

Module code: MOD002533	Version: 10 Date Amended: 01/Nov/2021
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1. Module Title
Quantitative Research Methods

2a. Module Leader
Sharon Morein

2b. School
School of Psychology, Sport and Sensory Sciences

2c. Faculty
Faculty of Science and Engineering

3a. Level
7

3b. Module Type
Standard (fine graded)

4a. Credits
30

4b. Study Hours
300

5. Restrictions			
Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	MSc Research Methods in Psychology MSc Cognitive Neuropsychology MSc Clinical Child Psychology MSc Consumer Psychology		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

This module gives students an understanding of the most commonly used statistical techniques used in psychological research. It develops a critical understanding of the principles of data collection and analysis for psychology of various quantitative methods. Practical issues surrounding statistical procedures are delivered in computer practical sessions. These will involve real-world research questions being presented to students. Example data sets will be provided and analysed. Students will be required to analyse additional data sets independently and submit these for assessment. The chosen statistical methods taught to the students have been directed by the Economic and Social Research Council's Postgraduate Training Guidelines (4th and 5th Editions). These will be written up in APA format, required by psychologists. The course will be delivered through lab-based practical sessions. The module will equip students with a wide range of highly useful transferable, research and analysis skills (such as numerical skills, use of SPSS, IT skills, experimental design, and presentations) which are highly relevant in the employment environment.

6b. Outline Content

-Principles of hypothesis testing & t-tests; -Analysis of variance & post-hoc testing. -Extensions to the General Linear Model: ANCOVA, MANOVA -Statistical Power & Effect size -Multiple Linear Regression -Use of SPSS to carry out statistical tests covered in the lectures

6c. Key Texts/Literature

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

6d. Specialist Learning Resources

It is essential that a dedicated computer laboratory is available for this module, with sufficient PCs to allow one student per PC in each practical session. Each PC should be equipped with SPSS and N-Vivo, as well as standard software such as Microsoft Word and Excel. There should be space in the laboratory to allow students to work in groups or individually on statistics problems and experimental design. The course should be run within the context of a department with a good range and variety of research laboratories to support a range of group projects, with access to a range of equipment (such as video and tape recorders, psycho-physiology equipment, transcribing machines, and appropriate psychological tests to be used under strict supervision).

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	Demonstrate the ability to report results from advanced statistical techniques in the most effective way, in APA format
2	Knowledge and Understanding	Demonstrate systematic understanding of the logic behind several advanced and/or specialised quantitative statistical methods
3	Knowledge and Understanding	Demonstrate comprehensive knowledge of and justification for specific research methods and experimental techniques
4	Intellectual, practical, affective and transferrable skills	Demonstrate initiative in the selection of appropriate statistical tests and the use of appropriate software for analysis
5	Intellectual, practical, affective and transferrable skills	Analyse a wide range of quantitative data
6	Intellectual, practical, affective and transferrable skills	Plan and deliver a professional presentation of their research in an appropriate academic style

8a. Module Occurrence to which this MDF Refers				
Year	Occurrence	Period	Location	Mode of Delivery
2026/7	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	1-5	12 x 1 hour lecture
Other teacher managed learning	36	1,4,5,6	12 x 2 hours computer practical sessions 12 x 1 hours Q&A/discussion sessions
Student managed learning	252	1-6	140 hours practical session preparation 56 hours computer assignments 56 hours major analysis assignment
TOTAL:	300		

9. Assessment for the above Module Occurrence					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Coursework	1 3 5	30 (%)	Fine Grade	40 (%)
Portfolio: computer assignment and analyses (1500 word equivalence)					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Coursework	1 3 4 5	30 (%)	Fine Grade	40 (%)
Portfolio: computer assignment and analyses (1500 word equivalence)					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
012	Coursework	1-6	40 (%)	Fine Grade	40 (%)
Essay: 1800 words					

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]