



# PSY 863

## Research Design and Evaluation

S1 Day 2014

*Psychology*

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## General Information

Unit convenor and teaching staff

Unit Convenor

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Credit points

4

Prerequisites

Admission to DClinPsych or MClinPsych or DClinNeuro or MClinNeuro or DOrgPsych or MOrgPsych or PGDipOrgBeh

Corequisites

Co-badged status

Unit description

This unit exposes students to a range of advanced quantitative statistical methods that are useful in research in psychology and introduces qualitative research methods. The intent of the unit is to explain underlying concepts rather than teach deeper technical detail. The unit is run as a seminar series and each seminar is followed by a practical workshop. Students completing the unit should have an appreciation of when a variety of advanced statistical methods are appropriate, how to interpret the results of these analyses and how to assess publications that have used these methods. Content includes a number of multivariate methods, meta-analysis and qualitative research methods.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

Design a study and formulate appropriate hypotheses and ways of testing them

Select analytic techniques that are appropriate for the data and which allow valid tests of hypotheses, and research questions to be answered

Read research literature in an informed and sophisticated manner

Reach a basic level of competence in handling SPSS commands and procedures

Knowledgeably apply the specific analytic methods used in optional modules

## Assessment Tasks

Name	Weighting	Due
Take-home exam	35%	25 April 2014
Practical project	35%	23 May 2014
Final exam	30%	Week 13 lecture slot

### Take-home exam

Due: **25 April 2014**

Weighting: **35%**

The data manipulation and missing value compulsory topics will be assessed via a take-home exam that will account for 35% of the overall course grade. The exam will be available and completed in the form of an online iLearn quiz. The exam may involve multiple choice, fill-in-the-blank or short answer questions.

On successful completion you will be able to:

- Select analytic techniques that are appropriate for the data and which allow valid tests of hypotheses, and research questions to be answered
- Reach a basic level of competence in handling SPSS commands and procedures
- Knowledgeably apply the specific analytic methods used in optional modules

### Practical project

Due: **23 May 2014**

Weighting: **35%**

The sample size and critical appraisal compulsory topics will be applied to a practical project that accounts for 35% of the overall course grade. Details of the project will be posted separately on iLearn but will take the form of a competitive grant research proposal. Reports will be submitted via Grademark (part of iLearn).

On successful completion you will be able to:

- Design a study and formulate appropriate hypotheses and ways of testing them
- Select analytic techniques that are appropriate for the data and which allow valid tests of hypotheses, and research questions to be answered
- Read research literature in an informed and sophisticated manner

## Final exam

Due: **Week 13 lecture slot**

Weighting: **30%**

This may be composed of multiple choice and/or short answer style questions and will be held in the lecture slot in week 13. The exam will cover all of the elective topics and students will choose to answer questions on any two topics. The exam will account for 30% of the overall course grade.

On successful completion you will be able to:

- Select analytic techniques that are appropriate for the data and which allow valid tests of hypotheses, and research questions to be answered
- Knowledgeably apply the specific analytic methods used in optional modules

## Delivery and Resources

The unit is largely delivered by downloadable video lectures that combine a classical lecture with demonstration of practical application using SPSS and are available for download at the start of semester. Only one compulsory topic is delivered by face-to-face lecture while all subsequent compulsory modules and all student-selected modules have their core content delivered by video lecture. All compulsory topics do, however, have one-hour face-to-face tutorial sessions at which attendance is strongly recommended but not compulsory. All student-selected modules have an associated in-person workshop at which attendance is very strongly recommended but also not compulsory. The purpose of the workshops is to provide an opportunity to address unresolved questions prior to the final exam. **Important note:** *To achieve this it will be necessary for each student to have viewed the module video and thought about their project prior to attending the workshop.*

## Unit Schedule

Every student will study six (6) learning modules in this unit of which four are compulsory topics and the remaining two (2) are selected by the student from five (5) available elective modules.

Compulsory modules are selected on the basis of being useful topics for any quantitative research topic, while the student-selected modules allow students to somewhat tailor the unit to their individual needs.

Compulsory modules (all must be undertaken)

1. Design and sample size determination
2. Data manipulation in SPSS
3. Revision of regression and General Linear model using SPSS
4. Dealing with missing values in data

Student-selected modules (select two)

5. Latent variable models
6. Longitudinal models
7. Multi-level modelling
8. Meta-analysis
9. Generalisability theory

## Learning and Teaching Activities

### Downloaded lectures

Video recorded lectures and software demonstrations

### Face-to-face lecture

One topic is presented in face-to-face format

### Workshops

In addition to downloaded lectures there are workshops/tutorials for all topics

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy [http://mq.edu.au/policy/docs/grievance\\_management/policy.html](http://mq.edu.au/policy/docs/grievance_management/policy.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: [https://students.mq.edu.au/support/student\\_conduct/](https://students.mq.edu.au/support/student_conduct/)

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

### Learning outcomes

- Design a study and formulate appropriate hypotheses and ways of testing them
- Read research literature in an informed and sophisticated manner
- Reach a basic level of competence in handling SPSS commands and procedures
- Knowledgeably apply the specific analytic methods used in optional modules

## PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

### Learning outcome

- Select analytic techniques that are appropriate for the data and which allow valid tests of hypotheses, and research questions to be answered

## PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

### Learning outcomes

- Design a study and formulate appropriate hypotheses and ways of testing them
- Select analytic techniques that are appropriate for the data and which allow valid tests of hypotheses, and research questions to be answered
- Reach a basic level of competence in handling SPSS commands and procedures
- Knowledgeably apply the specific analytic methods used in optional modules

## PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

### Learning outcome

- Design a study and formulate appropriate hypotheses and ways of testing them

## PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able

to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

### **Learning outcome**

- Read research literature in an informed and sophisticated manner

## **PG - Capable of Professional and Personal Judgment and Initiative**

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

### **Learning outcomes**

- Design a study and formulate appropriate hypotheses and ways of testing them
- Select analytic techniques that are appropriate for the data and which allow valid tests of hypotheses, and research questions to be answered
- Read research literature in an informed and sophisticated manner
- Knowledgeably apply the specific analytic methods used in optional modules