Field Engineering and Technology

Review of *Mechanical Engineering* unit standards

Subfield	Domain	ID
Mechanical Engineering	Engineering Machining and Toolmaking	2701-2704, 2717, 2718, 18542-18544, 18616, 18617, 22911
	Engineering - Measurement	4440, 4441

Competenz has completed the review of the unit standards listed above.

Date new versions published **December 2017**

Planned review date **December 2022**

Summary

The unit standards were reviewed and new unit standards were written to align with the recently registered New Zealand Certificate in Mechanical Engineering (Level 3) [Ref: 2715] and New Zealand Certificate in Mechanical Engineering (Trade) (Level 4) [Ref: 2714] and to meet Competenz's ongoing unit standard review schedule.

The review was carried out during July – September in consultation with mechanical engineering industry technical experts. Any feedback that was received about the unit standards from assessors, industry training managers, technical experts, and users was collated. Technical experts were consulted via small group meeting format. Subsequent detail development was carried out by email and phone. These units have been endorsed by the industry technical experts, assessors, and users.

Main changes

- Unit standards were reviewed to reflect technology changes and current practices.
- Some titles were amended to align with unit standard content changes.
- Level and credits for two unit standards were adjusted to reflect unit standard content changes.
- Two new unit standards were registered.
- Last dates for the most recent superseded versions of the reviewed standards were specified.

The last date for assessment of superseded versions of Category B unit standards is December 2022

Impact on existing organisations with consent to assess

Current consent for			Consent extended to		
Nature of consent	**Classification or ID**	**Level**	**Nature of consent**	**Classification or ID**	**Level**
Subfield	Mechanical Engineering	2	Standard	2701	3
Domain	Engineering Machining and Toolmaking	2	Standard	2701	3

Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit	Review Category
30665	**Demonstrate and apply knowledge of workplace communication in mechanical engineering trades**	**3**	**2**	**New**

Engineering and Technology > Mechanical Engineering > Engineering Machining and Toolmaking

ID	Title	Level	Credit	Review Category
2701	Produce components by performing reciprocating cutting operations	2 **3**	5 **3**	B
2702	Set and operate a CNC machining centre	4	15	B
2703	Set and operate a CNC lathe	4	15	B
2704	Produce components by performing advanced engineering turning operations	4	15	B
2717	Produce components by performing advanced engineering milling operations	4	15	B
2718	Produce components by performing advanced engineering grinding operations	4	15	B
18542	Manufacture single stage tooling for industry	3	15	B
18543	Manufacture multi-stage tooling for industry	4	15	B
18544	Select and use advanced material cutting tools in engineering machining	4	10	B
18616	Program a 3-axis CNC machining centre using proprietary software **Program a 3-axis CNC machining centre**	4	15	B
18617	Program a 2-axis CNC turning centre using proprietary software **Program a 2-axis CNC turning centre**	4	10	B
22911	Demonstrate knowledge of toolmaking principles	3	2	B
30666	**Demonstrate and apply knowledge of keys and pins**	**3**	**5**	**New**

Engineering and Technology > Mechanical Engineering > Engineering - Measurement

ID	Title	Level	Credit	Review Category
4440	Demonstrate and apply knowledge of international tolerancing in engineering **Demonstrate knowledge of international tolerancing in engineering**	4 **3**	4 **2**	B
4441	Calibrate engineering measuring devices and equipment	4	4	B