# FACULTY OF SCIENCE
# SCHOOL OF PSYCHOLOGY

# PSYC2001

# RESEARCH METHODS 2

## SEMESTER 1, 2018

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## 1. Information about the Course

| FACULTY | Science | | |
|---|---|---|---|
| SCHOOL | Psychology | | |
| COURSE CODE | PSYC2001 | | |
| COURSE NAME | Research Methods 2 | | |
| SEMESTER | Semester 1 | **YEAR** | 2018 |
| UNITS OF CREDIT | 6 | **LEVEL OF COURSE** | 2 |
| PREREQUISITES | PSYC1001, PSYC1011, PSYC1111 | | |
| SUMMARY OF THE COURSE | This course deals with the basic principles of research design and provides an introduction to inferential data analysis procedures. | | |

## 2. Staff Contact Details

**COURSE COORDINATOR**

| Name | Phone | Email | Office |
|---|---|---|---|
| Chris Donkin | 9385 9444 | c.donkin@unsw.edu.au | 706 |

**LECTURERS**

| Name | Phone | Email | Office |
|---|---|---|---|
| Peter Lovibond | 9385 3830 | p.lovibond@unsw.edu.au | 914 |
| Chris Donkin | 9385 9444 | c.donkin@unsw.edu.au | 706 |

**TUTORS & DEMONSTRATORS**

| Name | Phone | Email | Office |
|---|---|---|---|
| Aaron Chang | | shuai.chang@unsw.edu.au | |
| Arthur Kary | | a.kary@unsw.edu.au | |
| Daniel Pearson | | d.pearson@unsw.edu.au | |
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| Ed Stewart | | ed.stewart@unswalumni.com | |
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| Jenny Sloane | | jfsloane92@gmail.com | |

**To make an appointment with teaching staff, please enquire by email.**
**All course enquiries should be directed to your tutor in the first instance.**

## 3. Course Timetable

| Component | Class Number | Day | Time | Location | Weeks |
|---|---|---|---|---|---|
| Lecture | 3862 | Monday | 3-4 pm | MAT A | 1-12 |
| Lecture | 3862 | Thursday | 1-2 pm | MAT A | 1-12 |
| Statistics Tutorial | 3863-3895 | various | | | 2-6, 9-12 |
| Computing Lab | 3867-3894 | various | | Mat 209 | 2,3,5,7,11,12 |

*NB. Course timetables are subject to change without notice. Students are advised to check regularly for updates on the Moodle course site. Log in via https://moodle.telt.unsw.edu.au/login/index.php*

| 4. | Aims of the Course |
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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.

| 5. | Student Learning Outcomes |
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By the end of this course you will have:

| 1. an intermediate-level knowledge of research methods, enabling you to: | 1.1. design and analyse basic studies to address theoretical questions: frame research questions; undertake literature searches; critically analyse empirical studies; formulate testable hypotheses; operationalize variables; choose appropriate research designs; make valid, reliable measurements; analyse data and interpret results; and draw defensible conclusions<br>1.2. perform descriptive and inferential statistical analyses using the computer package SPSS |
|---|---|
| 2. enhanced critical thinking skills, enabling you to: | 2.1. apply knowledge of the scientific method in thinking about problems related to behaviour and mental processes<br>2.2. evaluate the quality of information, including differentiating empirical evidence from speculation<br>2.3. assess the validity of conclusions based on statistical analysis of experimental evidence<br>2.4. evaluate issues and behaviour using different theoretical and methodological approaches |
| 3. enhanced communica-tion skills, including the ability to: | 3.1. describe the outcome of inferential statistical tests<br>3.2. articulate valid conclusions from statistical tests |
| 4. improved knowledge of research ethics, allowing you to: | 4.1. carry out sound research and data analysis, controlling the risk of inferential errors<br>4.2. appreciate the limitations of your own research and the research of others<br>4.3. identify both intentional and unintentional errors in data analysis and presentation |

| 6. | Graduate Attributes |
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| School of Psychology Graduate Attributes[*] | Level of Focus<br>0 = No focus<br>1 = Minor<br>2 = Medium<br>3 = Major | Activities/Assessment |
|---|---|---|
| 1. Core knowledge and understanding | 1 | Lecture material, tutorial exercises and assignment will refer to knowledge and methods from various fields of psychology |
| 2. Research methods in | 3 | All components of the course relate directly to this |

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[*] The *Graduate Attributes of the Australian Undergraduate Psychology Program* was produced as part of the Carrick Associate Fellowship project, "Sustainable and evidence-based learning and teaching approaches to the undergraduate psychology curriculum", and "Designing a diverse and future-oriented vision for undergraduate psychology in Australia", a Discipline-based Initiative funded by the Carrick Institute for Learning and Teaching in Higher Education, and supported by the Australian Psychological Society and the University of New South Wales (School of Psychology; Learning and Teaching @UNSW).

| | | |
|---|---|---|
| **psychology** | | attribute. |
| 3. **Critical thinking skills** | 3 | Lectures will raise theoretical issues regarding how to quantify and communicate probabilistic information. |
| 4. **Values, research and professional ethics** | 2 | All components of the course will emphasise how to draw valid conclusions from evidence |
| 5. **Communication skills** | 2 | Throughout the course, emphasis will be given to communication of the outcomes of inferential analyses. The mid-semester test and final exam will assess these skills. |
| 6. **Learning and application of psychology** | 1 | Lecture material, tutorial exercises and assignment will include reference to examples of applied research. |

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### 7. Rationale for the Inclusion of Content and Teaching Approach

This course prepares students for higher-level psychology courses by conveying the benefits and limitations of particular research designs and inferential statistical analyses. It also provides specific skills in carrying out data analyses, communicating the outcomes and drawing appropriate conclusions.

Students who continue in psychology can study more advanced techniques in PSYC3001 Research Methods 3, which provides preparation for the independent research project carried out in the fourth (Honours) year.

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### 8. Teaching Strategies

The course web page is run through Moodle, which can be accessed from the UNSW eLearning site: http://teaching.unsw.edu.au/elearning

Login with your student number and your zPass, and follow the links to the Research Methods 2 page.

**Lectures** will be digitally recorded through the Echo 360 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 lectures. You may wish to print the slides and bring them to the lecture to write more detailed notes on.

**Statistics tutorials** will be held weekly from Week 2-12, except for Weeks 7 and 8, which will be self-guided revision. Times and locations are listed on the Moodle 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 12 (test). 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 face to face tutorials and labs is essential in accordance with UNSW Assessment Implementation Procedure.

**Calculator**: You should purchase a basic calculator for use in tutorials, the mid-semester test and the final exam. This calculator must be on the list of UNSW approved calculators.
See: https://student.unsw.edu.au/exam-approved-calculators-and-computers

Please go to the front desk on Mathews Level 15 East prior to the end of semester to obtain an official UNSW sticker that confirms your calculator is approved for use in UNSW exams.

**Online Quizzes**: Quizzes will be made available on Moodle in Week 5 and Week 10 to provide you with feedback on your progress in the course. Your score will not count towards your course grade.

**Practice questions**: In addition to the exercises in the tutorial manual, sample questions will be posted on Moodle prior to the mid-semester test and the final exam. Worked solutions will also be posted.

**Suggested approach to the course:**

1. Attend lectures and tutorials/labs; take good notes
2. Complete the quizzes, the exercises in the tutorial manual and the practice questions
3. Take the mid-session test
4. Submit your assignment on time
5. Do not leave studying until just before the final exam

| 9. Course Schedule | | |
|---|---|---|
| **Week (approx.)** | **Lecture Topic** | **Lecturer** |
| 1 | Introduction and revision | Chris Donkin |
| 1-2 | Inferential statistics | Chris Donkin |
| 2-3 | Analysis of single mean designs | Chris Donkin |
| 4-5 | Analysis of two mean designs | Chris Donkin |
| 5 | Dependent vs. independent mean designs | Peter Lovibond |
| 6-7 | Type 1 errors, Type II errors, and power | Peter Lovibond |
| 7 | Presentation of results | Peter Lovibond |
| 8-10 | Correlation and prediction | Peter Lovibond |
| 10 | Factorial designs | Peter Lovibond |
| 11 | Replicability and revisiting power | Chris Donkin |
| 12 | Assumptions, multiple comparisons | Peter Lovibond |

## 10. Assessment

| Assessment Task | Weight | Learning Outcomes Assessed | Graduate Attributes Assessed | Date of | | | Feedback | | |
| | | | | Release | Submission | Fail Deadline | Who | When | How |
|---|---|---|---|---|---|---|---|---|---|
| Mid-semester test | 0 or 15% | All | 1-5 | Week 8 Lecture 1 April 24 | Week 8 Lecture 1 April 24 | Friday May 4 | Lecturer | Tuesday May 8 | Marks and generic feedback on Moodle. |
| Assignment | 20% | 1.1, 1.2, 3.1, 3.2 | 1-5 | Week 8 | Week 12 Thursday May 24 | Thursday May 31 | Marker (one of the Tutors) | Thursday June 7 | Marks and individualised feedback on Moodle |
| SPSS test | 20% | 1.1, 1.2, 3.1 | 1-2 | Week 12 Computing lab | Week 12 | Friday June 1 | Lecturer | Monday June 4 | Marks on Moodle |
| Final Exam | 45% or 60% | all | 1-5 | Exam Period | Exam Period | - | - | - | - |

There will be 4 components of assessment.

A **Mid-session Test** will be held during the Monday lecture hour in Week 8 (April 24, 11-12 am, Matthews Theatre A). This test is open book and is optional in the sense that your mark will contribute to your overall grade in the course only if it turns out to be higher on a percentage basis than your final exam mark. The test will cover topics 2-5 listed in the course schedule above (lectures weeks 1-5; tutorials and labs weeks 2-7). Please bring your calculator and tutorial manual. There will be no supplementary test for students who miss the test.

**Assignment**. The assignment is compulsory and is to be submitted through the Turnitin link on the Moodle page by 5 pm on the Thursday of Week 12 (May 24th). The assignment question will be released in Week 7 and will involve analysis, interpretation and presentation of data.

An **SPSS Test** will be held in the computing lab at your normal lab time, in Week 12. This test is compulsory and will involve analysing and interpreting data and SPSS output.

The **Final Exam** will be two hours and will be closed book (but 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. Please bring your calculator to the exam. Alternative examinations will be subject to approval and implemented in accordance with UNSW Assessment Implementation Procedure.

Note: All assessments in this course have been designed and implemented in accordance with UNSW Assessment Policy. Marks and/or feedback will be provided within 10 days of the due date. Further details for each assessment will be provided to students closer to the assessment release date (see 4.1: UNSW Assessment Design Procedure). Supplementary assessments will be offered and implemented in accordance with UNSW Assessment Implementation Procedure. Please see the School of Psychology Student Guide 2019 for details on how to apply for extensions, special considerations, or for any further queries.

## 11. Expected Resources for Students

| TEXTBOOK | There is no set textbook for this course. You may wish to consult the following books held in the Library's High Use Collection, but they are not required reading for the course. |
| --- | --- |
| | Howell, D. C. (2012). *Statistical Methods for Psychology*. Belmont, CA : Thomson/Wadsworth. |
| | Smithson, M. (2000). *Statistics with Confidence*. London: Sage. |
| TUTORIAL MANUAL | Download the Tutorial Manual from Moodle and print at start of semester. |
| | The manual includes material to be covered in statistics and computing labs, practice questions, and statistical tables. |

## 12. Course Evaluation & Development

Courses are periodically reviewed and students' feedback is used to improve them. Feedback is gathered using various means including UNSW's Course and Teaching Evaluation and Improvement (CATEI) process.

## 13. Plagiarism & Academic Integrity

**What is plagiarism?**

Plagiarism is presenting someone else's thoughts or work as your own. It can take many forms, from not having appropriate academic referencing to deliberate cheating.

UNSW groups plagiarism into the following categories:

- **Copying:** using the same or very similar words to the original text or idea without acknowledging the source or using quotation marks. This also applies to images, art and design projects, as well as presentations where someone presents another's ideas or words without credit.

- **Inappropriate paraphrasing:** changing a few words and phrases while mostly retaining the original structure and information without acknowledgement. This also applies in presentations where someone paraphrases another's ideas or words without credit. It also applies to piecing together quotes and paraphrases into a new whole, without referencing and a student's own analysis to bring the material together.

- **Collusion:** working with others but passing off the work as a person's individual work. Collusion also includes providing your work to another student before the due date, or for the purpose of them plagiarising at any time, paying another person to perform an academic task, stealing or acquiring another person's academic work and copying it, offering to complete another person's work or seeking payment for completing academic work.

- **Duplication:** submitting your own work, in whole or in part, where it has previously been prepared or submitted for another assessment or course at UNSW or another university.

**Where can I find out more information?**

In many cases plagiarism is the result of inexperience about academic conventions. The University has resources and information to assist you to avoid plagiarism. The first place you can look is the section about referencing and plagiarism in each Course Guide, as this will also include information specific to the discipline the course is from. There are also other sources of assistance at UNSW:

- **How can the Learning Centre help me?**

    The Learning Centre assists students with understanding academic integrity and how to not plagiarise. Information is available on their website: http://www.lc.unsw.edu.au/academic-integrity-plagiarism. They also hold workshops and can help students one-on-one.

- **How can Elise help me?**

    ELISE (Enabling Library & Information Skills for Everyone) is an online tutorial to help you understand how to find and use information for your assignments or research. It will help you to search databases, identify good quality information and write assignments. It will also help you understand plagiarism and how to avoid it. All undergraduate students have to review the ELISE tutorial in their first semester and complete the quiz, but any student can review it to improve their

knowledge: http://subjectguides.library.unsw.edu.au/elise.

- **What is Turnitin?**

   Turnitin is a checking database which reviews your work and compares it to an international collection of books, journals, Internet pages and other student's assignments. The database checks referencing and whether you have copied something from another student, resource, or off the Internet. Sometimes students submit their work into Turnitin when they hand it in, but academics can also use it to check a student's work when they are marking it. You can find out more about Turnitin here: https://teaching.unsw.edu.au/elearning.

**What if plagiarism is found in my work?**

If plagiarism is found in your work when you are in first year, your lecturer will offer you assistance to improve your academic skills. They may ask you to look at some online resources, attend the Learning Centre, or sometimes resubmit your work with the problem fixed. However more serious instances in first year, such as stealing another student's work or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in a honours thesis) even suspension from the university. The Student Misconduct Procedures are available here

https://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

**Examples of plagiarism**

**Using the internet appropriately**

A first year student handed in an assignment where she had copied from a website. Her lecturer realised she didn't understand you have to reference websites in the same way you reference books and journal articles. The lecturer explained how to reference and sent her to a workshop at the Learning Centre to help her improve her skills.

**Working together on a math assignment**

A group of Mathematics students worked together on an assignment when they had been told this was not allowed. All questions where the students had worked together were given zero, and this lead to some student failing the assessment.

**No referencing in an assessment**

A third year student submitted a major assessment that included material from a journal article published in Canada. When his essay was submitted into Turnitin, it let the academic know that the student didn't reference the material. The student was given zero for the essay, and because it was worth 50 per cent he failed the course.

**Copying design work**

A final year design student used images of someone else's designs in her work and he said the designs were his own. The matter was formally investigated by his Faculty and he was found to have committed academic misconduct and failed the course.

**Further information and assistance**

If you would like further information or assistance with avoiding plagiarism, you can contact the Learning Centre. The Learning Centre at The University of New South Wales has two locations:

**UNSW Learning Centre**

Lower Ground Floor, North Wing, Chancellery Building

(C22 Kensington Campus – near Student Central)

http://www.lc.unsw.edu.au/

**Phone:** 9385 2060

**Email: learningcentre@unsw.edu.au**

**Opening Hours:**

Monday to Thursday: 9am - 5pm and

Friday: 9am - 2.30pm

**COFA Campus Learning Centre**

**Email:** cofalearningcentre@unsw.edu.au

**Phone:** 9385 0739

| **14. Administrative Matters** |
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The *School of Psychology Student Guide*, available on http://www.psy.unsw.edu.au/current-students/student-guide, contains School policies and procedures relevant for all students enrolled in undergraduate or Masters psychology courses, such as:

- Attendance requirements;
- Assignment submissions and returns;
- Assessments;
- Special consideration in the event of illness or misadventure;
- Student Code of Conduct;
- Student complaints and grievances;
- Student Equity and Disability Unit; and
- Occupational Health & Safety.

Students should familiarise themselves with the information contained in this *Guide*.