



## New Zealand Certificate in Automotive Engineering Level 3

If you are into cars and motors then this 1 year certificate is the right course for you. Turn your passion into a career and enter the automotive industry.

### You will learn how to:

- follow workplace policies, procedures and relevant regulations to work safely and effectively in an automotive workshop.
- use tools and equipment to complete basic workshop engineering tasks.
- apply fundamental automotive engineering knowledge to service engine, and driveline systems.
- check operation of, and perform minor repairs on, electrical and electronic systems
- apply fundamental automotive engineering knowledge to service steering, suspension, tyres and brake systems.

### PROGRAMME INFORMATION

#### CAE3.101

Automotive  
Workshop Safety

Identify the policies, procedures and regulations that underpin safe workshop practices. Select and consistently apply safe and effective working practices when undertaking work in an automotive workshop.

#### CAE3.102

Basic Workshop  
Engineering Tasks,  
Tools and Equipment

Explain tools, power tools and engineering equipment in an automotive engineering workshop. Use hand and power tools to complete basic automotive engineering workshop tasks. Use workshop engineering equipment to complete basic automotive engineering workshop tasks.

#### CAE3.103

Engines

Identify the components of an engine. Disassemble, measure, reassemble and start an engine. Carry out engine tuning for four stroke petrol and diesel engines.

#### CAE3.104

Engine Systems

Describe the function, purpose and location of engine systems.  
Undertake basic servicing of engine systems.

#### CAE3.105

Driveline Systems

Describe the function, purpose and location of driveline systems.  
Undertake basic servicing of driveline systems.

#### CAE3.106

Electrical and  
Electronics

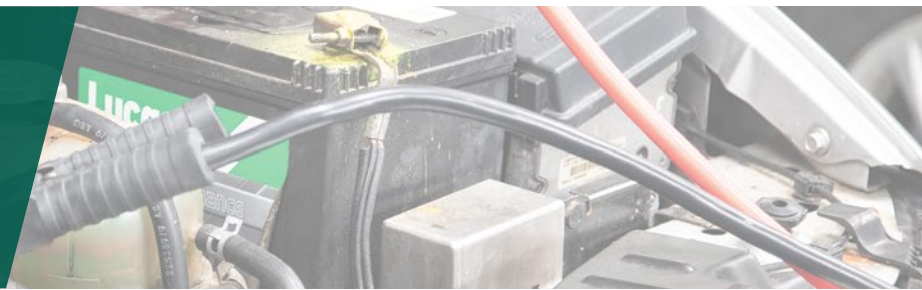
Understand and identify automotive electrical and electronic principles.  
Identify and describe automotive electronic purposes and principles.  
Use appropriate tools to test batteries and test and repair wiring and lighting systems.

#### CAE3.107

Starting and  
Charging Systems

Identify the function and purpose of starting and charging systems. Use appropriate tools and processes to check the operation of starting and charging systems.

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## Programme Specific Information:

Students are encouraged to undertake 240 hours of work experience for this programme. Doing so will consolidate course content, establish relationships with industry and open up employment/apprenticeship opportunities.

## Career Options:

Automotive Engineer, Motorcycle Engineer, Automotive Electrical Engineer, Automotive Machinist, Accessories & Parts Sales, Power Boat Servicing, agricultural engineering, light and heavy diesel engineering

## PROGRAMME INFORMATION

### CAE3.108

Electronic Controls,  
High Voltage  
Systems and HVAC

Understand the function and purpose of electronic control systems.  
Use appropriate tools and processes to check the operation of electronic control systems.  
Understand operation and safety processes of high voltage (HV) systems.

### CAE3.109

Brake Systems

Identify the function, purpose and location of brake systems and their respective components. Use appropriate tools and processes to service brake systems. Understand the function and purpose of wheels and tyres.

### CAE3.110

Steering and  
Suspension Systems

Identify the function, purpose and location of steering systems and their respective components. Identify the function, purpose and location of suspension systems and their respective components. Use appropriate tools and processes to service steering and suspension systems.

## Programme Fees and Additional Expenses

### Programme Fees

See website for domestic and international prices.

### Additional Expenses

Overalls – no exposed zip at front and NOT Nylon - approx \$60 to \$150

Safety Boots (steel capped) - approx \$100 to \$250

Safety Glasses - \$10

Small LED Light - \$11

### Stationery

A4 lever arch folder, lined A4 refill, calculator, pencil, pens, etc - \$25 approx

**A laptop or tablet is also required - approx \$750**