USC

Course Outline

Code: PSY400
Title: Advanced Statistics in Psychology

School: Social Sciences
Teaching Session: Semester 1
Year: 2019
Course Coordinator: Dr Peter Innes - pinnes@usc.edu.au
Course Moderator: Dr Kate Mulgrew - kmulgrew@usc.edu.au
                                    Dr Tamara de Regt - tderegt@usc.edu.au

Please go to the USC website for up to date information on the teaching sessions and campuses where this course is usually offered.

1.   What is this course about?

1.1   Description

This course consolidates knowledge of the advanced statistical techniques introduced in PSY300, including general linear modelling, multiple regression analysis and exploratory and confirmatory factor analysis. In addition, it provides an introduction to structural equation modelling. Proficiency is acquired in the use of SPSS and AMOS for the purpose of undertaking complex statistical analysis of psychological data. The course prepares you to undertake Honours and higher degree dissertations and to conduct professional research.

1.2   Field trips, WIL placements or activities required by professional accreditation

Activity	Details
Nil	Nil

2.   What level is this course?

400 level Graduate - Independent application of graduate knowledge and skills. Meets AQF and professional requirements. May require pre-requisites and developing level knowledge/skills. Normally taken in the 4th year of an undergraduate program.

3.   What is the unit value of this course?

12 units

4.   How does this course contribute to my learning?

Specific Learning Outcomes On successful completion of this course, you should be able to:	Assessment tasks You will be assessed on the learning outcomes in task/s:	Graduate Qualities or Professional Standards mapping Completing these tasks successfully will contribute to:
Demonstrate knowledge of a range of advanced statistical techniques used in psychological research	1, 2 and 3	Knowledgeable.

Specific Learning Outcomes On successful completion of this course, you should be able to:	Assessment tasks You will be assessed on the learning outcomes in task/s:	Graduate Qualities or Professional Standards mapping Completing these tasks successfully will contribute to:
Select statistical techniques appropriate for the analysis of certain psychological data	1, 2 and 3	Creative and critical thinkers. Empowered.
Apply advanced statistical techniques to the analysis of psychological data	1, 2 and 3	Creative and critical thinkers. Empowered.
Write and present complex research findings in a scientific fashion	1, 2 and 3	Empowered.
Demonstrate competence in the use of SPSS and AMOS for complex statistical analysis of psychological data	1, 2 and 3	Empowered.

5. Am I eligible to enrol in this course?

Refer to the USC Glossary of terms for definitions of "pre-requisites, co-requisites and anti-requisites".

5.1 Enrolment restrictions

Must be enrolled in AR403

5.2 Pre-requisites

Nil

5.3 Co-requisites

Nil

5.4 Anti-requisites

Nil

5.5 Specific assumed prior knowledge and skills (where applicable)

Nil

6. How am I going to be assessed?

6.1 Grading scale

Standard – High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL)

6.2 Details of early feedback on progress

Practice quizzes, with access to answers, will be provided online in BlackBoard, aligned appropriately with the content material to be assessed in the first Task assessment in Week 5, in earlier weeks.

6.3 Assessment tasks

Task No.	Assessment Product	Individual or Group	Weighting %	What is the duration / length?	When should I submit?	Where should I submit it?
1	Quiz/zes	Individual	25%	50 minutes	Week 5	In Class
2	Essay	Individual	30%	2000 words maximum	Week 9	Online Assignment Submission

3	Quiz/zes	Individual	45%	1 hour and 30 minutes	Week 13	In Class
			100%			

Assessment 1: In class test I

Goal:	Demonstrate an understanding of ANOVA, GLM and regression analyses. This assessment involves an in-class test to be undertaken in Week 5. The test will be applied in the computer laboratory and involve providing answers to questions covering analyses covered in Weeks 1-4 (qualitative research methods, analysis of variance, and general linear models). Students will engage two sources of data for analyses in the test. First, an NVIVO project will be provided with limited questions requiring use of taught analyses of existing coding at nodes (basic or advanced). The test will provide several alternative results from which the correct corresponding result from the in-test NVIVO analyses and output is selected. Second, an SPSS dataset will be provided from which specific statistical tests must be conducted, and results interpreted, in order to provide answers to set questions.
Product:	Quiz/zes
Format:	The test will only be available during the scheduled tutorial times and students must attend their allocated tutorial in order to sit the test. Fifty minutes will be allowed for completion of the test. The test will be open-book/lecture notes.
Criteria:	- identification and application in SPSS of appropriate statistical analyses - correct interpretation of statistical results - correct APA formatting of results

Assessment Task 2: Essay

Goal:	Understanding of research topic literature, hypotheses and appropriate data analyses.
Product:	Essay
Format:	This assessment focuses on you providing a 2000 word structured response, and discussion, of your own thesis topic, hypotheses, and appropriate intended data analysis techniques, including a discussion of planned assumption testing and potential data transformations. The essay must describe the topic, key concepts, hypotheses, key variables/measurements, appropriate statistical techniques and assumption tests and discuss potential strategies, including data transformations, that could be employed in instances where statistical assumptions have been violated. Where appropriate, qualitative research approaches should feature, following presentation of research question and literature review, the case for a qualitative methodology and method, sampling, ethics and data analysis.
Criteria:	The essay will be assessed according to the following criteria: - The effective presentation of an Introduction (maximum 500 word summary of the thesis topic, including a minimum of five key references. This section should include a discussion of conceptual relevance and relationships). - The effective presentation of research Hypotheses (at least two alternative hypotheses should be provided with the presentation of null hypotheses). The remainder of the essay should include: - an effective short description of Measurements/Variables - demonstrated competence in identifying and reporting the appropriate statistical technique planned for assessing each of the hypotheses, and presentation of a discussion of any key analytic features of the statistical technique (e.g. effect size) - provision of a hypothetical example of APA Publication Style format reporting of each chosen statistical technique's key statistics - demonstrated competence in identifying and reporting the assumption tests appropriate to the chosen statistical techniques

	- correct identification of appropriate data transformations and other strategies to address any violations of statistical assumptions, - demonstrated knowledge of SPSS functions relevant to assumption testing and data transformation - demonstrated knowledge of APA Publication Style for the Running-Head/Title Page, Introduction, Method Sections, and References

Assessment Task 3: In class test II

Goal:	You will demonstrate understanding of Factor analysis, SEM and logistic regression. This assessment involves an in-class test to be undertaken in Week 13. The test will involve providing answers to questions covering analysis types covered in Weeks 7-12 (Factor analysis, Structural equation modelling, and Logistic regression). Questions will be applied, in that SPSS output will be provided, and focus on the interpretation of results, including assumptions.
Product:	Quiz/zes
Format:	The exam will be undertaken in the Lecture period and will last 1 hour and 30 minutes: It will be open-book/lecture notes.
Criteria:	- identification of appropriate statistical analyses - correct interpretation of statistical results - correct APA formatting of results

7. Directed study hours

The directed study hours listed here are a portion of the workload for this course. A 12 unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Directed study hours may vary by location. Student workload is calculated at 12.5 learning hours per one unit.

Location:	Directed study hours for location:
Sippy Downs	Lecture: 2 hours per week. Computer Workshop: 1 hour per week

8. What resources do I need to undertake this course?

Please note that course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Blackboard site. Please log in as soon as possible.

8.1 Prescribed text(s) or course reader

Information regarding prescribed texts or other associated resources will be made available on the BlackBoard site prior to commencement of study.

8.2 Specific requirements

Nil

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low.

It is your responsibility as a student to review course material, search online, discuss with lecturers and peers, and understand the health and safety risks associated with your specific course of study. It is also your responsibility to familiarise yourself with the University's general health and safety principles by reviewing the online Health Safety and Wellbeing training module for students, and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1 Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

10.2 Assessment: Additional requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

a) The final mark is in the percentage range 47% to 49.4%
b) The course is graded using the Standard Grading scale
c) You have not failed an assessment task in the course due to academic misconduct

10.3 Assessment: Submission penalties

Late submission of assessment tasks will be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.
- 10% (of the assessment task's identified value) for the third day
- 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.
- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task.

Weekdays and weekends are included in the calculation of days late.

To request an extension, you must contact your Course Coordinator and supply the required documentation to negotiate an outcome.

10.4 Study help

In the first instance, you should contact your tutor, then the Course Coordinator. Additional assistance is provided to all students through Academic Skills Advisers. To book an appointment or find a drop-in session go to Student Hub.

Contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au

10.5 Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website:
http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching

10.6   General Enquiries

In person:

- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **USC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **USC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **USC Fraser Coast -** Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **USC Caboolture -** Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890

Email: studentcentral@usc.edu.au