

METAL & ENGINEERING

MEM10105 Certificate I in Engineering

Version 03/17

COURSE DETAILS

Hours	240 hours
Type	Board Developed Course
Duration	2 years
Unit Value	2 unit Preliminary 2 unit HSC
Specialisation	Yes
HSC Exam	Yes
ATAR	Yes
Workplacement	Mandatory 70 hours
SBAT	Opportunity to complete a School Based Apprenticeships or a Traineeship and gain credit towards the HSC - MEM20105 Certificate II in Engineering
RECOGNITION	National and HSC Qualification

ASSESSMENT

Assessment strategies may include:

- Observation
- Student Demonstration
- Questioning
- Written tasks
- Tests



FURTHER STUDY

Apprenticeship, for example in

- Engineering - Fabrication Trade
- Engineering - Mechanical Trade
- Engineering - Electrical/Electronic Trade
- Engineering - Technical
- Boating Services

DUTIES AND TASKS OF A METAL TRADES ASSISTANT

Metal trades assistants may perform the following tasks:

- Position and hold metal stock or products to enable work to be carried out
- Perform assembly and dismantling operations, such as screwing or bolting
- Solder or spot-weld components using electrical spot welding machines
- Operate power hammers, presses or other cutting and shaping tools and machines
- Transport tools, materials and work pieces to and from sites or workbenches
- Hand tools to tradespersons and hold tools not immediately required
- Clean and prepare working surfaces.

STUDENT OUTCOMES for Certificate I in Engineering

These are the outcomes of graduates surveyed six months after completing their training for Certificate I in Engineering.

All statistics are supplied by the [National Centre for Vocational Education Research](http://www.nvq.gov.au)

Engineering: Top Occupations



Engineering: Starting Salary



Engineering: Employment Outcomes



ABOUT

The Certificate I in Engineering provides students with broad-based underpinning competencies in a range of engineering skills.

Students undertaking this program will work on **Lathes and Milling machines**, as well as learning about **Hand and Power Tools** and **Precision Measurement Tools**.

Students will have the opportunity to learn welding skills including **STICK welding, MIG welding, TIG welding, OXY Welding and Cutting**.

JOB ROLES

Trades' assistants related to this qualification include:

- Factory Worker
- Metal Production Assistant



PERSONAL REQUIREMENTS

- Enjoy technical and engineering activities
- Good with hands
- Enjoy practical and manual activities
- Able to work efficiently
- Able to work as part of a team
- Safety-conscious
- Able to cope with the physical demands of the job.

CAREER PATHWAYS

Sheet Metal Worker, Machinist, Equipment Maintainer & Repairer, Plant Mechanic, Mechanical Fitter, Tool and Die Maker, Design Engineer, CNC Operator, Mechanical and Maintenance Engineer



ENGINEERING - VET

Training Package	Metal and Engineering Training Package	
Qualification	MEM10105 Certificate I in Engineering	
Delivery	Year 11 2019 / Year 12 2020	
BOS Syllabus	Stage 6 Metal and Engineering Curriculum Framework	
Units of Delivery	Unit Code	Unit Title
Where young men achieve	Year 11	
	MEM12023A	Perform engineering measurements
	MEM13014A	Apply principles of Occupational Health & Safety in work Environment
	MEM16007A	Work with others in a manufacturing, engineering or related environment
	MEM05012C	Perform routine manual metal arc welding
	MEM11011B	Undertake manual handling
	MEM18001C	Use hand Tools
	MEM18002B	Use power tools/hand held operations
	Year 12	
	MEM14004A	Plan to undertake a routine task
	MEM15002A	Apply quality systems
	MEM15024A	Apply quality procedures
	MEM03003B	Perform sheet and plate assembly
	MEM12001B	Use comparison and basic measuring devices
	MEM12024A	Perform computations
	MEM09002B	Interpret technical drawing (HSC Content only – No competency -delivered)

NOTE: MANDATORY WORK PLACEMENT OF 70 HOURS TO ACHIEVE CERTIFICATE QUALIFICATION