

Certificate IV in Engineering

Course Code: MEM40119 | CRICOS Code: 112672F

Duration: 104 Weeks

Course Description

This qualification defines the skills and knowledge required of a higher-level engineering tradesperson within the metal, engineering, manufacturing, and related industries.

It applies to a broad range of advanced engineering work, including but not limited to: refrigeration and air conditioning, casting and moulding, CNC programming, fluid power, heavy fabrication, instrumentation, maintenance, plant mechanics, marine electronics, mechatronics, patternmaking, robotics, toolmaking, welding, and watch and clock servicing and repair. This may also include post-trade work.

Graduates will gain the capability to:

- ✚ Apply quality control techniques
- ✚ Interpret complex instructions and procedures
- ✚ Work independently or as part of a team with minimal supervision
- ✚ Use effective interpersonal and communication skills
- ✚ Exercise discretion and judgement within defined responsibilities
- ✚ Guide and assist others in a trade environment
- ✚ Perform incidental non-trade tasks supporting primary duties
- ✚ Inspect materials and products for compliance with standards
- ✚ Operate lifting equipment related to their tasks
- ✚ Support training delivery alongside supervisors and trainers

While there are no formal entry requirements, it is expected that learners are qualified tradespeople with access to structured on- and off-the-job training, or apprentices under an Australian Apprenticeship arrangement. This qualification is not intended for pre-employment or pre-apprenticeship use.

Licensing or Regulatory Requirements

No licensing, legislative or certification requirements apply to this qualification at the time of publication. However, in some jurisdictions units in this qualification may require a license. Licensing information is included in the relevant units of competency.

Mode of Delivery

This program is delivered and assessed through a combination of classroom-based learning, simulated industry workplace activities, and supervised online study. Learners are also expected to complete approximately 10 hours per week of unsupervised study, including reading, research, and revision of previous lessons.

Target Group / Learner Cohort

This qualification is intended for international students who are seeking one or more of the following pathways:

- ✚ A career specialising in welding, with potential job roles such as Welder, Fabricator-Welder, or Boilermaker
- ✚ Progression to advanced vocational training, including the Certificate IV in Engineering or a Diploma of Engineering – Advanced Trade
- ✚ A stepping stone towards higher education in engineering or related technical disciplines

Resources Required

Student must have a personal electronic device such as a laptop or iPad.

1. Provided by Lead college:
2. Relevant support materials for delivery and assessment areas
3. Current assessment tools used in the program
4. Resources to support learners with special needs, including reasonable adjustment procedures
5. Equipment and facilities aligned with unit requirements

Assessment Methods

Assessment methods may include, but are not limited to: direct observation of practical tasks, oral and written questioning, completion of workbooks, simulated workplace activities, site visits, interviews, and third-party reports.

The selected assessment strategies have been designed to suit both the qualification outcomes and the characteristics of the target learner group. These methods ensure fair, flexible, valid, and reliable assessment practices are applied.

Entry Requirements

The following are the Admission requirements of Lead college:

- Must be 18 years of age or older at the time of course commencement.
- Prospective students may be required to undertake a Language, Literacy and Numeracy (LLN) and/or a pre-enrolment interview.
- Must have completed MEM31922 Certificate III in Engineering – Fabrication Trade with Lead College or another institute with similar elective.
- Must demonstrate English level of IELTS 6.0 overall with no band less than 5.5 or equivalent, such as:
 - I. IBT 60
 - II. PTE 50
 - III. CAE 169
 - IV. OET B
 - V. General English Advanced or equivalent
 - VI. MOI Certificate
 - VII. Duolingo 95
 - VIII. MET
 - IX. LANGUAGECERT Academic
 - X. CELPIP General
 - XI. Certificate IV or higher qualification with an Australian institution.
- Must have basic digital literacy, including the ability to confidently use the internet and common software applications for learning purposes, completing assignments, and engaging with course content.
- Must be able to participate in training within a simulated workplace environment, including performing manual handling tasks.

Packaging Rules Units of Competency

To be awarded the MEM40119 Certificate IV in Engineering units of competency to a value of 132 points must be achieved

<https://training.gov.au/training/details/MEM40119/qualdetails>

Units Of Competency

The MEM40119 Certificate IV in Engineering requires the completion of the following Units.

Core Units – 12

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

Elective Units – 17




MEM05060	Perform welds to code standards using submerged arc welding process
MEM05062	Apply welding and welding related codes and standards
MEM03001	Perform manual production assembly
MEM03002	Perform precision assembly
MEM03003	Perform sheet and plate assembly
MEM03004	Perform electronic/electrical assembly (production)
MEM03006	Set assembly stations
MEM04002	Perform gravity die casting
MEM18092	Maintain and repair commercial and/or industrial refrigeration and/or air conditioning controls
MEM18093	Maintain and repair integrated industrial refrigeration and/or large air handling system controls
MEM18084	Commission and decommission split air conditioning systems
MEM18085	Install, service and repair domestic air conditioning and refrigeration appliances
MEM18086	Test, recover, evacuate and charge refrigeration systems
MEM18087	Service and repair domestic and light commercial refrigeration and air conditioning equipment

MEM18088	Maintain and repair commercial air conditioning systems and components
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**** Please note: Electives are subject to change to meet client and industry requirements.**

Career Pathways

This qualification enables the student to seek employment in the following job roles:

-  Advanced Fabrication Technician (Structural),
-  Advanced Toolmaking Technician
-  Pressure Welder

Pathway Qualification

Additional training opportunities stemming from this certification consist of pursuing the Advanced Trade Diploma in Engineering or other suitable qualifications.

Recognition of Prior Learning (RPL) and Credit Transfer

Lead College recognises qualifications and Statements of Attainment issued by other registered training organisations (RTOs), unless restricted by licensing requirements. We offer Credit Transfer for completed units or subjects that match those in your course.

Recognition of Prior Learning (RPL) allows you to have your existing skills and knowledge gained through work, life experience, or unaccredited training formally recognised. During your entry and interview, we will discuss RPL options with you. If eligible, you will receive a kit to help gather evidence and demonstrate your competencies for relevant units. Review our Credit Transfer and RPL Policy <https://www.leadcollege.edu.au/credit-transfer-rpl/> or fill in the form with required evidence <https://www.leadcollege.edu.au/application-for-credit-transfer/>

Fee

Take advise from Admissions Officer admission@leadcollege.edu.au