



# 22519VIC Certificate IV in Integrated Technologies (Robotics Control Systems)

National ID: 22519VIC | State ID: AB84

## About this course

**Integrated technology is the coming together of various technologies that were previously stand alone, into new and innovative integrated applications.**

The impact of the application of **integrated technologies** is being increasingly felt within a range of industry areas such as **mining, engineering, electrical, electronic, information technology and manufacturing industries**. The technology used by these industries range from traditional electronics, hardware platform, networking automation, fibre internet connectivity.

Technicians who work in **Industry 4.0** sectors are required to be skilled in multiple disciplines.

To be able to competently repair and maintain equipment you will need knowledge and skills in the following areas:

**Networking** - Including both wireless and cabled networks that incorporates the principles of cyber security

**Data Collection and Predictive Analysis.**

**Electronics** - You may be required to repair and fault-find sensitive electric equipment

**Electrical** - You will need to be able to understand the electrical concepts incorporating safety and licensing issues

**Mechatronics** - You'll have to have an understanding of the equipment that is used in the automatic processing and manufacture of products

**Auto control** - Repair and maintenance of automatic control systems whether they are physical devices on site or control provided by online via the industrial internet of things will also be a required skill

**Robotics** - You will need to be able to program and repair robotic equipment

Graduates of the course will be able to seek employment as service technicians capable of operating, installing and repairing a wide variety of equipment and includes the "Industrial Internet of Things" (IIoT).

### Gain these specific skills in an integrated technology context

- Installation of integrated technology applications
- Set up of applications
- Maintenance within industry
- Fault diagnosis and rectification

### Is this course right for me?

I have the following attributes:

- An ability in mathematics for engineering purposes
- Analytical skills and the ability to interpret information
- An interest in programming and building robots

## Details

During your course of study, NMTAFE may use a variety of learning practices to ensure you get the best outcome for your learning journey.

This may include online learning, face-to-face classroom, laboratory/workshop delivery, work placement or a combination of these, depending on which is most appropriate.

## Semester 2, 2020

### Midland - On Campus



Duration: **2 Semester/s**



When: **Semester 2, 2020**



How: **On campus**

## Units

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### Core

National ID	Unit Title
MEM30007A	Select common engineering materials
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components
UEENEEE141A	Use of routine equipment/plant/technologies in an energy sector environment
VU22333	Perform intermediate engineering computations
VU22746	Undertake an integrated technology project
VU22747	Apply computer tools and networking in an integrated technology context

### Elective

National ID	Unit Title
ICTNWK405	Build a small wireless local area network
MEM30011A	Set up basic pneumatic circuits
MEM30031A	Operate computer-aided design (CAD) system to produce basic drawing elements
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
VU22338	Configure and program a basic robotic system
VU22563	Set up mechatronics engineering systems
VU22674	Explore applications and operation of the Internet of Things (IoT)
VU22758	Build a simple network and establish end to end connectivity

## 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

While there are no set pre-requisites for the course, the completion of 22289VIC Certificate II in Integrated Technologies (Robotics Control Systems) or similar, or relevant industry experience in electronics, and/or programming would be an advantage.

## Further study

Further study, including at university, in electrotechnology or engineering.

## Job opportunities

- Service Technician
- Installation Technician
- Technician responsible for monitoring performance of equipment
- Technician engaged in repair of equipment and restoration of operations after failure

## Important information

This course will be completed on campus, typically from 8:30am to 4:30pm over 3 days per week

## Fees and charges

### 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.**