



# Certificate in Energy Process Operations (Level 3)



## Domestic Fees

\$4,397



## Duration

1 semester full time  
(including 12 weeks of  
industry placement)



[witt.ac.nz](http://witt.ac.nz)

Leading to the New Zealand Certificate in Energy and Chemical Process Operations (level 3), this qualification provides the energy and chemical plant industry with competent employees who have the operational skills and knowledge required to work as entry-level operators. This qualification is suitable for those wishing to enter the industry or those already employed as entry-level operators who want to develop their career in energy or chemical plants.

## You will learn how to:

- Apply knowledge of health and safety regulatory requirements to working in an energy and chemical plant.
- Apply knowledge of drawings, instrumentation, and thermodynamics to monitoring energy and chemical plant operations.
- Operate a range of plant and equipment and carry out product sampling in an energy or chemical plant.

*The Certificate in Energy Process Operations is currently not being offered in 2025. This programme has been paused and is scheduled for review in 2026. Further updates will be provided once the review has been completed.*

## Courses

EPO3.001

### Thermodynamics

This course provides students with knowledge of basic thermodynamics, the basics of energy and heat relevant to the energy and chemical industry.

EPO3.002

### Instrumentation

This course provides students with knowledge of instruments used in the energy and chemical industry.

EPO3.003

### Safety Equipment

This course provides students with knowledge to be able to demonstrate knowledge of: personnel safety equipment and systems; and describe responsibilities under the Health and Safety at Work Act. They are also able to: maintain and monitor personnel safety equipment; and identify and comply with PPE requirements, in an energy and chemical plant.

EPO4.004

### Gas testing

This course provides students with ability to: demonstrate knowledge of gas testing and related hazards in the energy and chemical industry; perform gas tests; and interpret and respond to gas test results, in an energy and chemical plant.

EPO3.017

### Pipework and Drawings

This course provides students with knowledge of pipework; and pipe fittings used in an energy and chemical plant. The course also provides students with knowledge of process drawings used in an energy and chemical plant; and sketch a section of an energy and chemical plant.

EPO3.016

### Chemical Management

This course provides students with knowledge of: pollutants; pollutant control compliance measures; and employer and employee responsibilities relating to pollutants, under the Resource Management Act (RMA), in an energy and chemical plant.

EPO3.018

## Applied Process Operations 1

This course provides a 'capstone' to the process operations programme, in which students are required to apply much of the knowledge and skills they have obtained throughout the programme regarding operating equipment in applied contexts within their work placements. Students will demonstrate their competency in routine plant operations and with pumps, fans, compressors and emergency power systems, and in the monitoring of plant\* operations.

In undertaking all of these activities, students will be required to demonstrate that they understand and can apply their legislative obligations and that they are capable of managing their own compliance with PPE requirements, as well as being able to identify and monitor on site personnel safety equipment more broadly.

EPO4.019

## Applied Process Operations 2

This course provides a 'capstone' to the process operations programme, in which students are required to apply much of the knowledge and skills they have obtained throughout the programme regarding operating equipment in applied contexts within their work placements. Students will demonstrate their competency operating valves, processing product samples and of fire safety equipment use in plant\* operations.

In undertaking all of these activities, students will be required to demonstrate that they understand and can apply their legislative obligations and that they are capable of managing their own compliance with PPE requirements, as well as being able to identify and monitor on site personnel safety equipment more broadly.

## Programme Specific Information

Develop the skills and abilities to the level required by

the energy industry for entry-level employment as process operators.

When you graduate you will be able to operate plant and machinery within an energy or chemical plant context, under limited supervision. You may also be able to apply these skills under limited supervision in roles across a wide range of manufacturing fields.

This programme is delivered in partnership with Energy Skills NZ and industry and offers work placement-based training in a range of energy-related industries.

### Entry requirements

- NCEA Level 2 which must include 12 or more credits from the science domain and NCEA Level 1 Literacy and Numeracy requirements, or
- Equivalent knowledge, skills, work experience or study.

### Special entry criteria

Additional to academic entry requirements applicants will also be required to provide two written referee reports, medical conditions disclosure and a criminal check. If shortlisted applicants will also be required to attend an industry interview and provide a drug free test. Drug free tests are at the cost of the student.

## Career Options

Graduates of this qualification may be employed as entry-level plant and machinery operators in an energy or chemical plant.

This qualification may lead on to the New Zealand Certificate in Energy and Chemical Process Operations (Level 4) with strands in Advanced Steam Generation Plant Operation, Chemical Plant Operation, Geothermal Plant Operation, Petrochemical Plant Operation, Petrochemical Transfer and Storage, with optional strands in Gas Turbine Operation, and Steam Turbine Operation.

## Further Study Options

- New Zealand Certificate in Workplace Health and

Safety Practice (Level 4).

- New Zealand Certificate in Energy and Chemical Operations (Boiler Operation) (Level 3) and/or the New Zealand Certificate in Energy and Chemical Field Operations (Level 4) with strands in Process Plant Equipment, Steam Plant, Geothermal Operation, Petrochemical Operation and Petrochemical Transfer and Storage.