

<b>Title</b>	<b>Demonstrate knowledge of international tolerancing in engineering</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	People credited with this unit standard are able to demonstrate knowledge of international tolerancing in engineering; and dimensioning and measuring features, shafts and holes, and geometric tolerancing.
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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

#### References

BS EN ISO 286-1:2010, *Geometrical product specifications (GPS). ISO code system for tolerances on linear sizes. Basis of tolerances, deviations and fits.*

BS EN ISO 286-2:2010, *Geometrical product specifications (GPS). ISO code system for tolerances on linear sizes. Tables of standard tolerance classes and limit deviations for holes and shafts.*

BS 3643-2:2007, *ISO metric screw threads. Specification for selected limits of size.*

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### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of international tolerancing in engineering.

#### Performance criteria

1.1 Tolerancing terminology used in the International Standards Organisation's system of limits and fits is explained.

1.2 The tolerancing of geometric features is explained in accordance with the International Standards Organisation's definitions.

Range features – parallelism, roundness, flatness, concentricity, surface finish.

**Outcome 2**

Demonstrate knowledge of dimensioning and measuring features, shafts and holes, and geometric tolerancing.

Range features – threads, parallelism, roundness, flatness, concentricity, perpendicularity, surface finish finish.

**Performance criteria**

- 2.1 Measuring techniques for different features are described in accordance with the International Standards Organisation's system of limits and fits.
- 2.2 Dimensioning methods and tolerance classes for shafts and holes are described in accordance with the fit classifications in the International Standards Organisation's system of limits and fits.

<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**Status information and last date for assessment for superseded versions**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	14 December 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.