Title	**Demonstrate knowledge of basic geometric form in engineering**		
Level	**1**	**Credits**	**1**

Purpose	People credited with this unit standard are able to demonstrate knowledge of: two-dimensional (2D) and three-dimensional (3D) forms used in engineering; basic geometry instruments; and common engineering concepts that apply to geometric form.

Classification	Mechanical Engineering > Engineering Drawing and Design

Available grade	Achieved

Explanatory notes

1 Definitions
Two-dimensional (2D) refers to forms with two dimensions (such as width and height) and no thickness.
Three-dimensional (3D) refers to forms that have height, width and depth.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of 2D and 3D forms used in engineering.

Evidence requirements

1.1 Typical geometric shapes are identified in terms of where and how they are used in engineering.

Range includes but is not limited to – circle, triangle, square, rectangle.

1.2 Typical geometric solids are identified in terms of where and how they are used in engineering.

Range includes but is not limited to – cube, cylinder, cone, prism, pyramid.

1.3 Positions in space are identified in terms of how they are used to construct geometric shapes and solids.

Range positions in space include – points, lines, angles.

Outcome 2

Demonstrate knowledge of basic geometry instruments.

Evidence requirements

2.1 Instruments are identified in terms of their role in forming geometric shapes and solids.

Range includes but is not limited to – rules, set squares, compasses, protractors.

Outcome 3

Demonstrate knowledge of common engineering concepts that apply to geometric form.

Range straightness, flatness, squareness, parallelism, roundness, taper.

Evidence requirements

3.1 Concepts are identified in terms of how they apply to the formation of selected geometric shapes and solids.

3.2 Engineering concepts are identified relative to geometric orientation.

Range horizontal, vertical.

Planned review date	31 December 2021

Status information and last date for assessment for superseded versions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 2011
Rollover and Revision	6	20 March 2009	31 December 2016
Review	7	17 November 2011	31 December 2021
Review	8	15 September 2016	N/A

Consent and Moderation Requirements (CMR) reference	0013

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

Please note
Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.