

<b>Title</b>	<b>Select, use, and care for advanced engineering measuring equipment</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	People credited with this unit standard are able to select, use, and care for advanced engineering measuring equipment.
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<b>Classification</b>	Mechanical Engineering > Engineering - Measurement
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<b>Available grade</b>	Achieved
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### Guidance Information

#### 1 Definitions

*Accepted industry practice* – approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors as examples of best practice.

*Digital level indicator* – digital spirit level with laser beam such as used in construction industry and for alignment of machinery, or a device measuring tilt on two axis' to determine the levelness of a platform.

*Displacement transducer* – transducer to measure linear displacement, and connected to a control system.

#### 2 Recommended for entry

Unit 4435, *Select, use, and care for engineering dimensional measuring equipment*.

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### Outcomes and performance criteria

#### Outcome 1

Select advanced engineering measuring equipment.

Range examples of advanced engineering measuring equipment are – gauge blocks, length bars, cylindrical squares, sine bars, surface texture standard blocks, digital level indicator, displacement transducer, precision squares, precision surface tables;  
evidence is required for gauge blocks, and at least three other items.

#### Performance criteria

- 1.1 Measuring equipment is selected having regard to the quantity to be measured, expected magnitude, ability to meet required tolerances, and effects of temperature and humidity.
- 1.2 Measurement technique is planned and explained prior to commencing work.

1.3 Measuring equipment is inspected for damage and faults and supervisor advised.

Range damage and faults may include but are not limited to – deformation, scratches and burrs, breakages, missing parts, not zeroing, expired calibration.

## Outcome 2

Use advanced engineering measuring equipment.

Range items selected from outcome 1.

### Performance criteria

2.1 Use of the measuring equipment achieves the required accuracy, and the tolerance of the measurement is quoted.

2.2 Measurements are validated by re-measurement with the same or alternate equipment.

2.3 Measuring equipment and objects to be measured are not damaged during measurement.

2.4 Measurements are recorded in accordance with accepted industry practice.

Range number of decimal places, units, prefixes, symbols, accuracy.

## Outcome 3

Care for advanced engineering measuring equipment.

Range items selected from outcome 1.

### Performance criteria

3.1 Measuring equipment is handled and stored in a manner that maintains its integrity.

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<b>Planned review date</b>	31 December 2022
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	23 May 1995	31 December 2011
Revision	2	14 April 1997	31 December 2011
Revision	3	5 January 1999	31 December 2011
Revision	4	23 May 2001	31 December 2011
Review	5	21 February 2005	31 December 2014
Review	6	17 June 2011	31 December 2022
Review	7	17 August 2017	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Competenz [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.