



# BUSA8000

## Techniques in Business Analytics

Session 2, In person-scheduled-weekday, North Ryde 2024

*Department of Actuarial Studies and Business Analytics*

### Contents

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<a href="#"><u>General Information</u></a>	2
<a href="#"><u>Learning Outcomes</u></a>	2
<a href="#"><u>General Assessment Information</u></a>	3
<a href="#"><u>Assessment Tasks</u></a>	3
<a href="#"><u>Delivery and Resources</u></a>	5
<a href="#"><u>Policies and Procedures</u></a>	5

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Senior Lecturer

Narges Safari

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510

Credit points

10

Prerequisites

BUSA6004 or ECON6034 or (Admission to MBusAnalytics or MActPrac)

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 R or suitable language.

**ULO3:** Implement statistical learning algorithms in R or suitable language.

**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

## General Assessment Information

**Late Assessment Submission Penalty (written assessments)** *Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical concern.*

*For any late submissions of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.*

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Assessment 1</a>	20%	No	Week 05
<a href="#">Online Quiz 1</a>	20%	No	Week 08
<a href="#">Assessment 2</a>	20%	No	Week 11
<a href="#">Group Project</a>	40%	No	Week 13

### Assessment 1

Assessment Type <sup>1</sup>: Case study/analysis

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Week 05**

Weighting: **20%**

Students will be given a dataset/business case and required to perform various analyses based on the techniques taught in classes. Details will be provided on iLearn.

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 R or suitable language.
- Implement statistical learning algorithms in R or suitable language.

### Online Quiz 1

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 5 hours

Due: **Week 08**

Weighting: **20%**

Students will complete some multiple-choice and/or short-answer questions

On successful completion you will be able to:

- Apply methods for handling data in R or suitable language.
- Implement statistical learning algorithms in R or suitable language.

## Assessment 2

Assessment Type <sup>1</sup>: Case study/analysis

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Week 11**

Weighting: **20%**

Students will be given a dataset/business case and required to perform various analyses based on the techniques taught in classes. Details will be provided on iLearn.

On successful completion you will be able to:

- 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.

## Group Project

Assessment Type <sup>1</sup>: Project

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **Week 13**

Weighting: **40%**

Students will work on a group project.

On successful completion you will be able to:

- 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

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<sup>1</sup> 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
- the [Writing Centre](#) for academic skills support.

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

## Delivery and Resources

The lectures and tutorials are delivered face-to-face. For more information, please refer to iLearn.

## 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](http://connect.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/>

## The Writing Centre

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

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [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 [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

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.

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Unit information based on version 2024.06 of the [Handbook](#)