



MGMT11169 Business Analytics

Term 1 - 2023

Profile information current as at 19/04/2024 06:03 pm

All details in this unit profile for MGMT11169 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

With today's digitisation and technology development, many organisations can collect and consolidate tremendous amounts of data and store them in databases and data warehouses with ease. In business analytics, you will use a variety of computational techniques and/or methods to evaluate and analyse huge sources of data in real time for trends, patterns, classification, relationship, and other useful information. You will learn and examine data sets for statistical inference, and conduct quantitative analysis, predictive modelling, regression, data mining, and optimisation. This is a practical based core unit and will provide you with foundation knowledge to contribute to the use of various data analytics for problem solving.

Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 10

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

STAT11048 Essential Statistics is an anti-requisite for this unit MGMT11169 Business Analytics. Students who completed STAT11048 Essential Statistics should not enroll in this unit MGMT11169 Business Analytics.

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

Offerings For Term 1 - 2023

- Brisbane
- Melbourne
- Online
- Rockhampton
- Sydney

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

[Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

[Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Online Quiz(zes)**

Weighting: 30%

2. **Online Test**

Weighting: 30%

3. **Online Test**

Weighting: 40%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Unit Evaluation

Feedback

Using an Excel spreadsheet for complex data analytics with key mathematical principles might be difficult for students who have never worked with this software before.

Recommendation

The weekly lesson plans will include more Excel spreadsheet exercises to help students learn how to use Excel for complex data analysis.

Feedback from Unit Evaluation

Feedback

Due to the lack of interactive engagement among other online students, Some students would want to see more discussion and engagement in the modules through group conversations.

Recommendation

Online students will have more challenging and interesting questions to think about in the weekly forum.

Unit Learning Outcomes

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

1. Analyse and reflect on key concepts of business analytics
2. Apply quantitative tools and techniques to analytically identify, examine, investigate and propose solutions to business problems
3. Synthesise data from a variety of sources and develop models to address practical problems in industry.

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes		
	1	2	3
1 - Online Quiz(zes) - 30%	•	•	
2 - Online Test - 30%	•	•	•
3 - Online Test - 40%			•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
1 - Communication	•	•	•
2 - Problem Solving		•	•
3 - Critical Thinking	•	•	•
4 - Information Literacy	•		
5 - Team Work			
6 - Information Technology Competence	•	•	•
7 - Cross Cultural Competence			
8 - Ethical practice			•
9 - Social Innovation			
10 - Aboriginal and Torres Strait Islander Cultures			

Textbooks and Resources

Textbooks

MGMT11169

Prescribed

Business Analytics

4th edition (2020)

Authors: Jeffrey D. Camm, James J. Cochran, Michael J. Fry, Jeffrey W. Ohlmann

Cengage Learning

Boston, MA, US

ISBN: 9780357131787

Binding: Paperback

Additional Textbook Information

Textbooks can be accessed online at the CQUniversity Library website. If you prefer your own copy, you can purchase either paper or eBook versions at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Excel spreadsheet software

Referencing Style

All submissions for this unit must use the referencing style: [American Psychological Association 7th Edition \(APA 7th edition\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Swee Kuik Unit Coordinator

s.kuik@cqu.edu.au

Schedule

Week 1 - 06 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Business Analytics	Chapter 1 Business analysis and decision making; and Lecture notes and material are available in Moodle	Details of Moodle site and resources available. Expectations of student engagement with the unit. Overview of the Assessment Items.

Week 2 - 13 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Descriptive Statistics	Chapter 2 Data types and statistics; and Lecture notes and material are available in Moodle	

Week 3 - 20 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Data Visualisation	Chapter 3 Charts and data visualisation; and Lecture notes and material are available in Moodle	Assessment 1 Online Quiz (Task A). The link will open in Week 3 Monday at 9:00 AM (AEST).

Week 4 - 27 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
Probability and Modeling Uncertainty	Chapter 4 Probability and modelling uncertainty and Lecture notes and material are available in Moodle	

Week 5 - 03 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Statistical Inference	Chapter 6 Point estimation and hypothesis testing; and Lecture notes and material are available in Moodle	Assessment 1 Online Quiz: Task A Due: Week 5, Friday 11:45PM (AEST)

Vacation Week - 10 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
No classes will be held during this week.	No classes will be held during this week.	

Week 6 - 17 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Regression Analysis	Chapter 7 Regression modelling and relationships; and Lecture notes and material are available in Moodle	

Week 7 - 24 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
Decision Analytics	Chapter 13 Decision making process and decision analysis; and Lecture notes and material are available in Moodle	Assessment 2 Online Test Due: Week 7 Friday (28 Apr 2023) 11:45 pm AEST

Week 8 - 01 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Optimisation Concept	Chapter 10 Building optimisation models; and Lecture notes and material are available in Moodle	

Week 9 - 08 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Spreadsheet Models	Chapter 10 and 12 Excel spreadsheet models and designs; and Lecture notes and material are available in Moodle	Assessment 1 Online Quiz (Task B). The link will open in Week 9, Monday at 9:00 AM (AEST).

Week 10 - 15 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Optimisation and Sensitivity Analysis	Chapter 12 Sensitivity analysis and relationships; and Lecture notes and material are available in Moodle	

Week 11 - 22 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Forecasting and Time Series

Chapter 8 Time series patterns and forecasting accuracy; and Lecture notes and material are available in Moodle

Assessment 1 Online Quiz: Task B
Due: Week 11, Friday 11:45 PM (AEST)

Week 12 - 29 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
Revision		Assessment 3 Online Test Due: Week 12 Friday (2 June 2023) 11:45 pm AEST

Review/Exam Week - 05 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Exam Week - 12 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic
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Assessment Tasks

1 Online Quiz

Assessment Type

Online Quiz(zes)

Task Description

Assessment 1 comprises two main tasks:

Task A: Online Quiz (Weighted score: 10%) - The quiz includes 20 questions and has a time limit of 30 minutes. It is designed for students to understand key concepts and apply techniques and/or tools to analytically examine and/or propose solutions to business problems from the selected topics in this unit. The quiz will be opened from 9:00 am (AEST) in Week 3, Monday. Please Note: Only one (1) attempt at the quiz will be made. Once you clicked on the quiz link, you must attempt the quiz within 30 minutes. There will be no opportunity to save your answers and return to the quiz at a later time.

Task B: Online Quiz (Weighted score: 20%) - The quiz includes 22 questions and has a time limit of 60 minutes. It is designed for students to understand key concepts and apply techniques and/or tools to analytically examine and/or propose solutions to business problems from the selected topics in this unit. The quiz will be opened from 9:00 am (AEST) in Week 9, Monday. Please Note: Only one (1) attempt at the quiz will be made. Once you clicked on the quiz link then you must attempt the quiz within 60 minutes. There will be no opportunity to save your answers and return to the quiz at a later time.

Number of Quizzes

2

Frequency of Quizzes

Other

Assessment Due Date

The assessments will be due in Weeks 5 (Task A) and 11 (Task B) at 11:45 pm (AEST) (Friday).

Return Date to Students

The results will be available on the unit Moodle site after the quiz due time.

Weighting

30%

Assessment Criteria

Task A: Online Quiz (10 marks) - You will have 30 minutes to complete the online quiz through the Moodle Site.

Task B: Online Quiz (20 marks) - You will have 60 minutes to complete the online quiz through the Moodle Site.

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Online

Learning Outcomes Assessed

- Analyse and reflect on key concepts of business analytics
- Apply quantitative tools and techniques to analytically identify, examine, investigate and propose solutions to business problems

2 Assessment 2 Online Test

Assessment Type

Online Test

Task Description

The online test (invigilated assessment) is in the form of an online quiz in Moodle. This assessment is designed for students to understand key concepts and apply techniques and/or tools to analytically examine and propose solutions to business problems from the selected topics in this unit. You are required to answer all questions in the online test (there are no multiple-choice questions in the online test).

Assessment Due Date

Week 7 Friday (28 Apr 2023) 11:45 pm AEST

The online test will be held in Week 7. Further information will be provided on Moodle in Week 5

Return Date to Students

Week 9 Friday (12 May 2023)

Grades and feedback comments are released on the unit Moodle page.

Weighting

30%

Assessment Criteria

Your submission (online test) will be assessed according to the following criteria.

- Demonstrated understanding of data analytics with techniques and/or tools that are related to the questions posed.
- Accurately suggest and develop the model for detailed analysis in relation to the case study.
- Able to articulate and evaluate case studies to provide managerial insights and practical limitations based on quantitative outcomes.
- Clarity of written expression, grammar, and spelling.

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Online

Submission Instructions

Submissions must be uploaded into Moodle (the unit website) per policy on or before the due date. Penalties apply for late submissions.

Learning Outcomes Assessed

- Analyse and reflect on key concepts of business analytics
- Apply quantitative tools and techniques to analytically identify, examine, investigate and propose solutions to business problems
- Synthesise data from a variety of sources and develop models to address practical problems in industry.

3 Assessment 3 Online Test

Assessment Type

Online Test

Task Description

The online test (invigilated assessment) is in the form of an online quiz in Moodle. This assessment is designed for students to understand key concepts and apply techniques and/or tools to analytically examine and propose solutions to business problems from the selected topics in this unit. You are required to answer all questions in the online test (there are no multiple-choice questions in the online test).

Assessment Due Date

Week 12 Friday (2 June 2023) 11:45 pm AEST

The online test will be held in Week 12. Further information will be provided on Moodle in Week 10.

Return Date to Students

Assessment feedback and grades are to be released upon certification of grades (refer to assessment policy).

Weighting

40%

Assessment Criteria

Your submission (online test) will be assessed according to the following criteria.

- Demonstrated understanding of the analytical model that is related to the questions posed.
- Accurately suggest and develop the model for detailed analysis in relation to the applications.
- Able to articulate and evaluate scenario modelling to provide managerial insights and practical limitations based on quantitative outcomes.
- Clarity of written expression, grammar, and spelling.

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Online

Submission Instructions

Submissions must be uploaded into Moodle (the unit website) per policy.

Learning Outcomes Assessed

- Synthesise data from a variety of sources and develop models to address practical problems in industry.

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?



Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem