UNSW Course Outline

EDST5101 Advanced Quantitative Research - 2024

Published on the 28 Jan 2024

General Course Information

Course Code : EDST5101
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Arts, Design and Architecture
Academic Unit : School of Education
Delivery Mode : Online
Delivery Format : Non Standard
Delivery Location : Distance Education
Campus : Sydney
Study Level : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

In this course you will learn about quantitative research methods and data analysis at an advanced level. The course will cover research design, population/sampling selection, construction of data collection tools, various types of data collection methods, and data analysis

such as multiple regression and factor analysis. Emphasis will be given to the selection of statistical analyses that would be appropriate for different types of quantitative data.

Course Aims

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Create a set of research questions that can be addressed by quantitative data
CLO2 : Select and apply appropriate statistical methods to analyse specific types of quantitative data
CLO3 : Use computer software programs to analyse quantitative data
CLO4 : Understand key concepts and terminology associated with various quantitative data analysis

Course Learning Outcomes	Assessment Item
CLO1 : Create a set of research questions that can be addressed by quantitative data	• Online quiz
CLO2 : Select and apply appropriate statistical methods to analyse specific types of quantitative data	• Online quiz
CLO3 : Use computer software programs to analyse quantitative data	• Report
CLO4 : Understand key concepts and terminology associated with various quantitative data analysis	• Report • Online quiz

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

Teaching strategies

The teaching approach attempts to actively engage students as they discuss major issues related to quantitative research design, data collection methods and process, and data analyses. Students will learn statistics not just by mathematical formula but also by understanding how statistical concepts are formulated. Concepts will be presented with plenty of examples. Students will be given problems to solve by calculating statistics by hand for simple data while analyzing complex data using computer software packages.

Rationale

Quantitative data analysis can be hard for many students. In this course, the attempts will be made to demonstrate how statistical concepts are formulated so that students have deeper appreciation of statistical methods beyond the numbers and outputs typically generated by computer package software. Calculation by hand is essential for students to gain a good sense of how quantitative data are analysed by a particular method.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Online quiz	40%	Due Date: 08/03/2024 05:00 PM
Report	60%	Due Date: 26/04/2024 05:00 PM

Assessment Details

Online quiz

Assessment Overview

Task description: Online quiz

Feedback: Students will receive immediate feedback following the quiz.

Course Learning Outcomes

- CLO1 : Create a set of research questions that can be addressed by quantitative data
- CLO2 : Select and apply appropriate statistical methods to analyse specific types of quantitative data
- CLO4 : Understand key concepts and terminology associated with various quantitative data analysis

Detailed Assessment Description

Students will take an online quiz. There will be 25 items (item format: multiple choices). Most of the questions will be based on the lecture content and the textbook - Field (2018) Chapters 1 (Introduction) and 8 (Correlation). Carefully read these chapters to do well in the quiz.

Assessment information

RUBRIC/FEEDBACK SHEET

EDST5101 UNSW SCHOOL OF EDUCATION

Assessment Task 1: Online Quiz

Specific Criteria	Fail -------- > High Distinction
Understanding of the question or issue and the key concepts involved • Demonstrate a clear understanding of statistical testing • Demonstrate a clear understanding of the t-test • Demonstrate a clear understanding of the F-test • Use of appropriate statistical terminology	
Depth of analysis and critique in response to the task • Demonstrate the ability to apply to practical situations • Demonstrate the ability to distinguish the correct and incorrect use of analysis and research design • Alignment between research design and analysis	
Familiarity with and relevance of professional and/or research literature used to support response • Draws upon correct analysis techniques • Understand statistical terminology • Apply statistical terminology to practical scenarios	
Structure and organisation of response • N/A	
Presentation of response according to appropriate academic and linguistic conventions • N/A	
General comments/recommendations for next time:	
Lecturer: Recommended: /20 (FL PS CR DN HD)	Date: Weighting: 40%
NB: The ticks in the various boxes are designed to provide feedback to students; they are not given equal weight in determining the recommended grade. Depending on the nature of the assessment task, lecturers may also contextualise and/or amend these specific criteria. The recommended grade is tentative only, subject to standardisation processes and approval by the School of Education Learning and Teaching Committee.	

Assignment submission Turnitin type

This is not a Turnitin assignment

Hurdle rules

A hurdle requirement or hurdle rule is a course requirement that must be fulfilled in order to pass the course. In all courses within the School of Education, all assessments (regardless of their weighting) are hurdle requirements. That is, all assessments in a course must receive a pass mark in order to pass the course. Where a student has failed to meet the requirements of an assessment, they may still be deemed to have met the hurdle requirement if the failure was due to a late penalty and if the overall mark for the course is still greater than 50.

Report

Assessment Overview

Task description: Write a report based on a quantiative data analysis

Length: 1500 words

Feedback: Students will receive feedback within 10 business days of submission.

This is the final assessment.

Course Learning Outcomes

- CLO3 : Use computer software programs to analyse quantitative data
- CLO4 : Understand key concepts and terminology associated with various quantitative data analysis

Detailed Assessment Description

- This assessment task will require students to produce output and writing based on SPSS exercises.
- Based on the content covered in class, three sets of data analysis problems will be presented to students to analyse.
- It is expected that students will present descriptive statistics (e.g., Means and Standard deviation) and inferential statistics (e.g., t-test, ANOVA).
- A format of this report is write-up in the results sections of a typical journal article.
- The results should be presented in a couple of tables (in the APA style: American Psychological Association) as well.
- The assessment should include SPSS output files as an appendix.
- Description and interpretation of the data should be accurate, appropriate, concise, and readable.

Assessment Length

1500 words

Assessment information

RUBRIC/FEEDBACK SHEET

EDST5101 UNSW SCHOOL OF EDUCATION

Assessment Task 2: Report

Specific Criteria	Fail -------- > High Distinction
Understanding of the question or issue and the key concepts involved • Demonstrate a clear understanding of statistical testing • Demonstrate a clear understanding of the t-test • Demonstrate a clear understanding of the F-test • Use of appropriate statistical terminology	
Depth of analysis and critique in response to the task • Demonstrate a well-thought-out analysis plan • Correct and appropriate analysis design • Alignment between the constructs, research design, and the analysis	
Familiarity with and relevance of professional and/or research literature used to support response • Draws upon correct analysis techniques • Produces correct and appropriate analysis results (in numbers) • Produces correct and appropriate interpretations of the results (in words)	
Structure and organisation of response • Present your ideas clearly • Present your ideas in logical and coherent order	
Presentation of response according to appropriate academic and linguistic conventions • Use of language with clarity and coherence • Use of academic writing conventions (e.g., punctuation, spelling, grammar, use of full sentences, capitalization) • Appropriate sentence structure • Appropriate paragraph structure • Appropriate use of headings and subheadings • Appropriate use of tables • APA style: American Psychological Association (tables, references, texts)	
General comments/recommendations for next time:	
Lecturer: Recommended: /20 (FL PS CR DN HD)	Date: Weighting: 60%
NB: The ticks in the various boxes are designed to provide feedback to students; they are not given equal weight in determining the recommended grade. Depending on the nature of the assessment task, lecturers may also contextualise and/or amend these specific criteria. The recommended grade is tentative only, subject to standardisation processes and approval by the School of Education Learning and Teaching Committee.	

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General Assessment Information

Students are required to follow their course convenor's instructions when submitting their work for assessment. All assessment task/s are to be submitted online via Moodle by 5pm. Students are also required to retain all drafts, original data, and other evidence of the authenticity of the work for at least one year after submission/examination. For more detailed information about submission, late penalties, special consideration, and the like, visit the School of Education website on policies and procedures: SED Policies and Procedures (unsw.edu.au).

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 2	Lecture	• Introduction: Fundamentals of statistics & Introduction to SPSS • Readings: Field (2018) Textbook Chapter 1: Why statistics? Chapter 4: The IBM SPSS Statistics environment
Week 4	Lecture	• Research design and statistical testing using: Correlation & Regression • Readings: Field (2018) Textbook Chapter 8: Correlation Chapter 9: The Linear Model (Regression) • Online quiz (Assessment 1 due)
Week 6	Lecture	• Research design and statistical testing using: t-tests & Analysis of Variance • Reading: Field (2018) Textbook Chapter 10: Comparing two means Chapter 12: GLM 1: Comparing several independent means
Week 10	Tutorial	• Data analysis and write up

Attendance Requirements

The School of Education has a minimum attendance requirement of 80% for classes, including lectures, tutorials, seminars, and other learning activities – irrespective of delivery mode. The attendance requirement is a minimum threshold for engagement and ensures that programs meet the requirements of external accreditation authorities (i.e., NESA), and for a range of programs (e.g., initial teacher education programs and other accredited postgraduate coursework specialisations). Students must register their attendance according to the course convenor's directions.

General Schedule Information

This course outline sets out the description of classes at the date the outline is published. The nature of classes may change during the term after the course outline is published. Moodle should be consulted for up-to-date class descriptions. If there is an inconsistency in the description of activities between the University timetable and the course outline (as updated in Moodle), the description in the course outline on Moodle applies.

Course Resources

Prescribed Resources

Readings

Main Textbook

- Field, A. (2018). *Discovering statistics using SPSS*. London; Sage.

Supplementary Textbook

- Heiman, G. (2011). *Basic statistics for the behavioural sciences*. Belmont, CA: Wadsworth, Cengage Learning.
- Morgan, G., Leech, N., Gloeckner, G., & Barrett, K. (2011). *IBM SPSS for introductory statistics: Use and interpretation*. New York: Routledge.
- Pallant, (2010). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS*. Allen & Unwin.

Further Readings

- Copies of articles and book chapters will be provided during the lectures.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Jihyun Lee		Ground Floor, Morven Brown Building	9385 1940	Contact via email	No	Yes

Other Useful Information

Academic Information

Due to evolving advice by NSW Health, students must check for updated information regarding

online learning for all Arts, Design and Architecture courses this term (via Moodle or course information provided).

Please see: https://www.unsw.edu.au/arts-design-architecture/student-life/resources-support/protocols-guidelines for essential student information relating to:

- UNSW and Faculty policies and procedures;
- Student Support Services;
- Dean's List;
- review of results;
- credit transfer;
- cross-institutional study and exchange;
- examination information;
- enrolment information;
- Special Consideration in the event of illness or misadventure;
- student equity and disability;

And other essential academic information.

Academic Honesty and Plagarism

Plagiarism is using the words or ideas of others and presenting them as your own. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement.

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 includes copying materials, ideas or concepts from a book, article, report or other written document, presentation, composition, artwork, design, drawing, circuitry, computer program or software, website, internet, other electronic resource, or another person's assignment without appropriate acknowledgement.
- Inappropriate paraphrasing: Changing a few words and phrases while mostly retaining the original information, structure and/or progression of ideas of the original without acknowledgement. This also applies in presentations where someone paraphrases another's ideas or words without credit and to piecing together quotes and paraphrases into a new whole, without appropriate referencing.
- Collusion: Working with others but passing off the work as a person's individual work. Collusion also includes providing your work to another student for the purpose of them plagiarising, 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.
- Inappropriate citation: Citing sources which have not been read, without acknowledging the

"secondary" source from which knowledge of them has been obtained.
- Duplication ("self-plagiarism"): 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.

The UNSW Academic Skills support offers resources and individual consultations. Students are also 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 proper referencing of sources in preparing all assessment items. UNSW Library has the ELISE tool available to assist you with your study at UNSW. ELISE is designed to introduce new students to studying at UNSW, but it can also be a great refresher during your study.

Completing the ELISE tutorial and quiz will enable you to:

- analyse topics, plan responses and organise research for academic writing and other assessment tasks
- effectively and efficiently find appropriate information sources and evaluate relevance to your needs
- use and manage information effectively to accomplish a specific purpose
- better manage your time
- understand your rights and responsibilities as a student at UNSW
- be aware of plagiarism, copyright, UNSW Student Code of Conduct and Acceptable Use of UNSW ICT Resources Policy
- be aware of the standards of behaviour expected of everyone in the UNSW community
- locate services and information about UNSW and UNSW Library

Use of AI for assessments

As AI applications continue to develop, and technology rapidly progresses around us, we remain committed to our values around academic integrity at UNSW. Where the use of AI tools, such as ChatGPT, has been permitted by your course convener, they must be properly credited and your submissions must be substantially your own work.

In cases where the use of AI has been prohibited, please respect this and be aware that where unauthorised use is detected, penalties will apply.

Use of AI for assessments | UNSW Current Students

Submission of Assessment Tasks

Turnitin Submission

If you encounter a problem when attempting to submit your assignment through Turnitin, please telephone External Support on 9385 3331 or email them on externalteltsupport@unsw.edu.au

Support hours are 8:00am – 10:00pm on weekdays and 9:00am – 5:00pm on weekends (365 days a year). If you are unable to submit your assignment due to a fault with Turnitin, you may apply for an extension, but you must retain your ticket number from External Support (along with any other relevant documents) to include as evidence to support your extension application. If you email External Support, you will automatically receive a ticket number, but if you telephone, you will need to specifically ask for one. Turnitin also provides updates on their system status on Twitter.

Generally, assessment tasks must be submitted electronically via either Turnitin or a Moodle assignment. In instances where this is not possible, alternative submission details will be stated on your course's Moodle site. For information on how to submit assignments online via Moodle: https://student.unsw.edu.au/how-submit-assignment-moodle

Late Submission Penalty

UNSW has a standard late submission penalty of:

- 5% per calendar day,
- for all assessments where a penalty applies,
- capped at five calendar days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Students are expected to manage their time to meet deadlines and to request Special Consideration as early as possible before the deadline. Support with Time Management is available here.

School-specific Information

Policies and Procedures

For more detailed information about School of Education policies and procedures visit the following website: SED Policies and Procedures (unsw.edu.au).

School Contact Information

School of Education. Arts, Design and Architecture. Ground Floor, Morven Brown Building (Map

Reference F20).

- T: +61 2 93851977
- E: education@unsw.edu.au
- W: https://www.arts.unsw.edu.au/education