PSY 863

Research Design and Evaluation

S1 Day 2018

Department of Psychology

Contents

General Information

Unit convenor and teaching staff
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Credit points
4

Prerequisites
Admission to MClinPsych or MClinNeuro or MOrgPsych

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. The intent of the unit is to explain underlying concepts rather than teach deeper technical detail. Students completing the unit should have an appreciation of when a variety of advanced statistical methods are appropriate, be able to undertake simple analyses, understand how to interpret the results of these analyses and how to assess publications that have used these methods. Content includes a refresher on statistical study design, critical appraisal of published research, common data analysis methods and a number of methods for longitudinal and complex-sampled data, latent variable models as well as meta-analysis.

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 Stata (or other software) data management and analysis procedures

Draw on a selection of quantitative analysis methods/approaches/techniques

Knowledgably apply the specific analytic methods they used in their optional modules

Assessment Tasks

Name	Weighting	Hurdle	Due
Practical project	50%	No	18 May 2018
Compulsory topic quizzes	20%	No	Weeks 3-6
Invigilated exam	30%	No	Exam period

Practical project

Due: **18 May 2018**
Weighting: **50%**

Each student selects one of the elective topics and writes a short report that accounts for 50% of the overall unit grade. Details of the project will be posted separately on iLearn. Reports will be submitted via Grademark (part of iLearn) and are due by 5pm on 18 May 2018.

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
- Reach a basic level of competence in handling Stata (or other software) data management and analysis procedures
- Draw on a selection of quantitative analysis methods/approaches/techniques
- Knowledgably apply the specific analytic methods they used in their optional modules

Compulsory topic quizzes

Due: **Weeks 3-6**
Weighting: **20%**

Each of the compulsory topics will be assessed by a short online quiz with one being completed in each of weeks 3-6. The quiz will be comprised of multiple choice, fill-in-the-blank and short answer questions. Each quiz will be available for seven days but once commenced must be completed within one hour. Each quiz accounts for 5% of the unit grade and therefore account for a combined 20% of the unit grade.

On successful completion you will be able to:

- Design a study and formulate appropriate hypotheses and ways of testing them
- Read research literature in an informed and sophisticated manner

- Draw on a selection of quantitative analysis methods/approaches/techniques

Invigilated exam

Due: **Exam period**
Weighting: **30%**

This will be multiple choice and short answer style and will be held in the official exam period. The exam may cover any and all material in the four compulsory modules as well as two of the five elective topics covered during the unit as well as use of SPSS and is open book format. The exam will contribute 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
- Read research literature in an informed and sophisticated manner

Delivery and Resources

The unit is largely delivered by downloadable video lectures that combine a classical lecture with demonstration of practical application using Stata and other software and are available for download at the start of or early in the 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.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public

- Special Consideration Policy *(**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Undergraduate students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/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/study/getting-started/student-conduct

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

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) 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

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

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

- 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
- Knowledgably apply the specific analytic methods they used in their optional modules

Assessment tasks

- Practical project
- Invigilated exam

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
- 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 Stata (or other software) data management and analysis procedures
- Draw on a selection of quantitative analysis methods/approaches/techniques
- Knowledgably apply the specific analytic methods they used in their optional modules

Assessment tasks

- Practical project

- Compulsory topic quizzes
- Invigilated exam

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 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
- Draw on a selection of quantitative analysis methods/approaches/techniques

Assessment tasks

- Practical project
- Compulsory topic quizzes
- Invigilated exam

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
- Read research literature in an informed and sophisticated manner
- Reach a basic level of competence in handling Stata (or other software) data management and analysis procedures

Assessment tasks

- Practical project
- Compulsory topic quizzes

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:

Assessment task

- Practical project