

Certificate II in Engineering Studies



COURSE CODE: MEM20422



Description:

If you enjoy problem-solving, working with your hands, and understanding how things work, this course is a great starting point. The Certificate II in Engineering Studies provides practical entry-level skills to help you explore pathways into the engineering and manufacturing industries. This course provides students with foundational skills and knowledge in engineering, manufacturing, and metal fabrication. Designed for secondary students interested in technical trades, the program blends theory with hands-on projects using industry-standard equipment in simulated workplace environments.

You will learn things like:

- Use industry-standard tools and equipment in a safe and controlled environment
- Interpret technical drawings and follow plans
- Complete basic fabrication and machining tasks
- Apply mathematical principles to real-world engineering problems
- Work safely in line with industry procedures and practices
- Basic machining and fabrication processes
- Introduction to welding techniques (MIG, TIG, arc)
- Computer-aided design (CAD) and measurements
- Team-based engineering projects and problem-solving tasks

Does this sound like you:

- Enjoy problem solving
- Working with your hands
- An interest in how things are built, designed, and maintained
- Good hand-eye coordination and manual dexterity
- Strong problem-solving skills and a logical approach
- Confidence working with machines, tools, and technology
- The ability to follow detailed instructions accurately
- A solid understanding of mathematics or a willingness to improve in this area
- A safety-conscious mindset and ability to work as a member of a team

Future Ready Skills:

Students develop valuable employability skills including:

- Communication
- Teamwork
- Problem solving
- Critical thinking
- Attention to detail
- Adaptability

COURSE INFORMATION

Qualification	Certificate II in Engineering Studies
Qualification Code	MEM20422
Qualification Outcome	Partial Completion. Students will also receive a Statement of Attainment for Units of Competency completed.
Year Levels	Year 10 (check with your school), Year 11, Year 12
Structured Workplace Learning	SWL requirements vary between VET courses and RTO's. Check with your VET Coordinator
Contribution to Senior Secondary Certificate	Contributes to VCE, VCE VM and VPC in accordance with current <u>VCAA</u> requirements. Speak with your VET Coordinator for advice specific to your senior pathway.
Transport	Students are responsible for travel to and from the delivery location. Subject to transport funding, SMRVC may provide transport on certain routes. Check with your VET Coordinator.
Scored Program	Yes

Industry Insight:

Australia's engineering and manufacturing sectors continue to grow, creating strong demand for skilled workers. This course provides a solid foundation for a wide range of careers in fabrication, machining, welding, maintenance, and

Venue & RTO:

RTO	LOCATION	DELIVERY DAY/TIME
<u>Bendigo TAFE</u> (3077)	Charleston Rd, Bendigo	Tuesdays (Yr 1 & 2) 9am - 3.30pm
<u>Kangan Institute</u> (3077)	Broadmeadows	Wednesday (Yr 1 & 2) 8.30am - 3.30pm
<u>Victoria University</u> (3113)	Sunshine Campus	Wednesday 8.30am - 3.00pm

Qualification and Recognition:

- Scored assessment is available for the scored Unit 3–4 sequence of the VCE VET Engineering Studies program, and the scored Unit 3–4 sequence must be delivered and assessed in a single enrolment year

Further study pathways:

- Certificate III/IV in Engineering Studies
- Diploma in Engineering
- Pathway into registered apprenticeships/traineeships

Career Opportunities:

- Apprentice Fabricator, Welder, Boilermaker, Fitter & Turner
- Labourer
- Tool maker
- Engineering Trades Assistant
- Manufacturing Technician
- Metal Fabrication assistance



How to apply:

All students must apply through their school VET Coordinator and submit their Expression of Interest by the required dates. Placement is subject to availability and school approval.

Fees: VET course and materials costs vary between courses. Refer to your VET Coordinator.

COURSE CODE	UNITS OF COMPETENCY Guide only-may vary between RTO's
VU23481	Apply occupational health and safety principles in an engineering environment
VU23475	Safely use hand tools and hand held power tools for general engineering applications
VU23476	Report on the sectors and employment in the manufacturing, engineering, and related industries
VU23477	Interpret and prepare basic two and three dimensional engineering drawings
VU23478	Perform basic machining processes
VU23479	Apply basic fabrication techniques
MEMPE006	Undertake a basic engineering project
VU23480	Perform intermediate engineering computations
VU23485	Perform basic welding and thermal cutting processes

***UOC's may differ from one RTO to another - these are listed as a guide.
Check with your VET Coordinator**

INFORMATION PROVIDED AS A GUIDE ONLY
Please check details with your VET Coordinator prior to enrolment