

Module code: MOD006618		Version: 8 Date Amended: 21/Jun/2024	
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1. Module Title			
Research in Action: Statistical Thinking			

2a. Module Leader			
James Close			

2b. School			
School of Psychology, Sport and Sensory 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 your statistical thinking to give you the ability to approach research questions with skill and understanding. You will develop a critical understanding of the principles of data collection and analysis in Psychology, and consider the theoretical bases, merits and limitations of various quantitative methods. In lectures, you will focus on theoretical and conceptual ideas underpinning statistics and research design, with an emphasis on understanding the logic behind these techniques, and the choices that researchers make. This will enable students to know when it is appropriate to use a particular approach, and how to interpret its output. Concepts covered in lectures are brought to life in associated practical sessions, helping you to gain experience using the statistical techniques covered in lectures, using practical and computer-based examples.

Designing research, analysing results and interpreting the data are essential skills for a psychologist, and highly valued by employers.

6b. Outline Content

Principles of hypothesis testing

Parametric tests of difference (t-tests, ANOVA)

Parametric tests of relationship (correlation, regression)

Interactions

Use of statistical software to carry out statistical tests covered in the lectures

Theories and approaches informing the principles of quantitative research methods

Ethical issues in Psychology research

Collection of data, and its subsequent analysis and report

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 (for face-to-face delivery). Each PC should be equipped with SPSS and the latest release of jamovi (<https://www.jamovi.org/>), as well as standard software such as Microsoft Word and Excel. The PCs should also be connected to the internet. There should be space in the laboratory to allow students to work in groups or individually on statistics problems and experimental design. All students on this module should have access to SPSS and specialist software via the Software Center

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 logic underlying a range of commonly used statistical tests
2	Knowledge and Understanding	Understand the relationship between data collection, interpretation and theory development
3	Intellectual, practical, affective and transferrable skills	Design and report empirical research appropriately, with minimal direction
4	Intellectual, practical, affective and transferrable skills	Select appropriate statistical tests and analyse data using statistical software, with minimal guidance

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	1-4	Lecture 1 hr X 11 weeks plus 1 hour lecture in TW 12
Other teacher managed learning	22	1-4	Practical 2 hr X 11 weeks
Student managed learning	116	1-4	72 hours coursework preparation and 44 hours practical preparation
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	40 (%)	Fine Grade	30 (%)
In-Class MCQ Tests (1200 Words Equivalent)					

Assessment components for Element 010				
Component No.	Assessment Title	Submission Method	Weighting (%)	Components needed for Mark Calculation?
010/1	MCQ1	Scheduled Activity: Timetabled assessment task	50 (%)	All
010/2	MCQ2	Scheduled Activity: Timetabled assessment task	50 (%)	

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Coursework	2-4	60 (%)	Fine Grade	30 (%)
Project Report (1800 words)					

Assessment components for Element 011				
Component No.	Assessment Title	Submission Method	Weighting (%)	Components needed for Mark Calculation?
011/1	Project Report	Canvas	98 (%)	All
011/2	SONA participation	Canvas	2 (%)	

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]
