



BUSA8000

Techniques in Business Analytics

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

Department of Actuarial Studies and Business Analytics

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General Information

Unit convenor and teaching staff Narges Safari narges.safari@mq.edu.au
Credit points 10
Prerequisites BUSA6004 or ECON6034 or (Admission to MBusAnalytics or MActPrac or GradCertResMQBS or GradDipResMQBS)
Corequisites
Co-badged status
Unit description This unit develops some of the core skills needed for the practice of modern business analytics. Statistical inference and associated statistical computing will be covered along with an introduction to analytical techniques needed for working with both structured and unstructured data. The reporting of the results from quantitative style research will also be studied.

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: Articulate the importance and application of data in a variety of contexts.

ULO2: Apply methods for handling data in relevant software.

ULO3: Implement statistical learning algorithms in relevant software.

ULO4: Apply appropriate statistical methods/models, and perform analysis on various types of data and interpret the result.

ULO5: Understand and apply the principles of statistical inference.

ULO6: Successfully work in teams to achieve group and organizational objectives

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Professional practice: Exploratory data analysis	30%	No	09/ 09/ 2026	Individual	Yes	Open
Professional practice: Analysis group project	30%	No	Week 13	Group	No	Observed
Formal examination: Test	40%	No	06/ 10/ 2026	Individual	No	Observed

Professional practice: Exploratory data analysis

Assessment Type ¹: Professional task

Indicative Time on Task ²: 15 hours

Due: **09/09/2026**

Weighting: **30%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

The purpose of this assessment is for you to focus on exploratory data analysis as a foundation for data analysis.

You will be given a dataset/business case and required to perform various analysis. Full details will be provided on iLearn.

Skills in focus:

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

Deliverable(s): Jupyter Lab file with solutions and recorded video explaining the solution (6 minutes).

Individual assessment

On successful completion you will be able to:

- Articulate the importance and application of data in a variety of contexts.
- Apply methods for handling data in relevant software.
- Implement statistical learning algorithms in relevant software.
- Apply appropriate statistical methods/models, and perform analysis on various types of data and interpret the result.

Professional practice: Analysis group project

Assessment Type ¹: Portfolio

Indicative Time on Task ²: 15 hours

Due: **Week 13**

Weighting: **30%**

Groupwork/Individual: Group

Short extension ³: No

AI Approach: Observed

The purpose of this assessment is for you to tackle a real-world business problem using industry-standard analytics techniques and Python programming.

You will work in a team to address a business scenario by conducting exploratory data analysis, performing statistical modelling, and developing a Python-based solution. Your team will present recommendations and rationale and submit a written report.

Skills in focus:

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

Deliverable(s): Group presentation with supporting report (30%, 15-minute presentation per team)

Group assessment

On successful completion you will be able to:

- Articulate the importance and application of data in a variety of contexts.
- Apply methods for handling data in relevant software.

- Implement statistical learning algorithms in relevant software.
- Apply appropriate statistical methods/models, and perform analysis on various types of data and interpret the result.
- Understand and apply the principles of statistical inference.
- Successfully work in teams to achieve group and organizational objectives

Formal examination: Test

Assessment Type ¹: Examination

Indicative Time on Task ²: 30 hours

Due: **06/10/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Observed

The purpose of this assessment is for you to test your understanding of the concepts related to business analytics techniques.

You will participate in a formal test. Feedback on your performance will help you assess your progress through the unit content.

Deliverable(s): Test

Individual assessment

On successful completion you will be able to:

- Articulate the importance and application of data in a variety of contexts.
- Apply methods for handling data in relevant software.
- Implement statistical learning algorithms in relevant software.
- Understand and apply the principles of statistical inference.

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

- This is an in-person unit. Both lectures and tutorials are delivered on campus.
- Links to all unit resources will be made available on iLearn.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#) (<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>). 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>) 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 2026.05 of the [Handbook](#)