

C8302 Research Methods in Psychology

20 credits

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Aims:

The rationale for this course is to continue the introduction to research methods and statistical analysis, following on from the second year class **C8203 Introduction to Research Design and Analysis**. The class builds upon the content introduced in the second year class, therefore prior knowledge of the content of this course is a requisite for the third year class. Students will be introduced to more advanced forms of quantitative analysis (moving beyond the one factor methodological designs introduced in the second year to two or more factor designs) as well as a range of qualitative methodologies. Students will be provided with a range of learning resources to support their learning of the material covered in lectures (e.g. quizzes following lectures, data sets, annotated SPSS handouts etc).

Developing a conceptual understanding and critical awareness of experimental design and analysis will also be enhanced by the use of group projects, during which students will gain first-hand experience of designing an experiment, collecting data, conducting statistical analysis, interpreting and writing up the results in a report.

The class is aligned to the British Psychological Society's Qualifying Exam (QE) syllabus, and covers key areas of research methods in psychology required to obtain Graduate Basis for Chartered Membership.

Content:

Part 1: Introduction to the class and review of statistical procedures introduced in second year classes. Introduction to the group projects.

Part 2: Introduction to ethical considerations in research on human participants.

Part 3: Introduction to designs involving more than one IV/factor, or more than two levels of one IV/factor. The problems of multiple testing, and capitalising on chance. Conceptual background to simple analysis of variance (ANOVA) and the application of post hoc and a priori tests for follow up analysis. The use of non-parametric forms of Analysis of Variance.

Part 4: Introduction to a range of multi-factorial ANOVA; between groups, repeated measures and mixed designs. How to analyse interactions between factors.

Part 5: Introduction to the concepts behind multivariate analysis, including a brief introduction to analysis of covariance (ANCOVA) and multivariate analysis of variance (MANOVA), Simple Regression, and an overview of Multiple Regression.

Part 6: Introduction to the use of surveys and conducting questionnaires.

Part 7: Consideration of conceptual and historical issues in qualitative research methods. Overview of key analytical approaches, such as Interpretative phenomenological analysis and Discourse Analysis.

Part 8: The use of a range of data collection methods for qualitative research, such as observation, naturally occurring interaction, interviews and focus groups.

Intended learning outcomes:

Cognitive skills

1. To gain a critical awareness of a wider range of research methods and analyses that can be applied in psychological research.
2. To be able to evaluate the appropriate application of a range of designs and research methods.

Knowledge and understanding

3. To provide students with knowledge of the use of simple and multi-factorial analysis, and understanding the assumptions on which these analyses are based.
4. To provide students with knowledge and understanding of basic qualitative methods and analyses.
5. To provide students with knowledge and understanding of the issues involved in designing an experiment and developing a survey or questionnaire.
6. To provide students with the knowledge and understanding of the issues involved in the ethics of research involving human participants.

Practical skills

7. Students will have the ability to carry out simple and multi-factorial forms of statistical analysis using standard computer software SPSS.
8. Students will be able to carry out a review of relevant literature and design a simple experiment.
9. Students will be able to conduct simple experiments, collect data from human participants, carry out appropriate analysis of the data, and write up the results of experiments in a standard report format.
10. Students will gain experience of explaining their research to others, via group presentations to peers, the writing of the practical report, and in the writing of the group ethics application.

Generic/transferable skills

11. Students will further develop the ability to write clear and concise practical reports in conventional APA format.
12. Students will further develop the ability to select and adopt appropriate methods of statistical analysis, use statistical software package SPSS, draw logical conclusions from statistical analyses, and communicate the meaning of numerical and statistical information.
13. Through the group research projects, students will develop teamwork skills via collaborating in decision making about research design and data collection, as well as preparing a group ethics application, and giving effective oral presentations as part of a group.

Teaching, learning and assessment methods

Methods of teaching and learning:

- a) Students will have 2 to 3 hours of lectures per week, covering the main class content;
- b) To gain further experience of entering data and conducting statistical analysis in SPSS, students will attend a statistical analysis practical which will involve using the statistical tests discussed in lectures;
- c) Students will work in small groups to design a computer-based experiment, collect data, and write individual reports;
- d) Students will take part in group presentations, where they present their group project to their peers and a member of staff; and
- e) Students will take part in a peer review activity where they will use assessment criteria to provide constructive feedback on a sample of their peers' Method sections.

Participation:

The University and the School require students to attend all elements of a class; here, that means, lectures, practicals, and the group presentation.

Assessment and Feedback:

The assessment for this class is designed to support, and measure, students' learning of the class material. The criteria for assessing students' work are available on Myplace. The group ethics application will contribute 10% of the overall mark for the class, and the write up of the group project in the form of an individually written practical report will contribute 40% towards the overall mark for the class. Three computer-based class tests, two on the quantitative parts of the class (each worth 15%) and one on the qualitative component (worth 20%), will make up the remaining 50% of the overall marks for the class. The resit examination will take the form of a two hour examination, contributing 100% to the class mark. The Statistical Analysis practical, peer review, and group presentation are all parts of the required work for the class, and must be completed, but marks are not awarded or included in the final assessment. Participating in all of these activities however, should enhance your learning of the class material. The rationale for developing teamwork skills is based on the collaborative nature of conducting research (have a look at published research papers and you'll see that research is mainly conducted collaboratively).

Assessment	Weighting	Alignment with intended learning outcomes	Feedback
Group ethics application	10%	6, 10	Written group feedback via MyPlace
Quantitative class test 1	15%	1, 2, 3, 6, 9	Automated individual feedback, plus general feedback to whole class
Quantitative class test 2	15%	1, 2, 3, 6, 9	Automated individual feedback, plus general feedback to whole class
Practical report	40%	1, 2, 3, 5, 6, 7, 8, 9, 10	Individual written feedback plus general feedback to whole class

Qualitative class test	20%	1, 2, 4, 6	Automated individual feedback, plus general feedback to whole class
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Other sources of feedback:

In addition to the forms described above, feedback, comes in many forms and at various other points: when a discussion post is responded to, this is feedback; when you email a member of staff and they reply, this is feedback; a response to a question before, after, or during a lecture, is feedback! If however, any feedback is unclear, given the opportunity staff will be happy to clarify it.

Place in course:

This is a third year Psychology class. It will build upon materials introduced in the level 2 *Introduction to Research Design and Analysis* class, and provides the basis for analysis of class assignments for other third level psychology classes (e.g. Individual Differences in the first semester, and second semester classes: Development and Cognition). The class also provides students with the experience and knowledge required to design their 4th year dissertation, and the ability to analyse the data for this dissertation.

Teaching hours:

Lectures will generally take place on Tuesdays and Thursdays 2–3pm, although several Tuesdays, lectures will last from 2-4pm. On weeks where the Tuesday 3-4pm is not being used for lectures, the time has been reserved in the timetable for students to meet and work on their projects. A practical/tutorial/class test will replace the Tuesday lecture slot in weeks 4, 6, 8 and 9, and the Thursday lecture slot in week 12, as per the class timetable, where some students will be expected to attend the practical/tutorial/class test at either 2-3pm or 3-4pm.

Personal Development and Employability:

The subject-specific and generic skills that are developed in this class are noted above. These skills will be of interest to employers within and outwith Psychology, as well as to recruiters for post-graduate courses, so where relevant they should be noted on personal statements/CVs etc. See the *Personal Development and Employability* page on MyPlace for more information related to employability.

Recommended core texts:

Forrester, M.A. (2010) (Ed.). *Doing Qualitative Research in Psychology*. London: Sage Publications.
 Wilson, S. & MacLean, R. (2011). *Research Methods and Data Analysis for Psychology*. London: McGraw-Hill. (Includes a student support web-site with good learning resources).

Other useful texts:

Brace, N., Kemp, R., & Snelgar, R. (2012). *SPSS for Psychologists*. Houndsmills: Palgrave MacMillan.
 Braun, V. & Clarke, V. (2013) *Successful qualitative research: A practical guide for beginners*. London: Sage.

Coolican, H. (2009). *Research Methods and Statistics in Psychology*. London: Hodder and Stoughton.

Field, A. & Hole, G. (2003). *How to Design and Report Experiments*. London: Sage Publications.

Mulhern, G. & Greer, B. (2011). *Making Sense of Data and Statistics in Psychology*. London: Palgrave MacMillan.

Silverman, D. (2010) *Doing qualitative research* (3rd edition – though older editions will do). London: Sage

Silverman, D. (2011) *Interpreting qualitative data* (4th edition – though older editions will do). London: Sage.

* Willig, C. (2001). *Introducing Qualitative Research in Psychology: Adventures in theory and method*. Buckingham: Open University Press.

Useful generic study skills books:

Exams

Becker, L. (2010). *14 Days to Exam Success*. London: Palgrave MacMillan.

Writing

Copus, J. (2009). *Brilliant Writing Tips for Students*. London: Palgrave MacMillan.

Greetham, B. (2008). *How to write better essays*. London: Palgrave MacMillan.

Smyth, T.R. (2004). *The Principles of Writing in Psychology*. London: Palgrave MacMillan.

Williams, K. & Carroll, J. (2009). *Referencing and Understanding Plagiarism*. London: Palgrave MacMillan.

Presentations

van Emden, J. & Becker, L. (2010). *Presentation Skills for Students*. London: Palgrave MacMillan.

Being critical

Cottrell, S. (2011). *Critical thinking skills: developing effective analysis and argument*. London: Palgrave MacMillan.

Williams, K. (2009). *Getting Critical*. London: Palgrave MacMillan.

Other highly recommended guides

Godfrey, J. (2010). *Reading and Making Notes*. London: Palgrave MacMillan.

*Race, P. (2007). *How to get a good degree: making the most of your time at university*. Maidenhead: McGraw Hill/Open University Press.

Williams, K. & Reid, M. (2011). *Time Management*. London: Palgrave MacMillan.

* Available in electronic format via the Library web pages. Copies of these texts are also available in the University Library.

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