MODULE SPECIFICATION

Module Code:	SCI719

Module Title:	Advanced Research Skills

Level:	7	**Credit Value:**	20

Cost Centre(s):	GAFS	JACS3 **code**: HECoS code:	X210 100962

Faculty	FAST	**Module Leader:**	Dr Amiya Chaudhry

Scheduled learning and teaching hours	21 hrs
Guided independent study	179 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
MRes Analytical & Forensic Chemistry	✓	☐
MRes Forensic Anthropology & Bioarchaeology	✓	☐

Pre-requisites
N/A

Office use only
Initial approval: 07/05/2019 Version no:1
With effect from: 01/09/2019
Date and details of revision: Version no:

Module Aims

The module is intended to introduce students to research methods at a postgraduate level in the Forensic 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.

Intended Learning Outcomes

Key skills for employability

KS1	Written, oral and media communication skills
KS2	Leadership, team working and networking skills
KS3	Opportunity, creativity and problem solving skills
KS4	Information technology skills and digital literacy
KS5	Information management skills
KS6	Research skills
KS7	Intercultural and sustainability skills
KS8	Career management skills
KS9	Learning to learn (managing personal and professional development, self-management)
KS10	Numeracy

At the end of this module, students will be able to		Key Skills	
1	Articulate the purpose and context of research and the basis for selecting appropriate research methodology and designs.	KS1 KS4 KS6	KS3 KS5 KS9
2	Write a critical literature review for a research topic which will critically appraise published research, including systematic reviews, and interpretation of new research in the context of existing knowledge.	KS1 KS4 KS6	KS3 KS5 KS7
3	Formulate an answerable research question with appropriate research aims, objectives and methods in order to demonstrate critical appreciation of the chosen research topic.	KS1 KS4 KS6	KS3 KS5 KS7
4	Demonstrate a systematic understanding of relevant ethical principles in research.	KS1	KS6
5	Identify appropriate audiences for their research discipline and professionally present the information in a poster format demonstrating competent skills.	KS1 KS4	KS5 KS6

Transferable skills and other attributes

- Research, investigative and problem-solving skills.
- Interpretation and presentation of written scientific information.
- Decision making and independent thought.

- Time management skills.

Derogations

N/A

Assessment:

Indicative Assessment Tasks:

Assessment will be in 2 parts. A 25% poster presentation assessing learning outcome 5 and a summative coursework of a literature review and research proposal assessing outcomes 1-4. 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 (%)	Duration or Word count (or equivalent if appropriate)
1	1-4	Coursework	75	3000
2	5	Poster Presentation	25	1000

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.

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
- Writing for publication.

Indicative Bibliography:

Essential reading

- Creswell, J.W. & Creswell, J.D. (2018) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches: SAGE, 5th Ed.
- Wallace, M. & Wray, A. (2016) Critical Reading and Writing for Postgraduates: SAGE Study Skills Series, 2nd Ed.

Other indicative reading

- Tabachnick, B.G. & Fidell, L.S. (2013) Using Multivariate Statistics: Pearson New International Edition.
- Bowen, R.T. (2017) Ethics and the Practice of Forensic Science (International Forensic Science and Investigation): Taylor and Francis.
- Journals specific to research area