

Title	Use personal computer software to demonstrate computer programming concepts for electrotechnology		
Level	3	Credits	5

Purpose	<p>This unit standard covers fundamental programming concepts for electrotechnology engineering.</p> <p>People credited with this unit standard are able to use personal computer software to demonstrate computer programming concepts for electrotechnology.</p>
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Classification	Electronic Engineering > Computer Engineering
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Available grade	Achieved
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Guidance Information

- 1 This unit standard is intended for use in engineering courses at diploma level.
- 2 This unit standard is one of three designed to cover skill and knowledge of programming techniques for electrotechnology engineering, the others being Unit 16981, *Demonstrate and apply advanced knowledge of programming techniques for electrotechnology*; and Unit 22718, *Demonstrate and apply intermediate knowledge of programming techniques for electrotechnology*. It is recommended that competency in these unit standards be achieved before assessment against unit standard 22718 is attempted.
- 3 Reference
Health and Safety at Work Act 2015;
and all subsequent amendments and replacements.
- 4 Definition
CPU – central processor unit.
Industry practice – practice used and recommended by organisations involved in the electrotechnology industry.
- 5 All measurements are to be expressed in Système International (SI) units, and, where required, converted from Imperial units into SI units.
- 6 All activities must comply with: any policies, procedures, and requirements of the organisations involved; the standards of relevant professional bodies; and any relevant legislative and/or regulatory requirements.

- 7 Range
- a performance in relation to the outcomes of this unit standard must comply with the Health and Safety at Work Act 2015;
 - b laboratory and workshop safety practices are to be observed at all times.

Outcomes and performance criteria

Outcome 1

Use personal computer software to demonstrate computer programming concepts for electrotechnology.

Range programming languages may include but are not limited to – a high level language and its compiler, low-level languages.

Performance criteria

1.1 The essential elements of computer hardware are identified and related to program execution in accordance with industry practice.

Range input, output, CPU, memory.

1.2 The concepts of a computer program are described.

Range sequence, selection, iteration.

1.3 The given computer program is used to input, edit, compile, debug, and execute specified programs.

Range programming task includes combinations of sequence, selection, iteration.

1.4 Program performance is consistent with expected outcomes in accordance with industry practice.

This unit standard is expiring. Assessment against this standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 December 2006	31 December 2022
Rollover and Revision	2	28 June 2018	31 December 2022
Review	3	28 January 2021	31 December 2022

Consent and Moderation Requirements (CMR) reference

0003

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.