

Field Engineering and Technology**Rollover and Revision and of *Mechanical Engineering* unit standards**

Subfield	Domain	ID
Mechanical Engineering	Applied Principles of Mechanical Engineering	11385 , 11386, 11392, 11393, 11398, 14866, 21277 , 21772-21779 , 21781 , 21782 , 21873, 21874 , 21785, 21787, 21788, 21789, 22918, 22919 , 22920, 22921 , 22922 , 24530-24535

Competenz has completed the rollover of the unit standards listed above. The standards in **bold** have also been revised.

Date new versions published

March 2010

Planned review date

December 2015

Summary

These standards had planned review dates of December 2009, 2010, and 2013. They are primarily used in the National Diploma in Engineering (Level 6) with strands in Mechanical Engineering, Production Engineering, and Mechanical Services, and with an optional strand in Practical Endorsement [Ref: 0534]. However, recent developments towards a unified New Zealand Diploma in Engineering system (NZDE) could make some of these standards and the National Diploma redundant.

The diploma system includes the New Zealand Diploma in Engineering (NZDE) and the New Zealand Diploma in Engineering Practice (NZDEP). Delivery of the New Zealand Diploma in Engineering is scheduled to begin in February 2011. No comments have been received from users of the standards and some have never been used. Therefore, Competenz has decided to delay the review of the standards and the National Diploma until the impact of the introduction of NZDE can be assessed.

Main changes

- Scheduled planned review for 2015.
- Minor edits to unit standard ranges, entry information, and special notes for accuracy and consistency.
- Corrections and amendments to references.
- Corrections to entry information.

There are no impacts on accreditations, Accreditation and Moderation Action Plan (AMAP) or registered qualifications.

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

There are no changes to classifications, title, level or credits resulting from this rollover.

Engineering and Technology > Mechanical Engineering > Applied Principles of Mechanical Engineering

ID	Title	Level	Credit
11385	Demonstrate and apply knowledge of fluid mechanics in mechanical engineering	6	15
11386	Apply principles of lubrication to rotating and sliding machine elements	6	10
11392	Apply mechanical engineering principles to mechanical power transmission	5	10
11393	Apply principles of vibration and acoustics to mechanical engineering systems	6	10
11398	Select and specify materials handling systems for mechanical engineering	6	20
14866	Demonstrate workshop skills for mechanical engineering	2	12
21277	Demonstrate and apply knowledge of the mechanics of machines in mechanical engineering	6	15
21772	Apply sketching techniques and produce drawings for mechanical engineering	4	11
21773	Demonstrate and apply knowledge of mechanical statics for mechanical engineering	4	15
21774	Demonstrate and apply knowledge of mechanical dynamics for mechanical engineering	4	15
21775	Demonstrate knowledge of mathematical principles for mechanical engineering	3	15
21776	Apply knowledge of calculus and data analysis for mechanical engineering	4	15
21777	Apply knowledge of quality and reliability for mechanical engineering production	6	15
21778	Demonstrate and apply knowledge of mechanical engineering operations management	6	15
21779	Demonstrate and apply knowledge of mechanical engineering planning	5	15
21781	Explain and apply laws of thermodynamics in mechanical engineering	5	15
21782	Demonstrate and apply advanced knowledge of principles of thermodynamics in mechanical engineering	6	15
21783	Demonstrate and apply knowledge of strength of materials in mechanical engineering	5	15
21784	Demonstrate and apply advanced knowledge of strength of materials in mechanical engineering	6	15
21785	Demonstrate knowledge of and test materials for mechanical engineering applications	5	15
21787	Demonstrate and apply electrical and electronic knowledge to mechanical engineering	5	15
21788	Demonstrate and apply knowledge of manufacturing processes and equipment for mechanical engineering	5	15

ID	Title	Level	Credit
21789	Demonstrate and apply knowledge of maintenance planning for mechanical engineering	6	15
22918	Demonstrate and apply knowledge of project management in mechanical engineering	6	15
22919	Demonstrate and apply knowledge of control system engineering in mechanical engineering	6	15
22920	Demonstrate and apply knowledge of fluid power in mechanical engineering	6	15
22921	Demonstrate knowledge of management in mechanical engineering	6	15
22922	Demonstrate knowledge of advanced manufacturing processes and equipment	6	15
24530	Demonstrate and apply knowledge of water-based system design for HVAC applications	6	15
24531	Demonstrate and apply knowledge of piped services system design	6	15
24532	Demonstrate and apply knowledge of air handling system design for HVAC applications	6	15
24533	Demonstrate and apply knowledge of HVAC control and building management system design	6	15
24534	Demonstrate and apply knowledge of commercial and light industrial RAC design	6	15
24535	Demonstrate and apply knowledge of industrial refrigeration system design	6	15