



MQBS8950

Advanced Business Research Methods II

Session 2, In person-scheduled-weekday, North Ryde 2026

Macquarie Business School Faculty level units

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	6
<u>Unit Schedule</u>	6
<u>Policies and Procedures</u>	7

Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

General Information

Unit convenor and teaching staff

Lecturer

Mostafa Hasan

mostafa.hasan@mq.edu.au

Lecturer

Abhay Singh

abhay.singh@mq.edu.au

Credit points

10

Prerequisites

Admission to GradDipResMQBS

Corequisites

Co-badged status

Unit description

This unit is designed to equip students with an in-depth understanding and practical application of advanced research methods in business. Building upon foundational knowledge about the research process and basic research methods, this unit delves into more advanced methods, including advanced multivariate analysis and machine learning, that are essential for conducting rigorous and impactful research to solve contemporary business problems.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Apply a range of multivariate methods to analyse data in business contexts and communicate the results.

ULO2: Employ quantitative research methods in a variety of business contexts and communicate the results.

ULO3: Critically analyse the relevance and limitations of advanced quantitative research methods used in business research.

General Assessment Information

Late submission

Late Assessment Submission Penalty (written assessments)

If you submit your assessment late, 5% of the total possible marks will be deducted for each day (including weekends), up to 7 days. Submissions more than 7 days late will receive a mark of 0.

Example 1 (out of 100): If you score 85/100 but submit 20 hours late, you will lose 5 marks and receive 80/100.

Example 2 (out of 30): If you score 27/30 but submit 20 hours late, you will lose 1.5 marks and receive 25.5/30.

Extensions:

Automatic short extension: Some assessments are eligible for automatic short extension. You can only apply for an automatic short extension before the due date.

Special Consideration: If you need more time due to serious issues and for any assessments that are not eligible for Short Extension, you must apply for Special Consideration. Need help? Review the [Special Consideration page](#) for further details

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Professional Practice: Advanced Data Analysis for Business	25%	No	Week 4	Individual	No	Open AI
Skills Development: Advanced Quantitative Analysis	25%	No	Week 8	Individual	No	Open AI
Professional Practice: Applied Quantitative Analysis	50%	No	Week 13	Individual	No	Open AI

Professional Practice: Advanced Data Analysis for Business

Assessment Type ¹: Professional task

Indicative Time on Task ²: 28 hours

Due: **Week 4**

Weighting: **25%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Open AI

The purpose of this assessment is for you to apply advanced data analysis techniques to real-world business problems.

You will engage with complex datasets to detect patterns, test hypotheses, and derive evidence-based insights, using statistical software and critically reflecting on your methodology.

Skills in focus:

- Digital skills
- Critical thinking and problem solving
- Discipline knowledge

Deliverable: Quantitative analysis report (generated using statistical software, e.g., Stata) (further details provided on iLearn)

Individual assessment

On successful completion you will be able to:

- Apply a range of multivariate methods to analyse data in business contexts and communicate the results.
- Employ quantitative research methods in a variety of business contexts and communicate the results.

Skills Development: Advanced Quantitative Analysis

Assessment Type ¹: Professional task

Indicative Time on Task ²: 28 hours

Due: **Week 8**

Weighting: **25%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Open AI

The purpose of this assessment is for you to independently design and execute a analysis using advanced quantitative methods.

You will define a business problem, justify your methodology, analyse data using statistical software, and communicate your findings in a structured report with critical reflection on your approach.

Skills in focus:

- Work readiness
- Digital skills
- Critical thinking and problem solving

Deliverable: Structured quantitative analysis report (details provided on iLearn).

Individual assessment

On successful completion you will be able to:

- Apply a range of multivariate methods to analyse data in business contexts and communicate the results.
- Critically analyse the relevance and limitations of advanced quantitative research methods used in business research.

Professional Practice: Applied Quantitative Analysis

Assessment Type ¹: Professional task

Indicative Time on Task ²: 42 hours

Due: **Week 13**

Weighting: **50%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Open AI

The purpose of this assessment is for you to demonstrate your understanding of core advanced business research methods, including multivariate techniques and introductory machine learning concepts.

You will complete a research report that applies these methods to business problems, interpreting results and critically evaluating the appropriateness of each technique.

Skills in focus:

- Work readiness
- Critical thinking and problem solving
- Digital skills

Deliverable: Written Report(details provided on iLearn)

Individual assessment

On successful completion you will be able to:

- Apply a range of multivariate methods to analyse data in business contexts and communicate the results.
- Employ quantitative research methods in a variety of business contexts and communicate the results.
- Critically analyse the relevance and limitations of advanced quantitative research methods used in business research.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- [Academic Success](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation.

³ An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

Delivery and Resources

Seminars: There are 3 hours of face-t-face teaching per week The timetable for classes can be found on the University web site at: <http://www.timetables.mq.edu.au/>

Required Text: Daniels, L., & Minot, N. (2025). An introduction to statistics and data analysis using Stata®: From research design to final report. 2e, Sage Publications.

Statistical package: Stata, R

Consultation Times: The consultation timetable will be made available on iLearn at the beginning of the session. Consultation will start from Week 2. You are encouraged to seek help at a time that is convenient to you from a staff member teaching on this unit during their regular consultation hours.

Students experiencing significant difficulties with any topic in the unit must seek assistance immediately.

Unit Web Page: Course material is available on the learning management system (iLearn). The web page for this unit can be found at: <https://ilearn.mq.edu.au/> from where you need to login to iLearn.

Unit Schedule

MQBS8950 - Advanced Business Research Methods II

(S2, 2026)

Week	Thursday	Lecture Topics	Readings (from Daniel s and Minot, 2025)	Assessment Due
1	30-Jul	• A brief overview of the research process • Sampling techniques	- Chapter 1 - Chapter 2	

2	6-Aug	- An introduction to Stata - Preparing and transforming your data - Data source: an introduction to WRDS	Chapter 4 Chapter 5	In-class practice Compustat Corporate culture data
3	13-Aug	- Descriptive statistics - Correlation and mean/median difference tests - Chi square test	Chapter 6 Chapter 7 - 11	In-class practice Data file: corporate culture and carbon emission
4	20-Aug	Linear regression analysis: Coding, presentation, tabulation, interpretation	Chapter 12	In-class practice Data file: corporate culture and carbon emission Project submission
5	27-Aug	Regression diagnostics	Chapter 13	
6	3-Sep	Regression analysis with binary dependent variable	Chapter 14	In-class practice
7	10-Sep	Introduction to advanced topics in regression analysis		
8	17-Sep	Writing a Research Paper (I)	Chapter 15	In-class practice Project submission
Mid-Session Break				
9	8-Oct	Writing a Research Paper (II)	Chapter 16	
10	15-Oct	Machine Learning Methods (I)		
11	22-Oct	Machine Learning Methods (II)		
12	29-Oct	Introduction to Text Mining		
13	5-Nov	Revision		Report submission

Note: This unit schedule is subject to change at the discretion of Unit Convenor.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)

- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Ask a Study Coach](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit <https://students.mq.edu.au/support/technology/service-desk>.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Unit information based on version 2026.03 of the [Handbook](#)