UNIVERSITY of BRADFORD

Module Descriptor

Biomolecular approaches to the study of human skeletal remains

Module Code:	ARC6033-B
Academic Year:	2018-19
Credit Rating:	20
School:	School of Archaeological and Forensic Sciences
Subject Area:	Archaeology, Forensic Science
FHEQ Level:	FHEQ Level 6
Module Leader:	Dr Hannah Koon

Additional Tutors:

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	16
Seminar	10
Supervised time in	9
Directed Study	165

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Semester 2 (Feb - May)

Module Aims

o explore the application of biomolecular approaches to the study of skeletal remains in forensic and archaeological contexts through the evaluation of current published research. To critically evaluate methods used for: dating skeletal material; for determining positive identification; for distinguishing human from animal bone and for investigating diet, health

and mobility.

To understand the principles of biomolecular preservation and to evaluate how the state of preservation may affect the reliability and interpretation of biomolecular data.

Outline Syllabus

Through a combination of lectures, workshops and seminars we will use real case studies to explore the application of a range of biomolecular approaches used to investigate skeletal remains within forensic and archaeological contexts. This will include approaches such as DNA analyses, proteomics, isotopes and radiocarbon dating.
The module will cover key topics such as identification, distinguishing animal from human bone, determining if remains are modern or ancient and evaluating preservation and decay. It will also look at the history and development of these approaches and at the main biomolecules recovered from skeletal material and discuss how and why then survive. Finally the module will evaluate the reliability of biomolecular data in light of differential preservation; contamination and experimental accuracy.

Module Learning Outcomes

On successful completion of this module, students will be able to...

1. Critically discuss the contribution that biomolecular analyses can make to the study of skeletal remains within forensic and archaeological contexts.
2. Critically review the principles of key biomolecular approaches to the study of skeletal material
3. Interpret and critically evaluate published work.
4. Apply enhanced analytical and problem-solving skills gained through the evaluation and synthesis of recently published research.
5. Evaluate how the state of preservation may affect the reliability and interpretation of biomolecular data.

Learning, Teaching and Assessment Strategy

Lectures will introduce key principles which will then be explored further with discussion of case studies within seminars and workshops. This will include group discussion, critical evaluation of current research articles and student-led seminars.
Detailed informal feedback will be given during seminar sessions and formal electronic feedback will be made available for each piece of assessment. There will also be the opportunity to obtain further feedback on assigments through individual meetings arranged by appointment.
During Directed Study hours students are expected to undertake reading to consolidate and expand on the content of formal taught sessions; research and prepare for the presentation and critial review; revise material from formal taught sessions; and undertake specific elements of reading as directed prior to seminars.
The emphasis on evaluating current research will be demonstrated by the assessments,

which will comprise a critical review of recently published research, a short individual presentation and a group work exercise centered around a forensic case scenario.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Presentation	Critically evaluate a research paper on a given topic and present the results to the group using powerpoint (or similar)	15 minutes	20%	No
Formative	Presentation	Critically evaluate a research paper on a given topic and present the results to the group using powerpoint (or similar) during a seminar session	15 minutes	%	No
Summative	Laboratory Report	Groupwork exercise based around a case scenario and involving the production of a short report based of the evaluation of data	0-1000 words	30%	Yes
Summative	Coursework	Critical review of a journal article	0-1000 words	50%	No

Legacy Code (if applicable)

Reading List

To view Reading List, please go to **rebus:list**.