

# CERTIFICATE IV IN ENGINEERING

AQF CODE N/A | COURSE CODE MEM40119 | COURSE TYPE Qualification | RTO 3097

## Overview

This course is specifically designed to cover the skills and knowledge required for employment as a higher level Engineering Tradesperson or a Special Class Engineering Tradesperson (Mechanical) and associated industries, or at equivalent levels in other industries where Engineering Tradespersons work. This course is ideal for tradespeople nearing completion or who have completed an apprenticeship, or are experienced in the trade (Fabrication or Fitter and Turner) wanting to broaden their skill set, or move into supervisory roles.

Public applicants can apply for this course without industry experience, upon agreement.

This course is also available under an Australian Apprenticeship Agreement, please contact the Australian Apprenticeship Support Network (AASN) which is your first point of contact for queries about a traineeship or apprenticeship, [www.australianapprenticeships.gov.au/about-aasn](http://www.australianapprenticeships.gov.au/about-aasn).

**Request an interview to discuss your relevant workplace:** Need to discuss further? Simply call our friendly Customer Experience team and request further discussion with the Engineering Department to discuss your individual workplace requirements and previous study.

## Duration

Up to 4 Years (Students already with trade qualifications will receive credit transfer where applicable)

## Requirements

Applicants must either be currently employed in a relevant engineering trade, or be completing an apprenticeship.

## Field Placement

Placement opportunities may be available/necessary depending on previous industry experience.

## Assessment

The assessments will enable students to demonstrate the underpinning knowledge, skills and attributes required to meet the course outcomes. These will involve the assessment of your practical and theoretical knowledge through written assessments, practical projects or observations.

## Other Information

**Request an interview to discuss your relevant workplace:** Need to discuss further? Contact Wodonga TAFE Engineering department to discuss your individual workplace requirements and previous study. Simply call our friendly Customer Experience team and request further discussion with Engineering.

## Learning Outcomes

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- 2D and 3D computer aided design
- CNC programming and operation
- Lathe operations
- Hydraulics and pneumatics
- Milling operations
- Advanced welding
- General engineering There are optional electives available relevant to your workplace, so learning outcomes may differ per student

## Compulsory Units

MEM09002 - Interpret technical drawing  
MEM11011 - Undertake manual handling  
MEM12023 - Perform engineering measurements  
MEM12024 - Perform computations  
MEM13015 - Work safely and effectively in manufacturing and engineering  
MEM14006 - Plan work activities  
MEM16006 - Organise and communicate information  
MEM16008 - Interact with computing technology  
MEM17003 - Assist in the provision of on-the-job training  
MEM18001 - Use hand tools  
MEM18002 - Use power tools/hand held operations  
MSMENV272 - Participate in environmentally sustainable work practices

## Selectable Units

MEM05005 - Carry out mechanical cutting  
MEM05006 - Perform brazing and/or silver soldering  
MEM05007 - Perform manual heating and thermal cutting  
MEM05009 - Perform automated thermal cutting  
MEM05010 - Apply fabrication, forming and shaping techniques  
MEM05012 - Perform routine manual metal arc welding  
MEM05037 - Perform geometric development  
MEM05049 - Perform routine gas tungsten arc welding  
MEM05050 - Perform routine gas metal arc welding  
MEM05052 - Apply safe welding practices  
MEM05056 - Perform routine flux core arc welding  
MEM05071 - Perform advanced manual thermal cutting, gouging and shaping  
MEM05072 - Perform advanced welding using manual metal arc welding process  
MEM05073 - Perform advanced welding using gas metal arc welding process  
MEM05074 - Perform advanced welding using gas tungsten arc welding process  
MEM05085 - Select welding processes  
MEM05089 - Assemble fabricated components  
MEM05090 - Weld using manual metal arc welding process

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MEM05091 - Weld using gas metal arc welding process  
MEM05092 - Weld using gas tungsten arc welding process  
MEM05096 - Weld using flux core arc welding process  
MEM07005 - Perform general machining  
MEM07006 - Perform lathe operations  
MEM07007 - Perform milling operations  
MEM07015 - Set computer controlled machines and processes  
MEM07016 - Set and edit computer controlled machines and processes  
MEM07018 - Write basic NC and CNC programs  
MEM07019 - Program NC and CNC machining centre  
MEM07021 - Perform complex lathe operations  
MEM07032 - Use workshop machines for basic operations  
MEM09003 - Prepare basic engineering drawing  
MEM09009 - Create 2-D drawings using computer-aided design system  
MEM09010 - Create 3-D models using computer-aided design system  
MEM12003 - Perform precision mechanical measurement  
MEM12006 - Mark off/out (general engineering)  
MEM12007 - Mark off/out structural fabrications and shapes  
MEM13003 - Work safely with industrial chemicals and materials  
MEM18003 - Use tools for precision work  
MEM18005 - Perform fault diagnosis, installation and removal of bearings  
MEM18006 - Perform precision fitting of engineering components  
MEM18007 - Maintain and repair mechanical drives and mechanical transmission assemblies  
MEM18009 - Perform precision levelling and alignment of machines and engineering components  
MEM18011 - Shut down and isolate machines/equipment  
MEM18012 - Perform installation and removal of mechanical seals  
MEM18018 - Maintain pneumatic system components  
MEM18019 - Maintain pneumatic systems  
MEM18020 - Maintain hydraulic system components  
MEM18021 - Maintain hydraulic systems  
MEM18055 - Dismantle, replace and assemble engineering components  
MEM24001 - Perform basic penetrant testing  
MEM30012 - Apply mathematical techniques in a manufacturing engineering or related environment

## Fees

*FREE TAFE: This course is free to eligible individuals.*

2025	Tuition	Materials	Total
Government Funded	\$4,760	-	<b>\$4,760</b>
Concession	\$952	-	<b>\$952</b>

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2025	Tuition	Materials	Total
Full Tuition	\$16,320	-	<b>\$16,320</b>

## Fees Additional Information

The student tuition fees published are indicative only and can be subject to change given individual circumstances at the time of enrolment.

Funding made available to eligible individuals by State and Commonwealth Governments. If funding is utilised, this may affect future opportunities to access additional funding in the future. For more information see 'Fee information and eligibility' under the Enrol Now tab on the Wodonga TAFE website.