



MMBA8160

Business Intelligence and Analytics: Generating Insights

Term 2, Online-scheduled-weekday 2025

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 MBA or PGDipMgt or GradDipMgt or MSocEntre or GradCertSocEntre or GradCertDigFin

Corequisites

Co-badged status

Unit description

In today's rapidly evolving business landscape, data-driven decision-making is paramount for strategic planning, tactical decision-making, and problem-solving. This unit equips modern business managers with quantitative and statistical research tools, advanced data analysis techniques, and machine learning modelling skills essential for harnessing data to drive transformative outcomes. Gain proficiency in quantitative methods and statistical tools to inform strategic decisions and develop innovative business strategies based on data-driven insights. Learn practical data analytics applications for tactical decision-making, including market segmentation, customer profiling, and performance optimisation across business functions. Explore efficient utilisation of resources through data analysis, enabling management effectiveness and cost optimisation strategies.

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: Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.

ULO2: Use appropriate quantitative research tools, evaluate and synthesise quantitative data to help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.

ULO3: Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable from a quantitative point of view.

ULO4: Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and projects.

General Assessment Information

The following late penalty clause for written assignments should be inserted in this section.

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 apply for Special Consideration.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Individual Assignment</u>	30%	No	Week 5
<u>Final project</u>	40%	No	Week 10
<u>Class participation</u>	10%	No	Throughout the course
<u>In-Class Test</u>	20%	No	Week 10

Individual Assignment

Assessment Type ¹: Programming Task

Indicative Time on Task ²: 10 hours

Due: **Week 5**

Weighting: **30%**

Students will be required to practice what they have learned by completing the assignment.

On successful completion you will be able to:

- Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.
- Use appropriate quantitative research tools, evaluate and synthesise quantitative data to help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.
- Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable from a quantitative point of view.
- Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and projects.

Final project

Assessment Type ¹: Project

Indicative Time on Task ²: 15 hours

Due: **Week 10**

Weighting: **40%**

The final week. Comprised of a 30% project report and 10% individual presentation.

On successful completion you will be able to:

- Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.
- Use appropriate quantitative research tools, evaluate and synthesise quantitative data to help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.
- Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable from a quantitative point of view.
- Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and

projects.

Class participation

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 15 hours

Due: **Throughout the course**

Weighting: **10%**

Weekly assessment of class participation in learning activities

On successful completion you will be able to:

- Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.
- Use appropriate quantitative research tools, evaluate and synthesise quantitative data to help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.
- Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable from a quantitative point of view.
- Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and projects.

In-Class Test

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 10 hours

Due: **Week 10**

Weighting: **20%**

A one hour open book test will be held in class.

On successful completion you will be able to:

- Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.
- Use appropriate quantitative research tools, evaluate and synthesise quantitative data to

help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.

- Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable from a quantitative point of view.
- Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and projects.

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

The delivery and necessary resources can be found in iLearn.

Additionally, resources include the following text book:

Bruce L. Bowerman, Anne M. Drougas, et al. ISE Business Statistics and Analytics in Practice, 9th Edition

Print Book (ISBN: 9781260287844)

<https://www.mheducation.com.au/ise-business-statistics-and-analytics-in-practice-9781260287844-aus>

eBook (ISBN: 9781260289626)

<https://www.vitalsource.com/en-au/products/ise-business-statistics-in-practice-using-data-bruce-bowerman-v9781260289626?term=9781260287844>

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.

- [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/.

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 2025.04 of the [Handbook](#)