

## Liverpool John Moores University

Title: RESEARCH METHODS  
Status: Definitive  
Code: **7108SPOSCI** (124257)  
Version Start Date: 01-08-2021

Owning School/Faculty: Sport and Exercise Sciences  
Teaching School/Faculty: Sport and Exercise Sciences

Team	Leader
Mark Scott	Y

**Academic Level:** FHEQ7      **Credit Value:** 20      **Total Delivered Hours:** 34  
**Total Learning Hours:** 200      **Private Study:** 166

### Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	22
Practical	10

**Grading Basis:** 50 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	Assessment	Critical appraisal of a research design	30	
Exam	Exam	Statistical analysis and evaluation exam	70	2

### Aims

*This module of study is available to provide mastery and expertise in quantitative research strategies, methods and techniques, specifically focussed on quantitative data so that students can undertake postgraduate research. The module aims to encourage critical understanding of how quantitative data should be handled and analysed using a variety of approaches. The module will provide the opportunity to develop critical analysis of statistical concepts and procedures, train them to use*

*statistical analysis software and extend their knowledge of the experimental and research design process.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Critically evaluate the appropriateness of experimental designs and research methodologies
- 2 Exhibit good decision making in the choice and application of data processing and statistical analysis procedures
- 3 Apply, report and interpret statistical analyses of quantitative data

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

research design critique	1	
Statistical evaluation	2	3

## **Outline Syllabus**

*Experimental design*  
*Basic significance tests*  
*Confidence Intervals*  
*Effect size*  
*ANOVA*  
*Regression and correlation*  
*Sample size estimation*  
*Validity and reliability assessment*

## **Learning Activities**

This module provides two hours of direct contact per week. Students will receive stimulus lectures on topics concerned with research design and data analysis. Students will also take part in computer practicals, where they will be required to analyse data using a statistical package and interpret the statistical output. In addition, online tasks/ quizzes are used to provide formative feedback to students and diagnostic feedback to staff regarding student performance through the module.

## **Notes**

This module is fundamental to the analysis of quantitative data. It is expected that students develop the data handling and analysis skills that they will directly use in their MSc project.