

# Prifysgol Wreccsam Wrexham University

## Module specification

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Module Code	SCI719
Module Title	Advanced Research Skills
Level	7
Credit value	20
Faculty	FAST
HECoS Code	100962
Cost Code	GAFS

## Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Biomedical Science	Core
Postgraduate Certificate Biomedical Science	Option
MRes Applied Biomedical Sciences Research	Core
MRes Applied Clinical Research	Core
MRes Analytical & Forensic Chemistry	Core
MRes Forensic Anthropology & Bioarchaeology	Core

## Pre-requisites

*None*

## Breakdown of module hours

Learning and teaching hours	21 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
<b>Total active learning and teaching hours</b>	<b>21 hrs</b>
Placement / work based learning	0 hrs
Guided independent study	179 hrs
<b>Module duration (total hours)</b>	<b>200 hrs</b>

<b>For office use only</b>	
Initial approval date	7/5/19
With effect from date	1/9/23
Date and details of revision	Approved via MSc Biomedical Science revalidation 17/8/23
Version number	2

## Module aims

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The module is intended to introduce students to research methods at a postgraduate level in the forensic science and biomedical science disciplines, with a focus on developing research ideas, undertaking a literature review and planning a research study. Writing skills for publication will also be developed. The module is intended to develop the skill base and subject knowledge of the students so that research work can be effectively undertaken in the directed research modules, Dissertation: Pilot Study and Dissertation: Research Project. Students will also be guided on ethics, GDPR, safeguarding and laboratory safety.

## Module Learning Outcomes - at the end of this module, students will be able to:

1	Articulate the purpose and context of research and the basis for selecting appropriate research methodology and designs
2	Critically appraise published research, including systematic reviews, and interpretation of new research in the context of existing knowledge.
3	Formulate an answerable research question with appropriate research aims, objectives and methods in order to demonstrate critical appreciation of the chosen research topic.
4	Discuss and implement relevant ethical principles in research.
5	Identify appropriate audiences for their research discipline and professionally present the information in a poster format demonstrating competent skills.

## Assessment

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### Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment will be in 2 parts. A 25% poster presentation assessing learning outcome 5 and a summative coursework (75%) of a research proposal assessing outcomes 1-4 and full completion of the research ethics form. Students will work on their assignment from a very early stage in the module. A review of current research literature will offer an opportunity for developing an argument to support their proposed research project. It is anticipated that the proposed question will be supported by critical argument and demonstrate understanding about a coherent research design with consistent underpinning methodology.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-4	Coursework	75
2	5	Presentation	25

## Derogations

N/A.

## Learning and Teaching Strategies

The module will be delivered through a mixture of online and face-to-face lectures, tutorials and directed private study. Students will discuss and share ideas through online student-led seminars and peer group discussion, practical exercises and review of published research.

## Indicative Syllabus Outline

- Literature search and review methods
- Research questions and hypotheses
- Research design: quantitative and qualitative methods
- Research ethics
- Research planning
- Research tools, e.g.: Gantt charts, reference managers
- Appropriate software for multivariate statistical analysis
- Research grants and writing for publication.

## Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

### Essential Reads

Creswell, J.W. and Creswell, J.D. (2022), *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 6th ed. SAGE.

Wallace, M. and Wray, A. (2021), *Critical Reading and Writing for Postgraduates*. 4th ed. SAGE Study Skills Series.

### Other indicative reading

Journals specific to research area

## **Employability – the University Skills Framework**

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Each module and programme is designed to cover core Graduate attributes with the aim that each Graduate will leave the University having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

### **Core Attributes**

Engaged  
Creative  
Ethical

### **Key Attitudes**

Commitment  
Curiosity  
Resilience  
Confidence  
Adaptability

### **Practical Skillsets**

Digital Fluency  
Organisation  
Critical Thinking  
Emotional Intelligence  
Communication