



ENMM20025 *Maintenance Strategies*

Term 3 - 2020

Profile information current as at 14/12/2025 06:35 am

All details in this unit profile for ENMM20025 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 this unit, students will examine the business drivers and operations strategy that impact on the maintenance decision-making framework. They explain the internal and external influences on the development of maintenance strategy. They also define maintenance objectives and develop maintenance planning and control strategies.

Details

Career Level: *Postgraduate*

Unit Level: *Level 8*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Prerequisite: ENMM20023 Introduction to Asset and Maintenance Management

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 3 - 2020

- Mixed Mode

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. **Written Assessment**

Weighting: 15%

2. **Written Assessment**

Weighting: 30%

3. **Written Assessment**

Weighting: 55%

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 Student Evaluation

Feedback

The format of the print ready learning guides needs to be reviewed as diagrams and text fonts are inconsistent which makes printing difficult. Some weblinks in the learning guides are broken.

Recommendation

The format of the print ready learning guides will be reviewed and amended as needed to ensure they print correctly. All embedded weblinks will be checked.

Feedback from Student Evaluation

Feedback

It is sometimes necessary to move between various modules in Moodle. It is difficult to go between modules in the current Moodle format.

Recommendation

The Moodle layout is changing to a tile format. It is hoped that the new format will make navigating between blocks easier.

Feedback from Student Evaluation

Feedback

The learning materials and assessments are heavily focussed on the resources sector. Students from other industries found the assessments difficult to understand.

Recommendation

The resources and assignment questions will be reviewed and revised to increase the relevance to a range of industry sectors.

Feedback from Student Evaluation

Feedback

Student evaluations for assessment feedback have fallen.

Recommendation

Marking criteria sheets for all assessments will be reviewed.

Unit Learning Outcomes

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

1. Explain the internal and external influences on the development of maintenance strategy.
2. Research and analyse the business drivers and operations strategy that impact on the maintenance decision making framework.
3. Communicate the defined life-cycle phases of industrial assets.
4. Describe the business-centred maintenance (BCM) approach to develop or modify maintenance strategy.
5. Define maintenance objectives and develop maintenance planning and control strategies.

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Written Assessment - 15%		•	•		
2 - Written Assessment - 30%	•	•	•	•	
3 - Written Assessment - 55%	•	•	•	•	•

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					

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes							
	1	2	3	4	5	6	7	8
1 - Written Assessment - 15%	○	○	○	○	○	○		
2 - Written Assessment - 30%	○	○	○	○	○	○		
3 - Written Assessment - 55%	○	○	○	○	○	○		

Textbooks and Resources

Textbooks

There are no required textbooks.

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Study Guide uploaded on the unit website

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)
For further information, see the Assessment Tasks.

Teaching Contacts

Fae Martin Unit Coordinator
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Muralitheran V Kanagarajoo Unit Coordinator
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Schedule

Week 1 - 09 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 1	Industrial organisations and life cycle costs	All lectures are online through the Zoom app. Lecture 1 - Wednesday 11/11/20 @ 8:00pm AEDT (daylight saving time)

Week 2 - 16 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 2	Formulating maintenance strategy, a business centred approach	Lecture 2 - Wednesday 18/11/20 @ 8:00pm AEDT (daylight saving time)

Week 3 - 23 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 3	The structure of industrial assets	Lecture 3 - Wednesday 25/11/20 @ 8:00pm AEDT (daylight saving time) Finalise Assignment 1. Assignment 1 Due: Week 3 Friday (27 Nov 2020) 11:45 pm AEST

Week 4 - 30 Nov 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 4	Maintenance objectives	Lecture 4 - Wednesday 02/12/20 @ 8:00pm AEDT (daylight saving time)

Vacation Week - 07 Dec 2020

Module/Topic	Chapter	Events and Submissions/Topic
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No lecture this week.

Week 5 - 14 Dec 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 5	Preventative maintenance decision making Part 1: Concepts and techniques	Lecture 5 - Wednesday 16/12/20 @ 8:00pm AEDT (daylight saving time)

Week 6 - 21 Dec 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 6	Preventative maintenance decision making Part 2: Maintenance task selection	No lecture this week.

Vacation Week - 28 Dec 2020

Module/Topic	Chapter	Events and Submissions/Topic
		No lecture this week.

Week 7 - 04 Jan 2021

Module/Topic	Chapter	Events and Submissions/Topic
Module 7	Maintenance task selection using reliability maintenance	Lecture 6 - Wednesday 06/01/21 @ 8:00pm AEDT (daylight saving time) Finalise Assignment 2. Assignment 2 Due: Week 7 Friday (8 Jan 2021) 11:45 pm AEST

Week 8 - 11 Jan 2021

Module/Topic	Chapter	Events and Submissions/Topic
Module 8	Determining the asset life plan and schedule	No lecture this week.

Week 9 - 18 Jan 2021

Module/Topic	Chapter	Events and Submissions/Topic
Module 9	Lean maintenance	Lecture 7 - Wednesday 20/01/21 @ 8:00pm AEDT (daylight saving time)

Week 10 - 25 Jan 2021

Module/Topic	Chapter	Events and Submissions/Topic
Module 10	Asset reliability maintenance control	Interactive session Wednesday 27/01/21 @ 8:00pm AEDT (daylight saving time). Recap of the unit. Clarification of final assessment.

Week 11 - 01 Feb 2021

Module/Topic	Chapter	Events and Submissions/Topic
Module 11	Management of asset turnarounds	Interactive session Wednesday 03/02/21 @ 8:00pm AEDT (daylight saving time). Recap of the unit. Clarification of final assessment.

Week 12 - 08 Feb 2021

Module/Topic	Chapter	Events and Submissions/Topic
Mini-project	Time to review unit and finalise mini-project	No lecture this week. Finalise Mini-project. Mini Project Due: Week 12 Friday (12 Feb 2021) 11:45 pm AEST

Exam Week - 15 Feb 2021

Module/Topic	Chapter	Events and Submissions/Topic
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Assessment Tasks

1 Assignment 1

Assessment Type

Written Assessment

Task Description

The details of the assessment will be available on the unit Moodle site.

This assessment is based upon the unit learning modules 1 - 3.

In answering the questions, you will relate the theoretical processes you have read about in the learning material to your own organisation or facility.

Assessment Due Date

Week 3 Friday (27 Nov 2020) 11:45 pm AEST

Return Date to Students

Week 5 Friday (18 Dec 2020)

It is expected that marked assessment will be returned within 2 weeks of the due date when submitted on time

Weighting

15%

Assessment Criteria

This is a criterion - based assessment item.

It is highly recommended that you read beyond the unit materials to complete assessment items.

A detailed marking guide is available on the unit Moodle site.

Your submission for this assessment will be evaluated according to the following criteria:

- Demonstration of knowledge and understanding of concepts
- Evidence of research beyond own experience and unit material
- Clarity of expression, including use of terminology, ease of reading, spelling and grammar, orderly and logical presentation and use of diagrams to illustrate points
- Quality of technical presentation including neatness, appropriate use of Figures and Tables
- Use of correct and accurate referencing techniques
- Marks could be deducted from your submitted assignment due to:
 - Exceeding the assignment word count by 10%
 - Late submission

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Submission Instructions

Assignments must be submitted electronically (in "MSWord" format NOT pdf) in Moodle. When uploading your assignment on Moodle, ensure you use the following file format, Example - 'Albert Jones_s024789_ENMM20025_Assignment 1'

Learning Outcomes Assessed

- Research and analyse the business drivers and operations strategy that impact on the maintenance decision making framework.
- Communicate the defined life-cycle phases of industrial assets.

Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills

- Research
- Self-management
- Ethical and Professional Responsibility

2 Assignment 2

Assessment Type

Written Assessment

Task Description

The details of this assessment item will be available on the unit Moodle site.

This assessment is based upon the unit learning modules 1 - 6.

In this assessment, you will critique and review elements of the maintenance strategy within your organisation or facility, relating it to the theoretical processes you have read about in the learning material.

Assessment Due Date

Week 7 Friday (8 Jan 2021) 11:45 pm AEST

Return Date to Students

Week 9 Friday (22 Jan 2021)

It is expected that marked assessment will be returned within 2 weeks of the due date when submitted on time

Weighting

30%

Assessment Criteria

This is a criterion - based assessment item.

It is highly recommended that you read beyond the unit materials to complete assessment items.

A detailed marking guide is available on the unit Moodle site.

Your submission for this assessment will be evaluated according to the following criteria:

- Demonstration of knowledge and understanding of concepts
- Evidence of research beyond own experience and unit material
- Clarity of expression, including use of terminology, ease of reading, spelling and grammar, orderly and logical presentation and use of diagrams to illustrate points
- Quality of technical presentation including neatness, appropriate use of Figures and Tables
- Use of correct and accurate referencing technique
- Marks could be deducted from your submitted assignment due to:
 - Exceeding the assignment word count by 10%
 - Late submission

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Submission Instructions

Assignments must be submitted electronically (in "MSWord" format NOT pdf) in Moodle. When uploading your assignment in Moodle, ensure you use the following file format, Example - 'Albert Jones_s024789_ENMM20025_Assignment 2'

Learning Outcomes Assessed

- Explain the internal and external influences on the development of maintenance strategy.
- Research and analyse the business drivers and operations strategy that impact on the maintenance decision making framework.
- Communicate the defined life-cycle phases of industrial assets.
- Describe the business-centred maintenance (BCM) approach to develop or modify maintenance strategy.

Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research

- Self-management
- Ethical and Professional Responsibility

3 Mini Project

Assessment Type

Written Assessment

Task Description

The details of the assessment will be available on the unit Moodle site.

This assessment is based upon the unit learning modules 1 - 11.

In answering the questions, you will relate the theoretical processes you have read about in the learning material to your own organisation or facility.

Assessment Due Date

Week 12 Friday (12 Feb 2021) 11:45 pm AEST

Return Date to Students

It is expected that marked assessment will be returned within 2 weeks of the due date when submitted on time

Weighting

55%

Assessment Criteria

This is a criterion - based assessment item.

It is highly recommended that you read beyond the unit materials to complete assessment items.

A detailed marking guide is available on the unit Moodle site.

Your submission for this assessment will be evaluated according to the following criteria:

- Demonstration of knowledge and understanding of concepts
- Evidence of research beyond own experience and unit material
- Clarity of expression, including use of terminology, ease of reading, spelling and grammar, orderly and logical presentation and use of diagrams to illustrate points
- Quality of technical presentation including neatness, appropriate use of Figures and Tables
- Use of correct and accurate referencing techniques
- Marks could be deducted from your submitted assignment due to:
 - Exceeding the assignment word count by 10%
 - Late submission

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Submission Instructions

Assignments must be submitted electronically (in "MSWord" format NOT pdf) in Moodle. When uploading your assignment on Moodle, ensure you use the following file format, Example - 'Albert Jones_s024789_ENMM20025_Mini Project'

Learning Outcomes Assessed

- Explain the internal and external influences on the development of maintenance strategy.
- Research and analyse the business drivers and operations strategy that impact on the maintenance decision making framework.
- Communicate the defined life-cycle phases of industrial assets.
- Describe the business-centred maintenance (BCM) approach to develop or modify maintenance strategy.
- Define maintenance objectives and develop maintenance planning and control strategies.

Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management

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