



MGMT20130 Operations Management and Business Analytics

Term 2 - 2024

Profile information current as at 06/07/2025 10:44 am

All details in this unit profile for MGMT20130 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

In today's dynamic business landscape, organisations strive for operational excellence and data-driven decision-making. Operations management and business analytics offer a comprehensive exploration of the synergies between efficient operations and the strategic use of data analytics. The unit explores the contemporary principles and practices involved in the management of both service and manufacturing operations. Taking a strategic approach to operations, you will examine fundamental concepts such as process planning, design, control and Six Sigma continuous improvement; quality management and lean thinking; the role of the supply chain in modern operations; capacity and location principles as well as the use of project-based activities in an operational environment. You will utilise business data from a variety of organisational sources including financial, economic and market information and develop mathematical models for more effective operational decisions. The unit also provides you with the opportunity to engage in independent research using evidence-based approaches to identify workplace issues and recommend viable solutions that enhance organisational effectiveness.

Details

Career Level: *Postgraduate*

Unit Level: *Level 9*

Credit Points: 6

Student Contribution Band: 10

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

There are no requisites for this unit.

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 2 - 2024

- Brisbane
- Melbourne
- Online
- 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 Postgraduate 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. **Critical Review**

Weighting: 40%

2. **Report**

Weighting: 60%

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 SUTE

Feedback

The unit was heavily focused around manufacturing. It would be great to understand how this could tie in to a corporate/service based industry with real work scenarios

Recommendation

More learning materials on service industries should be added to the unit's Moodle site creating a balance in learning materials between manufacturing and service industries

Feedback from SUTE

Feedback

Dr.Imran Ali explained the content of the unit clearly and was helpful with explaining the assessments

Recommendation

Continue to provide detailed information on the unit's content and assessment criteria.

Feedback from SUTE

Feedback

It would be beneficial to include more complex Excel Solver problems in the course. Currently, the content is too simple, and addressing industry-level issues could enhance our understanding further.

Recommendation

It is recommended to include a variety of Excel Solver problems to enhance students' analytical skills, benefiting both their assessment performance and professional career development.

Unit Learning Outcomes

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

1. Develop an advanced and integrated understanding of operations managements and business analytics
2. Critically analyse and reflect on key principles of operations analytics
3. Critically apply a complex systems approach to analytically identify, analyse and investigate the management of operational functions
4. Synthesise complex data from a variety of sources and develop mathematical models as part of the analytical process to identify and propose solutions to contentious workplace business problems
5. Interpret and successfully apply knowledge related to recent development of operations management in service and manufacturing industries.

Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Critical Review - 40%	•	•	•	•	•
2 - Report - 60%	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Knowledge		◦	◦	◦	◦
2 - Communication			◦	◦	◦
3 - Cognitive, technical and creative skills	◦	◦	◦	◦	◦
4 - Research	◦		◦	◦	◦
5 - Self-management		◦		◦	◦
6 - Ethical and Professional Responsibility	◦	◦		◦	◦
7 - Leadership	◦	◦	◦	◦	◦
8 - Aboriginal and Torres Strait Islander Cultures					

Textbooks and Resources

Textbooks

MGMT20130

Supplementary

Business Analytics

Latest Edition

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

Mason, OH : Cengage

ISBN: 9780357131909

MGMT20130

Supplementary

Operations and Supply Chain Management for MBAs

Latest Edition

Authors: Authors: Jack R. Meredith and Scott M. Shafer

John Wiley & Sons Inc

ISBN: 9781119898672

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Supplementary

Operations Management: An Integrated Approach

Latest Edition

Authors: R. Dan Reid and Nada R. Sanders

John Wiley & Sons, Inc.

ISBN: 9781119674665

[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 2016 with Add-in Solver

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

Imran Ali Unit Coordinator

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Darren Turnbull Unit Coordinator

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Schedule

Week 1 - 08 Jul 2024

Module/Topic	Chapter	Events and Submissions/Topic
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Introduction to Operations Management	Lecture notes and materials are available in Moodle.	
Week 2 - 15 Jul 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Process Planning and Design	Lecture notes and materials are available in Moodle.	
Week 3 - 22 Jul 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Process Monitoring and Control	Lecture notes and materials are available in Moodle.	
Week 4 - 29 Jul 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Managing the Supply Chain and Inventory	Lecture notes and materials are available in Moodle.	
Week 5 - 05 Aug 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Forecasting, Capacity Planning and Facility Location	Lecture notes and materials are available in Moodle.	
Vacation Week - 12 Aug 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Week 6 - 19 Aug 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Business Analytics	Lecture notes and materials are available in Moodle.	
Week 7 - 26 Aug 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Optimisation Modelling	Lecture notes and materials are available in Moodle.	A Critical Review Due: Week 7 Monday (26 Aug 2024) 11:45 pm AEST
Week 8 - 02 Sep 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Modelling and Sensitivity Analysis	Lecture notes and materials are available in Moodle.	
Week 9 - 09 Sep 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Network Models and Decision Analytics	Lecture notes and materials are available in Moodle.	
Week 10 - 16 Sep 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Quality Management	Lecture notes and materials are available in Moodle.	
Week 11 - 23 Sep 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Just-in-time and Lean Systems	Lecture notes and materials are available in Moodle.	
Week 12 - 30 Sep 2024		
Module/Topic	Chapter	Events and Submissions/Topic

Project Management

Lecture notes and materials are available in Moodle.

Business Report Due: Week 12
Friday (4 Oct 2024) 11:45 pm AEST

Review/Exam Week - 07 Oct 2024

Module/Topic

Chapter

Events and Submissions/Topic

Exam Week - 14 Oct 2024

Module/Topic

Chapter

Events and Submissions/Topic

Assessment Tasks

1 A Critical Review

Assessment Type

Critical Review

Task Description

This is an individual assessment. In this assessment, the students are required to perform a critical analysis of the literature on the intersections of digital technologies and supply chain resilience and devise a model or framework for resilient supply chain operations. The literature should not be more than three years old and should be sourced from the recommended list of academic journals in the field of operations and supply chain management (the list of journals has been provided in Moodle).

Students are advised to submit their 2500-word (+/- 10%) critical review through Turnitin in Moodle, with a cover sheet showing the unit name and number, assessment number, student name, and ID. Assessment details and guidelines will be provided on the unit website.

Assessment Due Date

Week 7 Monday (26 Aug 2024) 11:45 pm AEST

A late penalty @ 5% per day applies

Return Date to Students

Week 9 Friday (13 Sept 2024)

See your marks in Moodle and grade book

Weighting

40%

Assessment Criteria

The assessment will be marked based on the following criteria:

Developed a succinct introduction of the review: 10%

Performed descriptive statistics: 20%

Critically discuss how different technologies support three main elements (readiness, response, and recovery) of supply chain resilience: 25%

Devised a robust framework linking digital technologies and supply chain resilience: 20%

Evaluated and articulated the viability and limitations of implementing a resilient supply chain framework for the organisation: 10%

Conclusion and recommendations: 10%

Cited at least 20 articles following APA style: 5%

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Develop an advanced and integrated understanding of operations managements and business analytics
- Critically analyse and reflect on key principles of operations analytics
- Critically apply a complex systems approach to analytically identify, analyse and investigate the management of operational functions

- Synthesise complex data from a variety of sources and develop mathematical models as part of the analytical process to identify and propose solutions to contentious workplace business problems
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2 Business Report

Assessment Type

Report

Task Description

This is an individual assessment. The assessment is designed for students to apply operations management principles and business analytics. It involves writing about factors influencing location decisions, identifying optimal facility locations, and scenario-based mathematical modelling of business problems to devise optimal solutions for operational efficiency and productivity.

Students need to submit a 2500-word (+/- 10%) Business Report and their quantitative outcomes based on the developed Optimisation Models using Excel Spreadsheets through Turnitin, and Moodle, with a cover sheet showing unit name and number, assessment number, your name, and student ID. Submissions must be in Business Report format using Word with 1.5 line spacing and Times Roman 12-point font. Further details and guidelines on assessment have been provided on the unit website.

Assessment Due Date

Week 12 Friday (4 Oct 2024) 11:45 pm AEST

A late penalty @ 5% per day applies

Return Date to Students

The result will be released after grade certification

Weighting

60%

Assessment Criteria

The assessment will be marked following these criteria:

Developed a concise executive summary and introduction for the report: 10%

Demonstrated a comprehensive understanding of the factors influencing facility location decisions: 20%

Conducted thorough analysis and accurately identified the optimal facility location: 20%

Developed and evaluated a mathematical model, proposing solutions to the problems/questions: 25%

Interpreted the outcomes of the model's analytics: 10%

Integrated a minimum of 12 academic journal articles, adhering to APA reference format: 10%

Ensured clarity of written expression, grammar, and spelling: 5%

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Develop an advanced and integrated understanding of operations managements and business analytics
- Critically analyse and reflect on key principles of operations analytics
- Critically apply a complex systems approach to analytically identify, analyse and investigate the management of operational functions
- Synthesise complex data from a variety of sources and develop mathematical models as part of the analytical process to identify and propose solutions to contentious workplace business problems
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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