



MEM40105 Certificate IV in Engineering (Instrumentation)

National ID: MEM40105 | State ID: WT46

About this course

Are you working in the engineering industry and looking to advance your career further? The Certificate IV in Engineering (Instrumentation) has been specifically designed for any qualified tradesperson such as unrestricted electricians, electrical fitters, engineers in the resource industry, refrigeration technicians, or for apprentices in their third or fourth year of study. Learn to install, commission, calibrate and maintain modern instrumentation and control systems, as well as loop turning of multi controller or multi element systems. Our skilled staff and industry-standard facilities prepare you with job-ready skills.

Gain these skills:

- PLC training
- P & I diagram
- Feedback systems
- Intrinsic safety
- Analytical skills
- Pressure, level, flow & temperature
- PID
- Fluid power
- Pneumatic instruments

- Variable speed drives
- Valve sizing
- Advanced control
- Engineering maths

A significant portion of this course is available for Recognition of Prior Learning. If you hold an electrical trade license or Certificate III in Engineering, we offer units to enable you to complete this qualification. They are:

- MEM18064B Maintain instrumentation system components
- MEM18054B Fault find, test and calibrate instrumentation systems and equipment
- MEM18062B Install, maintain and calibrate instrumentation sensors, transmitters and final control elements
- MEM18060B Maintain, repair control instrumentation - single and multiple loop control systems
- MEM18067B Tune control loops - multi controller or multi element systems
- MEM10004B Enter and change programmable controller operational parameters (optional but recommended)
- MEM10005B Commission programmable controller programs (optional but recommended)

See below for all units which complete this course.

Overview

This course may be offered with a blended, flexible delivery model to enable social distancing measures to be undertaken during the COVID-19 pandemic. This approach may include a mix of online and classroom based delivery, as well as practical and work experience placements. Lecturers will provide any specific instructions if your training delivery style needs to change.

All year round, 2020

Munster - Part Time-Self Paced



When: **All year round**



How: **Part Time
Self Paced**

Units

Core

National ID	Unit Title
MEM12023A	Perform engineering measurements
MEM12024A	Perform computations
MEM13014A	Apply principles of occupational health and safety in the work environment
MEM14004A	Plan to undertake a routine task
MEM14005A	Plan a complete activity
MEM15002A	Apply quality systems
MEM15024A	Apply quality procedures
MEM16006A	Organise and communicate information
MEM16007A	Work with others in a manufacturing, engineering or related environment
MEM16008A	Interact with computing technology
MEM17003A	Assist in the provision of on the job training
MSAENV272B	Participate in environmentally sustainable work practices

Elective

National ID	Unit Title
MEM09002B	Interpret technical drawing
MEM10002B	Terminate and connect electrical wiring
MEM10003B	Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c.
MEM10004B	Enter and change programmable controller operational parameters

National ID	Unit Title
MEM10005B	Commission programmable controller programs
MEM10011B	Terminate and connect specialist cables
MEM12002B	Perform electrical/electronic measurement
MEM12004B	Perform precision electrical/electronic measurement
MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations
MEM18011C	Shut down and isolate machines/equipment
MEM18046B	Fault find/repair electrical equipment/components up to 1000 volts a.c./1500 volts d.c.
MEM18048B	Fault find and repair/rectify basic electrical circuits
MEM18049C	Disconnect/reconnect fixed wired equipment up to 1000 volts a.c./1500 volts d.c.
MEM18051B	Fault find and repair/rectify complex electrical circuits
MEM18054B	Fault find, test and calibrate instrumentation systems and equipment
MEM18055B	Dismantle, replace and assemble engineering components
MEM18060B	Maintain, repair control instrumentation - single and multiple loop control systems
MEM18062B	Install, maintain and calibrate instrumentation sensors, transmitters and final control elements
MEM18064B	Maintain instrumentation system components
MEM18067B	Tune control loops - multi controller or multi element systems

Entrance requirements

School Leaver

Non-School Leaver

AQF

C Grades in Year 11 WACE General
English, and OLNA or NAPLAN 9 Band 8

C Grades in Year 11 English and Maths
or equivalent

Certificate II or
Certificate III

Study pathway

 [Certificate III in Engineering - Industrial Electrician](#)



[Certificate IV in Engineering \(Instrumentation\)](#)



[Diploma of Engineering - Advanced Trade](#)

Job opportunities



[Instrumentation specialisation associated with the electrical post trade](#)

Please note this list should be used as a guide only as job titles and qualification requirements may vary between organisations.

SM TAFE actively promotes the employment availability of course graduates to key industry partners and organisations. We also seek expressions of interest from organisations for the placement of our students into work experience. We endeavour to assist students into a career pathway, but please be aware that neither employment nor work experience placement is guaranteed by us.

To access free career planning and job search assistance, visit the [Jobs and Skills Centres](#) page.

Fees and charges

Indicative fees and charges

[2020 general admission fees list](#)

[2020 apprenticeship/traineeship fees list](#)

Fees and charges published on our website are indicative. Your fees will depend on your eligibility for government funding or a concession rate, and the units you choose to study or seek to be recognised under Recognition of Prior Learning (RPL). Our Indicative fees lists show fees that are:

- Based on the full possible study plan of units, including the recommended electives
- Based on full time study in 2020
- Charged at the government funded rate for over 18 years of age students
- Based on unit electives designed to meet localised industry demand for skills
- Made up of course fees and resource fees, or RPL fees. Course fees are the cost of your tuition, while resource fees pay for consumables provided to you to aid your study (such as printing and paper). You may also be required to purchase text books or equipment that are not part of our tuition or resource fees.

Fees may vary between students and between educational providers. Other charges may apply.

Visit our [Fees and payment options](#) page for more information.

Call 1800 001 001 to get a more accurate fee indication based on your eligibility and study plan before applying.

VET Student Loans

Selected courses are VET Student Loan eligible courses.

A VET Student Loan creates a debt that must be repaid to the Commonwealth and is only available to students who are eligible.

To find out if you are eligible or to see the list of eligible courses visit our [Student Loans](#) page.

International students

Selected courses are available to International students for full time study only.

Fees, charges, available locations, applications and enrolment procedures for International students are different to those for students who have Australian permanent residency.

For more information or to find a course visit the [TAFE International WA](#) website.

Apprenticeships and traineeships

Fees for apprenticeships and traineeships are charged at a rate per nominal hour of study.

This means that your fees will vary depending on the units you study as part of your training plan.

Apprentices and trainees are liable to pay for their own fees but some industrial agreements (awards) dictate that employers are required to reimburse their apprentice upon receipt of satisfactory progress. An employer may also opt to pay on behalf of the apprentice or trainee.

For more information visit our [Apprenticeships and traineeships](#) page.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) enrolments are charged at \$3.25 per nominal hour of study.

No concession fees apply to RPL enrolments. Refer to the institutional or apprenticeship/traineeship fee lists for an indicative RPL course fee.

Please note, fees are subject to change.