



THE UNIVERSITY OF
NEW SOUTH WALES

SCHOOL OF PSYCHOLOGY

PSYC2001

Research Methods 2

2012

1. Staff involved in the course and their contact details

Course Co-ordinator

Prof Peter Lovibond; Room 914 Mathews; phone: 9385 3830; email: p.lovibond@unsw.edu.au

Lecturers

Prof Peter Lovibond (as above)

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Statistics tutors

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2. Information about the course

The course web page is run through Blackboard: telt.unsw.edu.au. Login with your student number and your zPass, and follow the links to the Research Methods 2 page.

Lectures will be held in weeks 1-12 inclusive, on Monday 2-3 (Mathews Theatre A) and Thursday 4-5 (Clancy Auditorium). The first lecture is on Monday Feb 27. Lectures will be digitally recorded through the Lectoria system. Links to the lecture recordings will be available through the course web page. Lecture slides in PDF format will be placed on the webpage in advance of each lecture. The slides summarise key points that the lecturer will expand on. They do not cover all the information and are not a substitute for attending the lecture. You may wish to print the slides and bring them to the lecture to write more detailed notes on.

Statistics tutorials will be held in Weeks 2 – 13 inclusive. Times and locations are available on the Blackboard site. These tutorials will concentrate on the practical application of inferential statistical procedures, through worked examples and practice questions.

Computing labs will be held in Weeks 2, 3, 5, 7, 11 and 13. In these labs you will be using the statistical package SPSS. All computing labs are in Mathews Room 209, located on level 2 behind the elevators.

Attendance at tutorials and labs is compulsory.

Please see the Psychology Student Guide for further information about School and University policy, particularly in relation to submission of class work and supplementary examinations: http://www.psy.unsw.edu.au/students/current/files/Student_Guide.pdf

3. The objectives of the course.

This course deals with the basic principles of research design and an introduction to inferential data analysis procedures. The aims of the course are to:

Specific

- 1) Provide you with a level of understanding of research methodology and inferential data analysis procedures that will allow you to choose appropriate analysis strategies for basic experimental and non-experimental designs, and to critically evaluate analyses of published experiments
- 2) Provide you with the skills necessary to carry out these analyses using the SPSS statistical package.

General

- 1) Allow you to understand and critically evaluate the scientific literature
- 2) Equip you with research skills that will be professionally useful
- 3) Help you think critically and logically

It is expected that by the end of this course you will have developed the “Research Methods in Psychology” Graduate Attribute to an intermediate level, with a particular emphasis on inferential data analysis procedures and associated research design

(see <http://www.apac.psychology.org.au/Content.aspx?ID=2161>)

4. Course Schedule

Lecture Topics (Weeks 1-12)

1. Introduction and revision (PL)
2. Inferential statistics (CD)
3. Estimation (CD)
4. Hypothesis testing and confidence intervals with single mean (CD)
5. Hypothesis testing and confidence intervals: Paired samples (CD)
6. Hypothesis testing and confidence intervals: Independent samples (CD)
7. Type 1 errors, Type II errors, and power (PL)
8. Validity (PL)
9. Correlation and prediction (JR)
10. Chi-square (JR)
11. Factorial designs (JR)
12. Assumptions, multiple comparisons (JR)

Statistics Tutorials (Weeks 2-13)

Week 2. Sampling distribution and probabilities for a range of means

Week 3. Single mean, σ known

Week 4. Single mean, σ unknown

Week 5. Dependent means when σ is known and unknown

Week 6. Independent means when σ is unknown

Week 7. Choosing an inferential test

Week 8. Type I and Type II errors and Power

Week 9. Type I and Type II errors and Power

Week 10. Correlation and prediction

Week 11. Correlation and prediction

Week 12. Chi square

Week 13. Complex designs

Computing Labs (Weeks 2, 3, 5, 7, 11 and 13 only)

Lesson 1 : Data analysis with SPSS

Lesson 2: Entering, defining, and analyzing data

Lesson 3: Single mean and dependent mean analysis

Lesson 4: Independent means

Lesson 5: Correlation and prediction

Lesson 6: Chi square and factorial designs

5. Assessment

There will be 4 components of assessment.

SPSS Exercises. In the final four computing labs, the tutor will grade your answers to the SPSS exercises (5 marks for each tutorial). He/she may ask you to show how you obtained the relevant output. Your best 2 marks will count (10% total).

An *Optional Test* will be held during the Monday lecture hour in Week 8 (April 23, 2-3pm Mat A). This test is optional in the sense that your mark will contribute to your overall grade in the subject only if it turns out to be higher (on a percentage basis) than your final exam mark. You should be able to adopt a reasonably relaxed attitude to the test, and treat it as relatively non-threatening practice for the final exam. The test will cover the material presented in Lecture Weeks 1-6. Please bring your calculator to the test. You may choose not to take the optional test if you wish. Its optional worth is 15% of your final mark. The optional test will be held only once; that is, there will be no additional assessment if you miss the test.

Assignment. The assignment is compulsory and is worth 15% of your final mark. It is due in by 4 pm on the Thursday of Week 12 (May 24th). This assignment will involve methodology and validity.

The *Final Exam* will be two hours and will be closed book (relevant formulae and statistical tables will be provided). The exam will contain data analysis questions, and both short-answer and multiple-choice questions. The data analysis questions will require you to do some limited hand calculations and interpret output from SPSS. The emphasis of the exam is on your understanding of inferential procedures and research methodology issues as well as their practical application. The exam is nominally worth 75% of your final mark, but if your optional test mark counts, the exam will be worth 60% of your final mark. Please bring your calculator to the exam.

Weights for the various components are as follows (which column is relevant depends on whether the optional test counts):

SPSS exercises	10	10
Optional Test	15	0
Assignment 2	15	15
Final Exam	60	75
	100	100

Suggested approach to the course:

1. Attend lectures and tutorials/labs; take good notes
2. Complete the exercises in the tutorial manual
3. Take the Optional Test
4. Submit your assignment on time
5. Do not leave studying until just before the final exam

6. School assessment policy

Final examinations

Students can attend the final examination only once, either in the regularly scheduled or deferred examination period. As students will not be permitted to attend both the regularly scheduled and deferred examinations, they should be advised not to attend the exam as originally scheduled if sick on that day. Instead, they should ensure the appropriate medical certificate to support their case for deferred medical exam. In such a case, a formal application for special consideration must be submitted to Student Central within three working days of the assessment to which it refers.

A deferred examination opportunity for each course will be offered only once. Deferred and alternative assessment materials may be in a different format from the original (e.g., short answers instead of multiple choice questions, oral examination instead of written examination). In addition, the original and deferred assessment materials may also differ in the specific content, although overall both will be sampled for the same relevant course material. These principles will apply to both deferred final examination and alternative in-session assessments.

Assignments

Hard copies of assignments must be submitted to the drop box located at the School Office on Level 10 (Mathews Room 1011) by 4.30pm on the day it is due or earlier. These will be date stamped by the School Office and taken as a formal evidence of submission. In addition, an electronic version must also be lodged into the Blackboard course module as a Turnitin assignment for plagiarism checking, and as insurance in the case of misplaced hard copies of submitted assignments. If students fail to do this, there will be no proof that the assignment was handed in on time and onus is on students to prove submission. Late submissions may not receive detailed feedback.

Special Consideration

All requests for special consideration for assessments worth 20% or more of the total course marks must be lodged through myUNSW. The grounds of the application are to be illness or misadventure beyond the student's control. Extra-curricular activities such as sporting commitments, work commitments or overseas travel will not be considered grounds for special consideration. All applications must be supported by independent third party or professional documentation e.g. medical certificate, letter from counselor. Applications have to be submitted within 3 working days of the exam or assessment due date or 3 working days from the last day covered by the supporting documentation. Applications will not be accepted by teaching staff.

Where an assessment is worth less than 20%, the original medical certificate or supporting documentation (including certified official documentation) must be stapled to the assignment or given to the tutor in the case of a class tests and, where appropriate, will be taken into account when marking the assignment or providing some other form of assessment. In the case of assignments worth less than 20% that are handed in late, we will not consider applications for special consideration unless there is evidence of these circumstances lasting for more than 3 consecutive days or a total of 5 days or more within the assessment period.

All Exchange and Study Abroad students will be expected to sit the final examination without exception. These dates are advertised well in advance.

Students registered with SEADU should follow guidelines indicated by them.

Applying for special consideration does not automatically mean that you will be granted additional assessment or that you will be awarded a higher mark. In some instances the additional assessment could be in the form of a viva.

7. Academic honesty and plagiarism

Plagiarism is the presentation of the thoughts or work of another as one's own.¹

Examples include:

- direct duplication of the thoughts or work of another, including by copying work, or knowingly permitting it to be copied. This includes copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and,
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.²

Submitting an assessment item that has already been submitted for academic credit elsewhere may also be considered plagiarism.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

The Learning Centre website is the central University online resource for staff and student information on plagiarism and academic honesty: www.lc.unsw.edu.au/plagiarism

Students are reminded that careful time management is an important part of study. One of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

8. Resources, suggested readings

All students should download a copy of the Research Methods 2 Tutorial Manual from the course web site. The manual includes material to be covered in statistics and computing labs, practice questions, and statistical tables.

You should purchase a basic calculator for use in tutorials, the optional test and the final exam.

See: <https://my.unsw.edu.au/student/academiclife/assessment/examinations/Calculator.html>

Please go to the Psychology Office (Mathews 1011) prior to the end of semester to obtain an official UNSW sticker that confirms your calculator is approved for use in UNSW exams.

There is no set textbook for this course. The following books held by the Library and/or in MyCourse (Reserve) are recommended, but are not required reading for the course.

Please do not purchase either of these books prior to Lecture 1, when further information will be given regarding recommended reading.

Howell, D. C. (2002). *Statistical Methods for Psychology*. Pacific Grove, CA: Duxbury.

Smithson, M. (2000). *Statistics with Confidence*. London: Sage.

¹ Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle.

² Adapted with kind permission from the University of Melbourne.