BUSA7000
Techniques in Business Analytics
Session 1, In person-scheduled-weekday, North Ryde 2024

Department of Actuarial Studies and Business Analytics

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General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
Admission to MRes

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: Perform a review of the literature relevant to an aspect of business analytics.
ULO2: Apply methods for handling data in R.
ULO3: Implement statistical learning algorithms in R.
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.

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**

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Quiz 1</td>
<td>10%</td>
<td>No</td>
<td>Week 4</td>
</tr>
<tr>
<td>Final Examination</td>
<td>60%</td>
<td>No</td>
<td>Exam Period</td>
</tr>
<tr>
<td>Literature Review</td>
<td>20%</td>
<td>No</td>
<td>Week 9</td>
</tr>
<tr>
<td>Online Quiz 2</td>
<td>10%</td>
<td>No</td>
<td>Week 11</td>
</tr>
</tbody>
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**Online Quiz 1**

Assessment Type: Quiz/Test  
Indicative Time on Task: 5 hours  
Due: **Week 4**  
Weighting: **10%**

Students will be given a dataset and required to perform various calculations based on the techniques taught in classes.

On successful completion you will be able to:

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

**Final Examination**

Assessment Type: Examination  
Indicative Time on Task: 20 hours  
Due: **Exam Period**  
Weighting: **60%**

A two hour exam to be held during the University Exam Period.
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.

**Literature Review**

Assessment Type 1: Literature review
Indicative Time on Task 2: 15 hours
Due: Week 9
Weighting: 20%

Students will produce a literate review on a particular topic. Details will be provided on iLearn.

On successful completion you will be able to:

- Perform a review of the literature relevant to an aspect of business analytics.
- Apply methods for handling data in R.
- Implement statistical learning algorithms in R.

**Online Quiz 2**

Assessment Type 1: Quiz/Test
Indicative Time on Task 2: 5 hours
Due: Week 11
Weighting: 10%

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

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.

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

- the Writing Centre 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

**Delivery and Resources**

Workshop to be held weekly on campus.

**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](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 [ask.mq.edu.au](http://ask.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 AskMQ, 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/.

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 2024.01R of the Handbook.