



# Course Outline

PSYC2001

Research Methods 2

School of Psychology

Faculty of Science

T1, 2022

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## 1. Staff

| Position        | Name           | Email                  | Consultation times and locations | Contact Details |
|-----------------|----------------|------------------------|----------------------------------|-----------------|
| Course Convenor | Peter Lovibond | p.lovibond@unsw.edu.au | Email for meeting Mathews 914    | 93853830        |
| Lecturer        | Peter Lovibond | p.lovibond@unsw.edu.au |                                  |                 |
| Lecturer        | Ed Stewart     | e.stewart@unsw.edu.au  |                                  |                 |

## 2. Course information

**Units of credit:** 6

**Pre-requisite(s):** PSYC1001, PSYC1011, PSYC1111

**Teaching times and locations:** [PSYC2001 Timetable](#)

### 2.1 Course summary

This course deals with the basic principles of research design and provides an introduction to inferential data analysis procedures.

### 2.2 Course aims

The overall aim of this course is to 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. The course also aims to provide you with the skills necessary to carry out these analyses using the *jamovi* statistical package.

### 2.3 Course learning outcomes (CLO)

At the successful completion of this course the student should be able to:

1. Extend your knowledge of research design and methodology for basic experimental and correlational designs.
2. Select and carry out appropriate inferential data analysis procedures, controlling the risk of inferential errors, and articulate defensible conclusions.
3. Use the computer package *jamovi* to carry out descriptive and inferential statistical analyses and interpret the outcomes.
4. Assess the validity of conclusions of published experiments and appreciate the limitations of your own research and the research of others.

## 2.4 Relationship between course and program learning outcomes and assessments

| CLO | Program Learning Outcomes                                                 |                                                                           |                                                                           |                                                                           |                                                                           |                                                                           | Assessment                            |
|-----|---------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------|
|     | 1. Knowledge                                                              | 2. Research Methods                                                       | 3. Critical Thinking Skills                                               | 4. Values and Ethics                                                      | 5. Communication, Interpersonal and Teamwork                              | 6. Application                                                            |                                       |
| 1.  | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions |                                                                           |                                                                           | Lectures, tutorials, labs, online activities, quizzes, practice questions | Mid-term test, Assignment, Final exam |
| 2.  | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Mid-term test, Assignment, Final exam |
| 3.  | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions |                                                                           | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Mid-term test, Assignment, Final exam |
| 4.  | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Lectures, tutorials, labs, online activities, quizzes, practice questions | Assignment, Final exam                |

## 3. Strategies and approaches to learning

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### 3.1 Learning and teaching activities

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.

**Lectures** will be delivered during the scheduled lecture times using Blackboard Collaborate. These sessions will be recorded, and the links to the lectures (including the 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.

**Statistics tutorials** will be held weekly from Weeks 2-5 and 7-10. These tutorials will concentrate on the practical application of inferential statistical procedures, through worked examples and practice questions. You will also have the opportunity to discuss issues and ask questions. Before each tutorial, preparatory material will be made available online which you should complete beforehand. Tutorials will be held in classrooms in the Mathews building (a limited number will be held online).

**Computing labs** will be held weekly from Weeks 3-5 and 7-8. In these labs you will be learning to use the statistical package *jamovi*. The computing labs will be held in Mathews Room 419, located on level 4 behind the elevators (a limited number will be held online).

Students attending in-person tutorials and labs must bring a mask.

**Online modules** will be posted on Moodle to supplement the lecture and lab material and to provide revision.

**Online Quizzes:** Quizzes will be made available on Moodle in Week 4 and Week 9 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-term test and the final exam.

**Suggested approach to the course:**

1. Attend all classes and complete the online modules; take good notes
2. Complete the online preparatory material before each statistics tutorial
3. Attempt the quizzes, exercises in the tutorial manual and practice questions
4. Submit your assignment on time
5. Do not leave studying until just before the final exam

### 3.2 Expectations of students

It is expected that students are aware of UNSW Assessment policy and understand how to apply for special consideration if they are unable to complete an assignment/exam due to illness and/or misadventure.

It is expected that students have read through the [School of Psychology Student Guide](#).

**Attendance** at tutorials and labs is essential in accordance with UNSW Assessment Implementation Procedure.

**Calculator:** You will need access to a basic calculator for use in tutorials, the mid-term test and the final exam.

**Announcements:** Updates and announcements will be made on the 'Announcements' forum on the Moodle page and/or by email. It is your responsibility to check Moodle and your **student** email account regularly to keep up to date.

**Travel:** The final exam for this course will take place during the T1 examination period, 29 Apr–12 May 2022. You should not arrange travel during the exam period until the date of the final exam has been released. Students who arrange travel or other commitments prior to the release of the final exam date will not be granted consideration in the event they are unable to sit the final exam. This is especially important for study abroad students – do not arrange travel until the final exam date has been released (4 April 2022). A supplementary exam will be held in the period 23-27 May 2022 for those who qualify (see notes on Special Consideration under section 5.3).

**Equitable Learning Service:** Students registered with Equitable Learning Services should contact the course coordinator immediately if they intend to request any special arrangements for later in the course, or if any special arrangements need to be made regarding access to the course material. Letters of support should be emailed to the course coordinator as soon as they are made available.

## 4. Course schedule and structure

In a typical week, this course consists of 2 hours of lecture material delivered online, 1 hour of statistics tutorials, 1 hour of computer labs, and 0-2 hours of online modules. Tutorials and labs will be face to face except for a limited number of online classes for students who are not in Sydney. In addition to the scheduled classes, students are expected to take an additional 6 hours of self-determined study to complete assessments, readings, and exam preparation.

| Week                                        | Lecture topic/s                                                                                    | Statistics tutorial topics                      | Computer lab topics                                     | Online modules                    | Self-determined activities                                                   |
|---------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------|-----------------------------------|------------------------------------------------------------------------------|
| <b>O Week</b>                               |                                                                                                    |                                                 |                                                         | Intro video; revision of PSYC1111 |                                                                              |
| <b>Week 1</b><br>Starting Mon<br>14/02/2022 | 1. sampling distribution, standard error<br>2. single mean confidence interval                     | <b>NO TUTORIAL</b>                              | <b>NO LAB</b>                                           | Intro to <i>jamovi</i> : Part 1   | lecture revision; tutorial/lab preparation                                   |
| <b>Week 2</b><br>Starting Mon<br>21/02/2022 | 1. z test, type 1/2 errors,<br>2. t distribution, degrees of freedom, single mean sigma unknown CI | area under normal curve; tables; CI, Z test     | <b>NO LAB</b>                                           | Intro to <i>jamovi</i> : Part 2   | lecture revision; practice; tutorial/lab preparation                         |
| <b>Week 3</b><br>Starting Mon<br>28/02/2022 | 1. single mean t test<br>2. dependent means CI, t test                                             | single mean sigma unknown; t tables, CI, t test | sampling distributions and central limit theorem        |                                   | lecture revision; practice; tutorial/lab preparation                         |
| <b>Week 4</b><br>Starting Mon<br>7/03/2022  | 1. independent means CI, t test<br>2. paired vs. independent design comparison; assumptions        | dependent means CI, t test                      | <i>jamovi</i> single mean and dependent mean CI, t test | choosing an inferential test      | lecture revision; practice; tutorial/lab preparation                         |
| <b>Week 5</b><br>Starting Mon<br>14/03/2022 | 1. power 1<br>2. power 2                                                                           | independent means CI, t test                    | <i>jamovi</i> independent means CI, t test              | revision of first section; Quiz 1 | lecture revision; practice; tutorial/lab preparation; practice mid-term test |
| <b>Week 6</b><br>Starting Mon<br>21/03/2022 | <b>FLEXIBILITY WEEK</b><br><b>(no lectures, tutorials or labs)</b>                                 |                                                 |                                                         |                                   | lecture revision; practice; tutorial/lab preparation; assignment             |

|                                                   |                                            |                   |                                                        |                                       |                                                                        |
|---------------------------------------------------|--------------------------------------------|-------------------|--------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------|
| <b>Week 7</b><br>Starting Mon<br>28/03/2022       | 1. <b>mid-term test</b><br>2. replication  | power             | <i>jamovi</i> post hoc analysis;<br>bouncing <i>ps</i> | writing Results section               | lecture revision; practice;<br>tutorial/lab preparation;<br>assignment |
| <b>Week 8</b><br>Starting Mon<br>4/04/2022        | 1. correlation<br>2. prediction 1          | correlation       | <i>jamovi</i> correlation, prediction                  | multiple comparisons;<br>peer review  | lecture revision; practice;<br>tutorial/lab preparation;<br>assignment |
| <b>Week 9</b><br>Starting Mon<br>11/04/2022       | 1. prediction 2<br>2. factorial designs    | prediction        | <b>NO LAB</b>                                          | revision of second<br>section; Quiz 2 | lecture revision; practice;<br>assignment                              |
| <b>Week 10</b><br>Starting Mon<br>18/04/2022      | 1. <b>NO LECTURE</b><br>2. exam info / Q&A | factorial designs | <b>NO LAB</b>                                          |                                       | lecture revision; practice                                             |
| <b>Study<br/>period</b><br>23/04/22 –<br>28/04/22 |                                            |                   |                                                        |                                       | Exam preparation                                                       |
| <b>Exam<br/>period</b><br>29/04/22 –<br>12/05/22  |                                            |                   |                                                        |                                       |                                                                        |

## 5. Assessment

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### 5.1 Assessment tasks

All assessments in this course have been designed and implemented in accordance with UNSW Assessment Policy. All assessments are compulsory.

| Assessment task                    | Length    | Weight | Mark | Due date                          |
|------------------------------------|-----------|--------|------|-----------------------------------|
| <b>Assessment 1:</b> Mid-term test | 60 min    | 20%    | /20  | Mon 28 March 1-2pm                |
| <b>Assessment 2:</b> Assignment    | 2-3 pages | 20%    | /20  | Fri 22 April                      |
| <b>Assessment 3:</b> Final exam    | 2 hours   | 60%    | /100 | Exam period<br>29 Apr–12 May 2022 |

**Assessment 1:** A **Mid-term Test** will be held in the Monday lecture time in Week 7 (28 March, 1-2pm). This test is open book and will cover material from the first half of the course (lectures weeks 1-4; tutorials and labs weeks 2-5).

**Assessment 2:** The **Assignment** is to be submitted through the Turnitin link on the Moodle page by midnight on the Friday of Week 10 (22nd April). The assignment question will be released in Week 7 and will involve analysis, interpretation and presentation of data.

**Assessment 3:** The **Final Exam** will contain data analysis questions and short-answer questions. The data analysis questions will require you to do some limited hand calculations and interpret output from *jamovi*. The emphasis of the exam is on your understanding of inferential procedures and research methodology issues as well as their practical application.

**UNSW grading system:** <https://student.unsw.edu.au/grades>

**UNSW assessment policy:** <https://student.unsw.edu.au/assessments>

### 5.2 Assessment criteria and standards

Further information about each assessment will be provided to students closer to the assessment release date.

### 5.3 Submission of assessment tasks

**Assessments 1, 2 and 3:** In accordance with UNSW Assessment Policy, written assessments must be submitted online via Turnitin. No paper or emailed copies will be accepted.

**Late penalties:** deduction of marks for late submissions will be in accordance with School policy (see: [Psychology Student Guide](#)).

**Special Consideration:** Students who are unable to complete an assessment task by the assigned due date can apply for special consideration. Students should also note that UNSW has a Fit to Sit/Submit rule for all assessments. If a student wishes to apply for special consideration for an exam or assessment, the application must be submitted prior to the start of the exam or before an assessment is submitted. If a student sits the exam/submits an assignment, they are declaring

themselves well enough to do so and are unable to subsequently apply for special consideration. If a student becomes ill on the day of the exam, they must provide evidence dated within 24 hours of the exam, with their application.

Special consideration applications must be submitted to the online portal along with Third Party supporting documentation. Students who have experienced significant illness or misadventure during the assessment period may be eligible. Only circumstances deemed to be outside of the student's control are eligible for special consideration. Except in unusual circumstances, the duration of circumstances impacting academic work must be more than 3 consecutive days, or a total of 5 days within the teaching period. If the special consideration application is approved, students may be given an extended due date, or an alternative assessment/supplementary examination may be set. For more information see <https://student.unsw.edu.au/special-consideration>.

**Alternative assessments:** will be subject to approval and implemented in accordance with UNSW Assessment Implementation Procedure.

**Supplementary examination:** will be made available for students with an approved special consideration application and implemented in accordance with UNSW Assessment Policy. This exam will be held in the period 23-27 May 2022.

## 5.4. Feedback on assessment

Feedback on all pieces of assessment in this course will be provided in accordance with UNSW Assessment Policy.

| Assessment    | When      | Who      | Where  | How      |
|---------------|-----------|----------|--------|----------|
| Mid-term test | By Week 9 | Lecturer | Online | Moodle   |
| Assignment    | By 10 May | Marker   | Online | Turnitin |
| Final exam    | N/A       | N/A      | N/A    | N/A      |

## 6. Academic integrity, referencing and plagiarism

The APA (7<sup>th</sup> edition) referencing style is to be adopted in this course. Students should consult the publication manual itself (rather than third party interpretations of it) in order to properly adhere to APA style conventions. Students do not need to purchase a copy of the manual, it is available in the library or online. This resource is used by assessment markers and should be the only resource used by students to ensure they adopt this style appropriately: [APA 7th edition](#).

**Referencing** is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

**Academic integrity** is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage.<sup>1</sup> At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

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<sup>1</sup> International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

Further information about academic integrity and **plagiarism** can be located at:

The *Current Students* site <https://student.unsw.edu.au/plagiarism>, and

The *ELISE* training site <http://subjectguides.library.unsw.edu.au/elise>

The *Conduct and Integrity Unit* provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

## 7. Readings and resources

|                                   |                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Textbook</b>                   | 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.<br>Howell, D. C. (2012). <i>Statistical Methods for Psychology</i> . Belmont, CA : Thomson/Wadsworth.<br>Smithson, M. (2000). <i>Statistics with Confidence</i> . London: Sage. |
| <b>Course information</b>         | Available on Moodle                                                                                                                                                                                                                                                                                                                                                |
| <b>Required readings</b>          | <a href="#">School of Psychology Student Guide</a> .                                                                                                                                                                                                                                                                                                               |
| <b>Recommended internet sites</b> | <a href="#">UNSW Library</a><br><a href="#">UNSW Learning centre</a><br><a href="#">ELISE</a><br><a href="#">Turnitin</a><br><a href="#">Student Code of Conduct</a><br><a href="#">Academic Integrity</a><br><a href="#">Email policy</a><br><a href="#">UNSW Anti-racism policy</a><br><a href="#">UNSW Equity, Diversity and Inclusion policy</a>               |

## 8. Administrative matters

The [School of Psychology 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
- Student code of conduct
- Student complaints and grievances
- Equitable Learning Services
- Health and safety

It is expected that students familiarise themselves with the information contained in this guide.

## 9. Additional support for students

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- The Current Students Gateway: <https://student.unsw.edu.au/>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- Student Wellbeing, Health and Safety: <https://student.unsw.edu.au/wellbeing>
- Equitable Learning Services: <https://student.unsw.edu.au/els>
- UNSW IT Service Centre: <https://www.myit.unsw.edu.au/>