AHIS391

Laboratory Methods of Archaeology

S2 Day 2017

Dept of Ancient History

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General Information

Unit convenor and teaching staff Unit Convenor Dr Ronika K. Power ronika.power@mq.edu.au Contact via Email Level 2, Australian Hearing Hub By appointment only; Contact via email
Credit points 3
Prerequisites AHIS190 and 6cp at 200 level
Corequisites
Co-badged status
Unit description This unit covers the range of laboratory principles and methods used in archaeology for the description, analysis and critical appraisal of artefacts, features and sites. Through theoretical instruction and practical demonstrations in on-campus laboratories students learn how the different experts involved in an archaeological project carry out laboratory analyses artefacts study, archaeological sediments, plant and animal remains using scientific approaches (for example, X-ray Fluorescence Spectrometry, Electron microscopy, Gas chromatography, etc).

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment

Apply knowledge of archaeology while participating in scientific practical experiences

Communicate with other team members about strategies for study and analysis of archaeological objects

Analyse archaeological features and materials (pottery, architecture, metal, bone, and

ivory objects) at an advanced level

Demonstrate critical thinking in the interpretation of the archaeological data

Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

General Assessment Information

SUCCESSFUL COMPLETION OF THE UNIT

There is no final examination for this unit but a class test (closed book).

To complete the unit successfully you need a minimum mark of 50% overall. You must attempt every piece of assessment or university policy requires that a zero grade be given.

You must attend all seminars. Failure to do so will result in a deduction of 2% per lecture from the overall mark for the unit unless a reasonable written explanation for each absence is provided within two days.

All seminars are compulsory. Non-attendance or failure to prepare and participate will result in a deduction of 2% per tutorial from the overall mark for the unit unless a reasonable written explanation for each absence is provided within two days.

GRADES:

F: 0-49% **P**: 50-64% **CR**: 65-74% **D**: 75-84% **HD**: 85-100%

Grade descriptors may be found in a separate document on the unit's website.

RESEARCH ESSAY

The Research Essay (2,500 words) is due on Week 6. It is worth 30% of the total marks.Your answer to the essay question (available on iLearn) should demonstrate extensive use of primary and secondary sources. Your essay should be based on an analysis and discussion of primary (ancient) sources. Secondary literature should be used to aid you in your analysis and interpretation of the ancient sources and to place your interpretation within the context of previous scholarship. All opinions included in the essay, whether quoted directly or paraphrased, should be referenced according to the guidelines, Essay Presentation & Conventions: Style Guide, available online at https://www.mq.edu.au/public/download/?id=292059/. Ensure you download the full version of the Essay Presentation Guide. Don't footnote lectures or include anything in footnotes except citations, and remember to include every reference you have actually used in your bibliography. You must include a word count. Anything beyond the prescribed word limit will not be marked.

Marking criteria:

1. Knowledge of relevant subject matter

2. The range of primary sources used and their analysis

3. The range of secondary works consulted and the depth of engagement with them.

4. Correct citation of sources

5. Structure of argument

6. Skill in presenting the argument

7. Formal presentation including correct referencing, English language grammar, spelling and punctuation

CLASS TEST

The closed-book one-hour class test will test your knowledge of the material offered during the whole unit in both lectures and tutorials. It is worth 30% of the total marks. More detail is available on iLearn.

Marking criteria:

1. knowledge of and depth of understanding of relevant subject matter
2. structure of argument
3. skill in presenting the argument
4. presentation (including spelling and grammar). Illegible writing will not be marked

Assessment Tasks

Name	Weighting	Hurdle	Due
Online quiz	15%	No	Week 5 (30/08/2017)
Research Essay	30%	No	Week 7 (15/09/2017)
Online quiz	15%	No	Week 10 (20/10/2017)
Class Test	30%	No	Week 13 (08/11/2017)
Preparation and Participation	10%	No	Every week

Online quiz

Due: **Week 5 (30/08/2017)**
Weighting: **15%**

Answer 10 short questions based on the seminar content and readings

On successful completion you will be able to:

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment

- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level

Research Essay

Due: **Week 7 (15/09/2017)**
Weighting: **30%**

Word limit: 2,500 words.

On successful completion you will be able to:

- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
- Demonstrate critical thinking in the interpretation of the archaeological data
- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Online quiz

Due: **Week 10 (20/10/2017)**
Weighting: **15%**

Answer 10 short questions based on the seminar content and readings

On successful completion you will be able to:

- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level

Class Test

Due: **Week 13 (08/11/2017)**
Weighting: **30%**

The Class Test is a brief examination of all major concepts covered in class. Length is one hour.

On successful completion you will be able to:

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and

ivory objects) at an advanced level
- Demonstrate critical thinking in the interpretation of the archaeological data
- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Preparation and Participation

Due: **Every week**
Weighting: **10%**

Students are required to attend all classes (lectures and tutorials), prepare the set of readings and participate in class.

On successful completion you will be able to:

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Apply knowledge of archaeology while participating in scientific practical experiences
- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
- Demonstrate critical thinking in the interpretation of the archaeological data
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Delivery and Resources

CLASSES

For lecture times and classrooms please consult the MQ Timetable website: http://www.timetables.mq.edu.au. This website will display up-to-date information on your classes and classroom locations.

It is important to note that a significant component of this unit consists of **laboratory visits across the campus**. You will need to **consult the unit's iLearn page every week** to find out the **location** of the **lecture/seminar/demonstration**. It is each student's responsibility to check these details and ensure that they are at the appropriate location in a timely, professional manner.

It is **imperative** for **every student** to **wear fully-covered, enclosed shoes** to **every lecture/seminar/demonstration**. This is a **non-negotiable Health and Safety requirement** for entry into scientific laboratories. It is each student's responsibility to ensure that they are properly

attired for laboratory work. If you do not comply with this requirement you will be denied access to the laboratory and the class.

To complete the unit satisfactorily you will need to undertake all assessment tasks and achieve an overall mark worth 50% or above.

Assignments must be submitted **through the iLearn website.** Information about how to submit work online can be accessed through the iLearn unit.

Assignments will be returned via the 'Assignments' tool on iLean Unit site, and will contain feedback from the marker within them. The convener will aim to return your assignments within two weeks.

There is no formal examination in this unit. A Class Test is set for the last week of classes.

EXTENSIONS AND PENALTIES

Extensions for assignments can only be granted for medical reasons or on compassionate grounds. Without documentation (medical or counselling certificates) or prior staff approval, a penalty of 2% a day, including weekends, will be applied. If required, applications for extensions should be made to the convenor before the assignment's due date.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

The following textbooks are required:

- Renfrew, C. and Bahn, P., *Archaeology: Theories, Methods and Practice* (London, 2016).

For a detailed bibliography refer to the syllabus.

DELIVERY AND RESOURCES

This unit has an online presence. Login is via: https://ilearn.mq.edu.au

Students are required to have regular access to a computer and the internet. Mobile devices alone are not sufficient.

- For technical support go to: http://mq.edu.au/about_us/offices_and_units/informatics/help

- For student quick guides on the use of iLearn go to: http://mq.edu.au/iLearn/student_info/guides.htm

Unit Schedule

Week	Date	Topic	Guest Expert(s)	Assessment
1	02/08/2017	Introduction	Convenor	N/A

2	09/08/2017	Microscopy	Ms. Sue Lindsay	N/A
3	16/08/2017	Elemental and Mineralogical Compositions	Prof. Damian Gore	N/A
4	23/08/2017	Photonics/Optics	Prof. Mick Withford Ms. Michelle Whitford Mr. Michael Rampe Dr Benjamin Johnston	N/A
5	30/08/2017	Landscapes and Sedimentology	Dr Tim Ralph	**Online Quiz 15%**
6	06/09/2017	Radiological Methods	Dr Ronika K. Power Mr. Simon Bird	N/A
7	13/09/2017	Isotopes	Dr Ronika K Power Ms. Anita Andrew	**Research Essay 30%**
		MID-SEMESTER BREAK		
8	04/10/2017	Optically Stimulated Luminescence	Dr Kira Westaway	N/A
9	11/10/2017	3D-Scanning, Imaging and Photogrammetry	Dr Yann Tristant	N/A
10	18/10/2017	Nuclear Methods	Dr Ronika K. Power Ms. Carla Raymond [Dr Joseph Bevitt - TBC]	**Online Quiz 15%**
11	25/10/2017	Human Osteology and Palaeopathology	Dr Ronika K. Power Ms. Marian Casey	N/A
12	01/11/2017	Zooarchaeology	Dr Mary Hartley	N/A
13	08/11/2017	Class Test / Statistical Methods	Convenor Dr Maurizio Manuguerra	**Class Test 30%**

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy_2016.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration

In addition, a number of other policies can be found in the Learning and Teaching Category of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Apply knowledge of archaeology while participating in scientific practical experiences
- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
- Demonstrate critical thinking in the interpretation of the archaeological data
- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Assessment tasks

- Research Essay
- Class Test
- Preparation and Participation

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcomes

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Apply knowledge of archaeology while participating in scientific practical experiences

- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
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- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Assessment tasks

- Online quiz
- Research Essay
- Online quiz
- Class Test
- Preparation and Participation

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcomes

- Demonstrate critical thinking in the interpretation of the archaeological data
- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Assessment tasks

- Online quiz
- Research Essay
- Online quiz
- Class Test
- Preparation and Participation

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where

relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Apply knowledge of archaeology while participating in scientific practical experiences
- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
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Assessment tasks

- Online quiz
- Research Essay
- Online quiz
- Class Test
- Preparation and Participation

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Apply knowledge of archaeology while participating in scientific practical experiences
- Communicate with other team members about strategies for study and analysis of archaeological objects

- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
- Demonstrate critical thinking in the interpretation of the archaeological data
- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Assessment tasks

- Research Essay
- Class Test
- Preparation and Participation

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Apply knowledge of archaeology while participating in scientific practical experiences
- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
- Demonstrate critical thinking in the interpretation of the archaeological data
- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Assessment tasks

- Online quiz
- Research Essay
- Online quiz
- Class Test
- Preparation and Participation

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- Acquire knowledge of of the principles of archaeological techniques and methods in a laboratory-environment
- Apply knowledge of archaeology while participating in scientific practical experiences
- Communicate with other team members about strategies for study and analysis of archaeological objects
- Analyse archaeological features and materials (pottery, architecture, metal, bone, and ivory objects) at an advanced level
- Demonstrate critical thinking in the interpretation of the archaeological data
- Synthesize and communicate acquired knowledge and understanding to produce critical analytical report

Assessment tasks

- Research Essay
- Class Test
- Preparation and Participation

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Assessment tasks

- Class Test
- Preparation and Participation

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Assessment task

- Preparation and Participation