (6) Whole programme particularly coursework projects and the *Dissertation*
- (7) Skills acquired through coursework projects (with feedback) and then developed in the *Dissertation*.

D Transferable skills – students will be able:

- (1) to work as a team
- (2) to write a report for a specialist audience
- (3) to record, present and analyse data
- (4) to give oral and poster presentations of work to a group
- (5) to prepare a paper in a format and to a standard suitable for publication
- (6) to gain skills in IT, data analysis presentation and statistics.
- (7) to develop the qualities and transferable skills necessary for employment requiring:-
 - exercise of personal responsibility
 - decision making in complex and unpredictable situations.
 - the independent learning ability required for continued professional development.

Teaching/learning methods and strategies

- (1) Group field and laboratory projects
- (2) Preparation of field and laboratory reports and dissertation.
- (3) Practical classes, preparation of field and laboratory reports and dissertation.
- (4) *Dissertation* critique seminars (un-assessed with feedback), *Dissertation* oral presentation, preparation of poster on dissertation.
- (5) Skills acquired through a series of mini practical and laboratory projects and then developed in preparation of the dissertation.
- (6) *Research resources and skills*, laboratory and practical classes
- (7) The taught programme as a whole and the *Dissertation*

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably expect to achieve and demonstrate if he / she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in module and programme handbooks.