

## MODULE DESCRIPTOR

### Module Title

Research Methods

Reference	AS4998	Version	2
Created	August 2021	SCQF Level	SCQF 10
Approved	February 2018	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

### Aims of Module

To provide the student with the ability to carry out and evaluate hypothesis driven laboratory work and analyse experimental data.

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Maintain a laboratory diary in which methods, results and conclusions are recorded.
- 2 Competently perform experimental procedures in a team and appraise each others' input.
- 3 Solve a scientific problem experimentally.
- 4 Evaluate experimental data, identifying sources of errors and uncertainty, including appropriate use of statistics.
- 5 Present and communicate, in the form of a scientific report and orally defend the results and conclusions of the investigative study.

### Indicative Module Content

The module will consist of extended laboratory investigations supported by lectures and tutorials. Students will be able to develop time and management skills and have the opportunity to gain an in-depth working understanding of data analysis. Peer assessment.

### Module Delivery

The course is laboratory based but will also involve some classroom based lectures and tutorials.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	50	N/A
Non-Contact Hours	100	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

**ASSESSMENT PLAN**

If a major/minor model is used and box is ticked, % weightings below are indicative only.

**Component 1**

Type:	Coursework	Weighting:	75%	Outcomes Assessed:	1, 3, 4, 5
Description:	The module will be assessed on the data that has been collected, analysed and presented in a written format and defended orally.				

**Component 2**

Type:	Coursework	Weighting:	25%	Outcomes Assessed:	2
Description:	Peer assessment: Members of the group will peer assess each other anonymously.				

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

The first grade represents Component 1 (CW1) weighted as major and the second, Component 2 (CW2), weighted as minor. A minimum module grade of D is required for a pass, with compensation of grade E in Component 1 or Component 2 permitted. Non-submission of either component will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	AA, AB, AC
<b>B</b>	AD, AE, BA, BB, BC, BD, CA
<b>C</b>	BE, CB, CC, CD, CE, DA, DB
<b>D</b>	DC, DD, DE, EA, EB, EC, ED
<b>E</b>	AF, BF, CF, DF, EE, EF, FA, FB, FC
<b>F</b>	FD, FE, FF
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	Successful completion of Stage 3 of the course or equivalent.
Corequisites for module	None.
Precluded Modules	None.

**ADDITIONAL NOTES**

Students will be required to conform to appropriate safety regulations throughout.

**INDICATIVE BIBLIOGRAPHY**

- 1 REED, R.H., HOLMES, D., WEYERS, J. and JONES, A. *Practical Skills in Biomolecular Sciences*. Current Edition. Pearson Education Ltd.
- 2 O'CONNOR, M. *Writing Successfully on Science*. Current Edition. Spoon.
- 3 YOUNG, M. *The Technical Writer's Handbook: Writing with Style and Clarity*. Current Edition. University Science Books.
- 4 MATTHEWS, J.R. and MATTTHEWS, R.W. *Successful Scientific Writing: A Step-by-Step Guide for the Biological and Medical Sciences*. Current Edition. Cambridge University Press.