ENMM20025 *Maintenance Strategies*
Term 1 - 2020

Profile information current as at 14/12/2025 06:50 am

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 1 - 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 Have your say

Feedback
The materials, lectures and immediate support were very helpful in learning and application.

Recommendation
High quality of content will always be maintained with high relevance to industry.

Feedback from Have your say

Feedback
The Zoom sessions internet connection had a quality issue.

Recommendation
Any possible improvement will be discussed with TaSAC. Students will be advised to check internet quality at their end.

Feedback from Have your say

Feedback
Assessment tasks and their requirements should be improved.

Recommendation
More attention will be given to explaining assessments during lectures.

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

— N/A Level | ◦ Introductory Level | • Intermediate Level | • Graduate Level | ◦ Professional Level | ◦ Advanced Level

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
f.martin@cqu.edu.au

Schedule

Week 1 - 09 Mar 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 11/03/20 @ 8:00pm AEDT (daylight saving time)

Week 2 - 16 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 2	Formulating maintenance strategy, a business centred approach	Lecture 2 - Wednesday 18/03/20 @ 8:00pm AEDT (daylight saving time)

Week 3 - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 3	The structure of industrial assets	Lecture 3 - Wednesday 25/03/20 @ 8:00pm AEDT (daylight saving time) Finalise Assignment 1. **Assignment 1** Due: Week 3 Friday (27 Mar 2020) 11:45 pm AEST

Week 4 - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 4	Maintenance objectives	Lecture 4 - Wednesday 01/04/20 @ 8:00pm AEDT (daylight saving time)

Week 5 - 06 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic

Module 5	Preventative maintenance decision making Part 1: Concepts and techniques	No lecture this week.

Vacation Week - 13 Apr 2020

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

Week 6 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 6	Preventative maintenance decision making Part 2: Maintenance task selection	Lecture 5 - Wednesday 22/04/20 @ 8:00pm AEST

Week 7 - 27 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 7	Maintenance task selection using reliability maintenance	Lecture 6 - Wednesday 29/04/20 @ 8:00pm AEST Finalise Assignment 2. **Assignment 2** Due: Week 7 Friday (1 May 2020) 11:45 pm AEST

Week 8 - 04 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 8	Determining the asset life plan and schedule	Lecture 7 - Wednesday 06/05/20 @ 8:00pm AEST

Week 9 - 11 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 9	Lean maintenance	Lecture 8 - Wednesday 13/05/20 @ 8:00pm AEST

Week 10 - 18 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 10	Asset reliability maintenance control	No lecture this week.

Week 11 - 25 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 11	Management of asset turnarounds	No lecture this week.

Week 12 - 01 Jun 2020

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 (5 June 2020) 11:45 pm AEST

Review/Exam Week - 08 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 15 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
		No further lectures or assessment for this unit.

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 Mar 2020) 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
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.
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 (1 May 2020) 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
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.
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 (5 June 2020) 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.
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
- Ethical and Professional Responsibility

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