



Maintenance and Reliability Engineering

Advance your career and company

Maintenance and Reliability Engineering for better asset management is a powerful tool in improving industrial profitability.

Many companies have enhanced their success by improving the knowledge and skill of their staff. This leads to improved business performance and the capability to reduce costs and risk.

At an individual level, those completing these programs have become equipped for career advancement.

For over 30 years, our courses have consistently responded to changing technology and industry demands.

CAREERS IN MAINTENANCE AND RELIABILITY ENGINEERING

- Asset manager
- Chief engineer
- Technical Director
- Engineer in operations and maintenance
- Engineering manager
- Maintenance and reliability engineer
- Maintenance manager
- Planning engineer
- Production and maintenance engineer
- Consultants

PROGRAM ENTRY AND EXIT OPTIONS

Three year Engineering degree
OR
extensive experience and two
University subjects

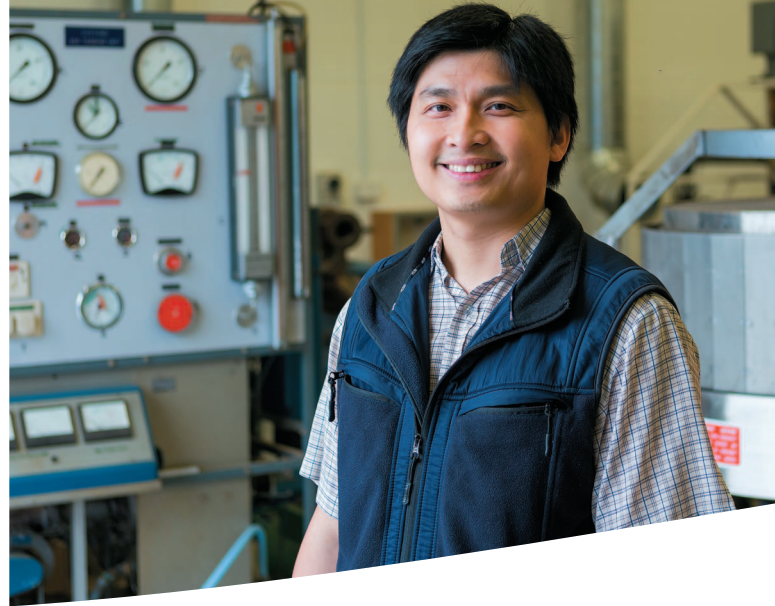
**Graduate
Certificate in
Reliability
Engineering**

**Graduate
Certificate in
Maintenance
Management**

**Graduate Diploma of Engineering
Maintenance Management**

**Master of Maintenance and
Reliability Engineering**

**Bachelor of Engineering
degree with honours**



GRADUATE CERTIFICATE IN MAINTENANCE MANAGEMENT

Designed for technical staff in full-time employment in the asset management field, the program provides the core elements of maintenance knowledge and skills.

You will study leadership and management techniques, the organisation, planning and application of maintenance and maintenance strategies, terotechnological aspects of engineering economics and accountancy and implementation of maintenance planning systems, asset operations optimisation and more. Knowledge can be applied in fields such as manufacturing processes, transport, power generation and the efficient operation of industrial, commercial and civic buildings, and mining, water, defence, navy, aviation, buildings and infrastructure, with the goal of increasing industrial competitiveness and benefiting your company's 'bottom line'.

DURATION

One year part-time via online learning

APPLICATION

Direct

COMMENCES

February or July

ENTRY REQUIREMENTS

A three-year degree in engineering, science, applied science or appropriate degree program or at least three years of high-level experience and successful completion of two subjects on a nonaward basis from the maintenance and reliability engineering course offerings.

SEMESTER ONE

Terotechnology and lifecycle costs

Maintenance management

SEMESTER TWO

Industrial techniques in maintenance management

Asset management techniques

GRADUATE CERTIFICATE IN RELIABILITY ENGINEERING

You will explore technical aspects of reliability engineering, focusing on reliability and availability of systems. This course is mathematically based and designed primarily for graduate engineers.

This program will enable you to develop a range of skills with a strong focus on reliability engineering underpinned with the mathematics essential for this area. You will complete study in reliability in management and quality control, design and data analysis, designing reliability into safety critical systems and more. Your studies also include a project related to the application of reliability tools and techniques to a work-based topic.

DURATION

One year part-time via online learning

APPLICATION

Direct

COMMENCES

February

ENTRY REQUIREMENTS

A three-year degree in engineering, science, applied science or appropriate degree program or at least three years of high-level experience and successful completion of two subjects on a nonaward basis from the maintenance and reliability engineering course offerings.

SEMESTER ONE

Basic quantitative skills for reliability engineering

Understanding reliability

SEMESTER TWO

Advanced reliability

Reliability application

Benefit from our extensive experience in delivering online courses to students across Australia and internationally.



GRADUATE DIPLOMA OF ENGINEERING MAINTENANCE MANAGEMENT

This program is designed for engineers and other technical staff who are involved with asset management of industrial, public sector or defence systems.

Upon successful completion, graduates can make a positive contribution to their companies' performance. Study includes: reliability and application of data, condition modelling (CM) techniques, risk engineering, and a Monte Carlo simulation. The program also includes leadership and management techniques, planning and application of maintenance and maintenance strategies, terotechnological aspects of engineering economics and accountancy and implementation of maintenance planning systems, asset operations optimisation.

DURATION

Two years part-time via online learning

APPLICATION

Direct

COMMENCES

February or July

ENTRY REQUIREMENTS

A recognised degree in Engineering or a related area, together with at least two years of work experience, or completion of the Graduate Certificate in Maintenance Management or the Graduate Certificate in Reliability Engineering.

Successful graduates of the Graduate Diploma of Engineering Maintenance Management can progress to the Master of Maintenance and Reliability Engineering.

SEMESTER ONE	SEMESTER TWO
YEAR ONE	
Terotechnology and lifecycle costs	Industrial techniques in maintenance management
Maintenance management	Asset management techniques
YEAR TWO	
Quantitative techniques for asset management	Machine conditioning and fault diagnosis
Maintenance and reliability engineering project	Risk engineering

MASTER OF MAINTENANCE AND RELIABILITY ENGINEERING

Increase your value in the workplace along with your specialised knowledge with our well recognised program.

Graduates of this course have been advancing their knowledge and employability while applying their skills to diverse industries for over 30 years.

As a professional asset manager who helps ensure that industrial assets work more efficiently, your work directly relates to the profitability of businesses. We'll walk you through terotechnology and lifecycle costs, risk engineering, reliability applications, maintenance, and asset management, so that you are able to be the best asset for your industry.

DURATION

Two years part-time via online learning

APPLICATION

Direct

COMMENCES

February or July

ENTRY REQUIREMENTS

Applicants should have a Bachelor of Engineering degree with honours, or have completed the Graduate Diploma in Engineering Maintenance Management with an average result of 65%. In certain circumstances, applicants with a Bachelor of Engineering pass degree or other appropriate degree together with honours equivalent work experience may be admitted.

SEMESTER ONE	SEMESTER TWO
YEAR ONE	
Terotechnology and lifecycle costs	Industrial techniques in maintenance management
Maintenance management	Asset management techniques
YEAR TWO	
Quantitative techniques for asset management	Machine conditioning and fault diagnosis
Maintenance and reliability engineering project	Risk engineering
YEAR THREE	
Basic quantitative skills for reliability engineering	Advanced reliability
Understanding reliability	Reliability applications

Flexible online study

Whether you are within Australia or studying from off-shore, we adapt to the location and time management needs of each student. Studying online allows you to work around your employment as a manager, engineer or technical staff member. Industry based projects allow for relevance and continual improvement.

We provide an extensive range of online support, including study skill resources, and access to relevant audio and video resources. Our staff will provide regular and timely feedback during your studies with opportunities for one-on-one conversations online.

You will have access to the latest software including Failure and Reliability analysis and Enterprise systems for Information Technology in maintenance and asset management relevant to our courses.

If you want to take your studies even further you can follow our graduates who have chosen to pursue a PhD in an area of interest related to maintenance and reliability engineering.

Established and recognized

Industries and peak bodies have supported our programs as leaders in the field for many years including: **Engineers Australia** and the **Asset Management Council of Australia**.

Our experienced academic staff are actively involved in teaching and innovation within the discipline. They are also researchers as well as hosts and participants of major events including the International Conference on Maintenance and Intelligent Asset Management, and have gained the international rating standings including alignment of ISO55000, 55001, 55002 standards on asset management for our courses.

Credit for prior studies

Students may articulate with full credit for all units successfully completed from the Graduate Certificate in Reliability Engineering or the Graduate Diploma in Engineering Maintenance Management.

Students may be eligible for credit from other previous postgraduate studies and will be assessed on a case-by-case basis. Credit or exemptions will not be granted for undergraduate qualifications. Credit is assessed on an individual basis.

Students entering the Master program with a four year honours degree in engineering or with a Bachelor's degree and a minimum of 3–5 years relevant work experience may be eligible for exemptions for a maximum of 60 credit points.

How to apply

Visit federation.edu.au/apply to take the next step. You can also access our convenient online chat service for assistance.

Hear from our graduates

Stephen Morey

Senior Engineer | BMT

I apply skills gained from the MRE program on a daily basis. Techniques and knowledge in reliability centred maintenance, reliability modelling, reliability data analysis, condition monitoring, asset management and reliability management have been very valuable.

The skills gained on the program have allowed the consultancy I work for to bid for a wider range of work, for example my current position in integrated logistics support.

Studying online allows flexibility around full-time work, and means you aren't geographically restricted from being able to do the program. One aspect I enjoyed was the flexibility of the course structure. It allowed me to tailor the program to my specific interests and skills I thought were needed.

Reliability skills are rare and highly valuable in the Defence industry, so the MRE program is worth undertaking.

Pierre Fernandez

Senior Asset Management Engineer
WSP Australia

The concepts I have learned from the MRE program has been fantastic and my value in the company has certainly increased, along with confidence in my work and providing input into projects.

The reliability concepts were excellent. There was an instance where I was asked to do a renewal planning study on a 2km 500mm pipeline. Significant savings were made, as I was able to apply reliability concepts and techniques to determine sections requiring renewal, and avoid replacement of the entire pipeline.

Studying online is more effective for me with flexibility to focus on areas I need to, making study more efficient. I have enjoyed the growth and confidence gained every time I finish my studies on a certain topic.

I'm hoping to be a Principal Engineer one day in my company, however, I do want to study a PHD or another master's degree in the future.



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