

Module Details	
Module Title	Quantitative Research Methods and Data Analysis
Module Code	PSY5011-B
Academic Year	2020/1
Credits	20
School	School of Social Sciences
Subject Area	Psychology
FHEQ Level	FHEQ Level 5
Pre-requisites	PSY4006-B, SY-4012L
Co-requisites	N/A

Contact Hours	
Type	Hours
Laboratories	10
Lectures	22
Directed Study	168

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
To expand on skills acquired in PSY4006-B and learn more advanced techniques for analysing data collected from experiments. In particular: experimental designs using two or more independent variables; designs with multiple levels of independent variables (factorial designs); analysis techniques for examining data from such experiments (Analysis of Variance - ANOVA, and the non-parametric equivalents). Also questionnaire design, carrying out analyses to examine reliability/validity; perform simple regression and multiple regression.

Outline Syllabus

- Regression and multiple regression.
- Types of experiments, factorial, within subjects, between subjects, mixed designs.
- Analysis of variance (ANOVA); univariate and multivariate. Non-parametric equivalents for ANOVA.
- Questionnaire design.
- Issues in psychometrics, response format issues; open ended and closed response formats.
- Reliability and validity analyses.
- Critical issues in statistics.

Learning Outcomes

Outcome Number	Description
01	be knowledgeable about a number of specialised quantitative analyses;
10	reason statistically and demonstrate competence in a range of statistical methods;
11	demonstrate ethical competence in psychological theory and research.
12	communicate ideas/research findings by effectively using written and visual means;
13	interpret and use numerical / statistical forms of data;
14	be computer literate to further your own learning in the analysis / presentation of ideas and research findings; approach problem solving in a systematic way;
15	undertake self-directed study;
16	recognise the need to assess your own skills and to harness them for future learning;
17	recognise the value of knowledge and its ability to be transformative;
18	recognise the value/application of ethical principles in a broader social context.
02	be knowledgeable about software to analyse data statistically;
03	be knowledgeable and demonstrate a critical understanding of quantitative research methods;
04	demonstrate knowledge of a range of quantitative research paradigms, research methods and measurement techniques;
05	demonstrate knowledge and application of ethical issues in quantitative research.
06	reason scientifically and demonstrate the relationship between theory and evidence;
07	detect meaningful patterns in behaviour and experience statistically
08	pose and operationalise research questions;
09	demonstrate competence in research skills through practical activities;

Learning, Teaching and Assessment Strategy

Lectures will be used to present factual information about advanced experimental design and statistical techniques (LO1-5). Practical sessions (which may be delivered online or face to face) will be used to teach you selective computer analysis packages and provide experience with handling large data sets (LO6-11). These practical sessions are also used to consolidate the theory learnt in the lectures (LO6-18). The open book exam and research article will assess all Learning Outcomes.

Mode of Assessment

Type	Method	Description	Length	Weighting
Summative	Examination - Open Book	Online examination: short answer questions and output interpretation.	1 hour 30 mins	50%
Summative	Coursework	Research article based on a data set produced in the practical sessions	N/A	50%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.