



# MEM40105 Certificate IV in Engineering (Instrumentation)

National ID: MEM40105 | State ID: WT46

## About this course

### Take control of your instrumentation career

Are you a **qualified tradesperson** with an electrical, mechanical fitter or refrigeration background? If so our Certificate IV in Engineering (Instrumentation) will give you the training, skills and knowledge needed to work on and maintain **modern instrumentation and control systems**.

This qualification includes both theoretical and practical training. The theoretical component is undertaken online whilst the practical components are completed on campus.

If you meet these prerequisites then this course will take you 6 - 12 months to complete and you may enrol at any time, see [our flyer](#) for more details

### Gain these skills

- Able to install, commission, calibrate and maintain modern instrumentation and control systems including:
  - PLC programming
  - Configuring instruments
  - Tuning of multi-loop cascade controls

### Is this course right for me?

I am:


- A qualified tradesperson such as an A-Grade electrician, mechanical fitter, refrigeration technician, **or**
- A third/fourth year apprentice

## Overview

## Semester 1, 2019

---

### Midland - Online

 Duration: **24 Months**

 When: **Semester 1, 2019**

 How: **0**

### Units

---

#### Core

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

#### Elective

Unit Title	National ID
Interpret technical drawing	MEM09002B
Terminate and connect electrical wiring	MEM10002B

Unit Title	National ID
Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c.	MEM10003B
Enter and change programmable controller operational parameters	MEM10004B
Commission programmable controller programs	MEM10005B
Terminate and connect specialist cables	MEM10011B
Perform electrical/electronic measurement	MEM12002B
Perform precision electrical/electronic measurement	MEM12004B
Perform emergency first aid	MEM13001B
Use hand tools	MEM18001C
Use power tools/hand held operations	MEM18002B
Shut down and isolate machines/equipment	MEM18011C
Fault find/repair electrical equipment/components up to 1000 volts a.c./1500 volts d.c.	MEM18046B
Fault find and repair/rectify basic electrical circuits	MEM18048B
Disconnect/reconnect fixed wired equipment up to 1000 volts a.c./1500 volts d.c.	MEM18049C
Fault find and repair/rectify complex electrical circuits	MEM18051B
Fault find, test and calibrate instrumentation systems and equipment	MEM18054B
Dismantle, replace and assemble engineering components	MEM18055B
Maintain, repair control instrumentation - single and multiple loop control systems	MEM18060B
Install, maintain and calibrate instrumentation sensors, transmitters and final control elements	MEM18062B
Maintain instrumentation system components	MEM18064B
Tune control loops - multi controller or multi element systems	MEM18067B

## 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

## Prerequisites

To complete this course you will need to have the prerequisite, core and other units required for the certificate IV, credited via an RPL or Credit Transfer process.

## Job opportunities

- Higher Engineering Tradesperson or a Special Class Engineering Tradesperson - Level II

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

## Important information

Third and fourth year apprentices can enrol and be issued with a certificate when they complete their trade studies.

## Fees and charges

View our [Indicative Fees list](#)

### Local full time students

Course fees are made up of two components, tuition fees and resource fees.

**Tuition fees** are determined by multiplying the course fee rate by the nominal hours, which is the number of hours in which an average student could be expected to complete each unit. They are not the hours of training or instruction.

**Resource fees** are charges for material that are essential to a course or unit, and are purchased by NMT to be used by students during the course.

Fees may vary depending on the units you are enrolled in so an approximate amount has been shown. You will be given the exact amount of your fees at enrolment. Part time student fees will vary depending on the number of units you are enrolled in.

Please note, you may also need to buy textbooks or equipment for your course.

### International Students

Check [TAFE International WA](#) to confirm this course is available to international students. You will pay your tuition fees to TIWA.

**Please note, fees are subject to change.**