Module code: MOD002602	Version: 9 Date Amended: 29/Jan/2026

1. Module Title

Computing Research Methodologies

2a. Module Leader

Shareeful Islam

2b. School

School of Computing and Information Sciences

2c. Faculty

Faculty of Science and Engineering

3a. Level

5

3b. Module Type

Standard (fine graded)

4a. Credits

15

4b. Study Hours

150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	None		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Develop a critical understanding of research in computer science and related fields. This module equips you with the skills and knowledge needed to rigorously evaluate published work, understand the principles behind effective study design, and plan research projects with confidence.

You will explore methodologies, data collection strategies, statistical analysis, and project management techniques, gaining insight into how research questions are framed, investigated, and interpreted.

By the end of the module, you will be able to critically assess research, design robust studies, and understand the practical considerations for executing projects, skills that provide a strong foundation for postgraduate study or research-informed professional practice.

6b. Outline Content

- Understand the nature of research within the context of the discipline - Display a knowledge of the relevant sources of published information and use these to support the choice of a research question. - Carry out a detailed literature survey in a chosen subject, so that relevant sources of published information can be utilised to support investigations and evidence for a chosen topic - Write a concise literature review on a particular subject using the conventions of the field - Plan a project on the basis of the literature review and with advice from the supervisor - Include in the plan relevant experimental design, data analysis and appropriate statistical tests, as well as elements of project and quality management. - Carry out, where appropriate, an ethical, legal or hazard assessment of work to be undertaken, informed by professional codes of conduct.

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Access to secure 'dirty' laboratories, secure networks, and hardware as deemed appropriate.

7. Learning Outcomes (threshold standards)

No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Understand the nature of research and its relevance to their future studies.
2	Knowledge and Understanding	Recognise and analyse the social, legal and ethical issues associated with research and experimentation, informed by professional codes of conduct.
3	Intellectual, practical, affective and transferrable skills	Demonstrate analytical competence in terms of both problem identification and resolution. Develop a project management plan, taking into account quality, time and cost requirements, and expand their skill set accordingly. Reflect on own skills, plan and record personal development as the foundation for lifelong learning.
4	Intellectual, practical, affective and transferrable skills	Identify key areas of problems, select and adopt appropriate tools/ research techniques/ methods and technical literature for their resolution in a considered manner.

8a. Module Occurrence to which this MDF Refers

Year	Occurrence	Period	Location	Mode of Delivery
2025/6	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence

Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	12	1,2,3	1 hour lecture
Other teacher managed learning	12	1,2,3	1 hour seminar
Student managed learning	126	1,2,3,4	Private study
TOTAL:	150		

9. Assessment for the above Module Occurrence

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Coursework	1 2 3 4	100 (%)	Fine Grade	30 (%)
Multiphase coursework					

Assessment components for Element 010				
Component No.	Assessment Title	Submission Method	Weighting (%)	Components needed for Mark Calculation?
010/1	Project Proposal Final Report	Canvas	80 (%)	
010/2	Presentation	Canvas	15 (%)	All
010/3	Weekly contribution	Canvas	5 (%)	

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]