

<b>Course Code &amp; Name:</b>		<b>Certificate II in Engineering Studies 22470VIC</b>  Current for 2021
<b>Course Aims:</b>		The Certificate II in Engineering Studies provides students with the practical skills and theoretical knowledge for employment as an apprentice in various engineering trades or as a pathway to higher education programs post-secondary school. Students will be required to plan projects, produce engineering sketches and drawings, and fabricate metal components and products. Each second year student will build their own drone as a take home project.
<b>Course Delivery</b>	<b>Location and Times:</b>	<b>Year 1:</b> Swinburne University of Technology, 369 Stud Road, Wantirna Wednesday 12:30pm-5:30pm <b>Year 2:</b> Swinburne University of Technology, 369 Stud Road, Wantirna Wednesday 12:30pm-5:30pm
	<b>Mode of Delivery:</b>	Classroom/workshop based
	<b>Duration:</b>	2 years' part time

## On successful completion of this program the student will achieve:

<b>Credit towards VCE/VCAL</b>	<b>VCE:</b>	Be eligible for up to four units of credit towards their VCE: two units at Units 1 and 2 level and a Units 3 and 4 sequence. ATAR Contribution: Students wishing to receive an ATAR contribution for the Units 3 and 4 sequence of VCE VET Engineering must undertake scored assessment for the purpose of achieving a study score. This study score can contribute directly to the ATAR, either as one of the student's best four studies (the primary four) or as a fifth or sixth study.
	<b>VCAL:</b>	This program contributes to the Industry Specific Skills Strand of VCAL and may also contribute to the Work Related Skills Strand of VCAL.
	<b>Qualification:</b>	Be eligible for the award of <b>22470VIC Certificate II in Engineering Studies</b> .

<b>Additional Requirements/ Information:</b>	<b>Name of RTO &amp; Provider of Qualification:</b>	Swinburne University of Technology (TOID 3059)
	<b>RTO Student Information:</b>	Please refer to <a href="http://www.swinburne.edu.au/policies-regulations/">http://www.swinburne.edu.au/policies-regulations/</a> and <a href="http://www.mullumvetcluster.com.au">www.mullumvetcluster.com.au</a> for student rights and responsibilities while on campus.
	<b>OHS / Personal Protective Equipment:</b>	Students must wear full-length cotton drill overalls and steel-capped leather work boots. No bib and brace overalls. Clear lens safety glasses will be supplied.
	<b>Excursions:</b>	TBA
	<b>Work Placement:</b>	A work placement is not required but is strongly recommended.
	<b>Other:</b>	<b>Please note this course is subject to change.</b>

## Units of Competency:

**Year 1:** Competencies covered in the first year: **22470VIC**

Unit Code	Unit Name	Nominal Hours	Compulsory / Elective
MEM13014A	Apply principles of occupational health and safety in the work environment	10	C
MEM18001C	Use hand tools	20	C
VU22329	Report on a range of sectors in the manufacturing, engineering and related industries	30	C
VU22330	Select and interpret drawings and prepare three dimensional (3D) sketches & drawings	20	C
VU20912	Perform basic machining processes	40	C
VU22339	Create engineering drawings using computer aided systems	60	E
VU22332	Apply basic fabrication techniques	40	C
MEM18002B	Use power tools/hand held operations	20	E
<b>Total nominal hours</b>		<b>240</b>	

**Year 2:** Competencies covered in the second year: **22470VIC**

Unit Code	Unit Name	Assessment Plan	Nominal Hours	Compulsory / Elective
MEMPE006A	Undertake a basic engineering project	TBA	80	C
VU22333	Perform intermediate engineering computations	TBA	40	C
VU22340	Use 3D printing to create products	TBA	40	E
VU22338	Configure and program a basic robotic system	TBA	60	E
<b>Total nominal hours</b>			<b>220</b>	

<b>FUTURE PATHWAYS &amp; OPPORTUNITIES</b>	<b>Complementary studies:</b>	<ul style="list-style-type: none"> <li>Mathematical Methods</li> <li>Physics</li> </ul>	
	<b>Pathways:</b>	<ul style="list-style-type: none"> <li>Certificate III or Certificate IV in Engineering</li> <li>Engineering apprenticeship – Mechanical, Fabrication, or Electrical Diploma, Advanced Diploma or Higher Ed Engineering qualifications.</li> </ul>	
	<b>Possible Future Career Opportunities:</b>	<ul style="list-style-type: none"> <li>Automotive Engineering</li> <li>Boiler Maker</li> <li>Electrical Engineering</li> <li>Electrician</li> </ul>	<ul style="list-style-type: none"> <li>Fitter and Turner</li> <li>Manufacturing Engineer</li> <li>Mechanical Engineer</li> <li>Metallurgical Engineer</li> </ul>

