CERTIFICATE II
IN ENGINEERING - PRODUCTION TECHNOLOGY

AQF CODE N/A | **COURSE CODE** MEM20219 | **COURSE TYPE** Qualification | **RTO** 3097

Overview

Looking for a Welding and/or CNC Machining pathway or Traineeship in Engineering, developing Engineering skills? This course has been developed in skills and knowledge clusters, being delivered in stages, covering the skills and knowledge related to each cluster. Students can complete Stage 1 - Welding cluster, and then take the option of completing Stage 2 - Machining cluster or complete all three stages to achieve the full qualification as either a public student, or through an employer under an Australian Traineeship agreement.

This program is designed to provide the option of progressing in stages: Stage 1 – WELDING PATHWAY The Welding Pathway stage offers participants the skills and knowledge to gain employment in Engineering, Fabrication or Manufacturing where welding is part of your role or can provide opportunity to up skill in your current position. This includes accredited welding training in Manual Metal Arc Welding (MMAW), Gas Metal Arc Welding (GMAW) and Gas Tungsten Arc Welding (GTAW) at a basic level (also contains pre-requisite units).

Stage 2 - MACHINING AND CNC (Optional*) On completion of Stage 1, applicants may continue to gain a set of skills and knowledge in hand and power tools, measurements, general machining and CNC machining. The training includes accredited training in the safe and correct use of hand and power tools, using workshop equipment such as lathes, drills and milling machines and an introduction to CNC machine operation.

Stage 3 – General Engineering (Optional*) Students may continue part time to complete the full Certificate II in Engineering – Production Technology qualification. Students will develop and gain a broad range of engineering skills and knowledge, including interpret drawings, dismantle, replace and assemble engineering components, mechanical and thermal cutting and soldering.

Duration

Duration is dependent on the stage progression undertaken: Stage 1 – Welding Pathway – 8 weeks Stage 2 – Machining and CNC Pathway – 13 weeks Stage 3 – Full Qualification Completion – 13 weeks Traineeship – a training plan is developed in consultation with an employer and trainee in line with the Australian Traineeship Agreement.

Requirements

Applicants must be at least 16 years of age to enrol. Applicants must supply own:

- Safety boots
- Safety glasses
- Appropriate flame-resistant clothing for workshop activities (not loose clothing as this is an OH&S hazard)
- Personal protective equipment will be required depending on units of study, for example, earplugs or earmuffs are required when using machinery.
- Calculator
- Writing materials (pen, highlighter, paper, etc.)

Field Placement

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Work ready public students may participate in optional work placement, run in conjunction with this course once sufficient entry level skills and knowledge are developed, providing opportunity in obtaining 'real life' experience and building connections with local employers as part of their course. Students undertaking a Traineeship, including School Based Students, will be employed through an Australian Traineeship Agreement.

Assessment

The assessments will enable students to demonstrate the underpinning knowledge, skills and attributes required to meet the course outcomes. You will be assessed through a combination of practical work skills and theory testing, through observation, class exercises, participation, written assignments and tests.

Learning Outcomes

Students will learn entry level skills and knowledge to work within engineering, fabrication and welding business including:

- Work, Health & Safety (WHS), communication, sustainability and basic computing technology
- Use hand and power tools
- Introduction to welding including manual metal arc, gas metal arc, gas tungsten arc
- Use workshop machines, including cut-off, drilling, lathes, milling, grinders, CNC
- Dismantle, replace and assemble engineering components
- Soft, silver soldering
- Mechanical, thermal cutting
- Technical drawing

Compulsory Units

MEM05003 - Perform soft soldering
MEM05005 - Carry out mechanical cutting
MEM05006 - Perform brazing and/or silver soldering
MEM05007 - Perform manual heating and thermal cutting
MEM05009 - Perform automated thermal cutting
MEM05012 - Perform routine manual metal arc welding
MEM05049 - Perform routine gas tungsten arc welding
MEM05050 - Perform routine gas metal arc welding
MEM07024 - Operate and monitor machine and process
MEM07028 - Operate computer controlled machines and processes
MEM07032 - Use workshop machines for basic operations
MEM07041 - Perform production machining
MEM09002 - Interpret technical drawing
MEM11011 - Undertake manual handling
MEM12023 - Perform engineering measurements
MEM12024 - Perform computations
MEM13015 - Work safely and effectively in manufacturing and engineering
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
MEM18055 - Dismantle, replace and assemble engineering components
MSMENV272 - Participate in environmentally sustainable work practices

Certification

By successfully completing this course you will receive a nationally recognised AQF Qualification.

Careers

Apprenticeships and Traineeships can lead into a range of careers in design, manufacture, installation and repair of a wide range of products. If you become a qualified trades person in the future, occupations may include: ? Boilermaker ? Toolmaker/mechanical technician ? Draftsperson ? Mechanical fitter. This qualification also provides a pathway into careers in the engineering industry such as a mechanical, fabrication or electrical engineer.

Fees

2025	Tuition	Materials	Total
Government Funded	$1,750	$170	**$1,920**
Concession	$350	$170	**$520**
Full Tuition	$7,000	$170	**$7,170**

Fees Additional Information

The units you will undertake in your studies vary depending upon your line of work and/or personal choice. This means prices for tuition fees can only be given as an approximation. 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.

Fee displayed on website is representative to completion of whole Certificate II course, each stage has its own fee associated. You can complete up to any stage of the program that you choose. Materials fees are only to be paid for Stage 1 of the program (Welding kit bag for students to keep). **STAGE 1 FEES** Government Funded $520.00 (Tuition $350.00, Materials $170.00) Concession $240.00 (Tuition $70.00, Materials $170.00) Fee For Service $1,570.00 (Tuition $1,400.00, Materials $170.00)

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STAGE 2 FEES Government Funded Tuition $625.00 Concession Tuition $125.00 Fee For Service Tuition $2,500.00

STAGE 3 FEES Government Funded Tuition $625.00 Concession Tuition $125.00 Fee For Service Tuition $2,500.00

Pathways

This course can lead to: Apprenticeship in MEM30219 Certificate III in Engineering - Mechanical Trade Apprenticeship in MEM31922 Certificate III in Engineering - Fabrication trade Traineeship in MEM40422 Certificate IV in Engineering Drafting MEM40119 Certificate IV in Engineering