USC

Course Outline

Code: BUS515
Title: Advanced Quantitative Research Methods

School:	Business
Teaching Session:	Semester 1
Year:	2019
Course Coordinator:	Professor Sajid Anwar | sanwar@usc.edu.au
Course Moderator:	Professor Meredith Lawley

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 is structured to enable you to develop advanced quantitative research skills that have relevance to higher degrees by research. The course starts with an overview of the research process and multivariate methods followed by a discussion of screening data for missing values and normality, exploratory factor analysis, unit root testing and cointegration in simple regression context, multiple regression analysis and diagnostics testing, logistic regression, discriminant analysis, and structural equation modelling. There is a strong emphasis on the use of statistical tools in data analysis and interpretation using computer packages; ethical issues in research; and reporting research results.

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

N/A

2.   What level is this course?

500 level Advanced - Engaging with new discipline knowledge and skills at an advanced level or deepening existing knowledge and skills within a discipline. Independent application of knowledge and skills in unfamiliar contexts.

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 an understanding of advanced quantitative research methodologies.	1, 2 and 3	Knowledgeable.
Design and develop a research proposal using quantitative methods	1	Engaged
Apply research skills and appropriate methodologies to investigate relevant issues.	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 a postgraduate or Honours program.

5.2   Pre-requisites

Nil

5.3   Co-requisites

BUS512

5.4   Anti-requisites

MBA719 or EMB769

5.5   Specific assumed prior knowledge and skills (where applicable)

N/A

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

A draft copy of your Task 1 will be peered reviewed in week 3 during the class session.

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	Plan	Individual	10%	500-600 words	Week 5, Wednesday 5pm AEST	Online Assignment Submission with Plagiarism check
2	Examination	Individual	40%	90 minutes	Week 10, during the 2nd half of the class session	In Class
3	Report	Individual	50%	2,500-3,000 words	Week 13, Friday 5pm (AEST)	Online Assignment Submission with Plagiarism check
			100%			

Assessment 1: Research Project – Design

Goal:	Based on secondary data, you will design a modest quantitative research project
Product:	Plan
Format:	Research project plan. The project plan will comprise of a brief introduction to the project topic, a tentative method section and a list of appropriate references.
Criteria:	• Clear statement of the problem based on the existing literature • Discussion of the appropriate secondary data and data sources • A list of appropriate hypotheses • Careful justification of the methodology and appropriate referencing (see the Course Blackboard site for more information)

Assessment Task 2: Examination

Goal:	You will demonstrate your advanced understanding of quantitative methods and analysis covered in this course.
Product:	Examination
Format:	This is an individual assessment. Based on topics 1 to 8, the exam will be held in week 10. The duration of the exam will be 90 minutes. Examination format is to be open book with short answers.
Criteria:	• Accuracy of interpretation and analysis of the statistical concepts and data • High level understanding of the concepts and their application

Assessment Task 3: Quantitative Research Project – Results and Analysis

Goal:	This task builds from your project plan and develops your skills in analysis of quantitative research results.
Product:	Report
Format:	Report will have the following sections: Title page, list of contents, introduction, methodology, analysis, conclusion and recommendations, references and an appendix. The introduction and methodology sections will be brief and the bulk of the report will focus on statistical results and their analysis.
Criteria:	• Discussion of data summary statistics, details of variable construction and assumption testing results • Use of appropriate statistical technique(s) • Hypotheses testing results and appropriate interpretation

	• Limitations and recommendations for future research, Concise communication and appropriate referencing (see the Course Blackboard site for more information)

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:
oncampus	Workshop (3 hours)

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

Please note that you need to have regular access to the resource(s) listed below as they are required:

Author	Year	Title	Publisher
Hair, J. F, Babin, B. J., Anderson, R.E., and Black, W.C.	2018, 8th ed.	*Multivariate Data Analysis*	Cengage, U.K.

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

Appendix 1   Course content

Week # / Module #	What key concepts/content will I learn?	Directed Study Activities: teaching components
1	Introduction to multivariate methods Ethical issues in quantitative research	Workshop
2	Testing hypothesis about population means (t and F-tests)	Workshop. Additional resources will be provided on the Course Blackboard site.
3	Mann-Whitney U-test Goodness of fit and contingency table chi-square testing procedures	Workshop. Additional resources will be provided on the Course Blackboard site.
4	Exploratory factor analysis	Workshop. Additional resources will be provided on the Course Blackboard site.
5	Dealing with outliers Data transformation Assumption testing	Workshop. Additional resources will be provided on the Course Blackboard site.
6	Review of correlation and simple regression Related issues	Workshop. Additional resources will be provided on the Course Blackboard site.
7	Multiple regression and diagnostics testing (autocorrelation, heteroscedasticity, multicollinearity)	Workshop. Additional resources will be provided on the Course Blackboard site.
8	Discriminant analysis	Workshop. Additional resources will be provided on the Course Blackboard site.
9	Logistic regression	Workshop. Additional resources will be provided on the Course Blackboard site.
10	Introduction to structural equation modelling: Overview and Confirmatory factor analysis	Workshop. Additional resources will be provided on the Course Blackboard site.
11	Introduction to structural equation modelling: Testing structural equation models	Workshop. Additional resources will be provided on the Course Blackboard site.
12	Introduction to partial least squares	Workshop. Additional resources will be provided on the Course Blackboard site.
13	Review of course	Review of course material provided on the Course Blackboard site.

Mid Semester Break:
15th April 2019-21st April 2019 (Between Week 7 and Week 8)

Public Holidays
Easter Monday- Monday 22nd April 2019 (Week 8)
Anzac Day - Thursday 25th April 2019 (Week 8)
Labour Day - Monday 6th May 2019 (Week 10)