

FIELD ENGINEERING AND TECHNOLOGY

Review of *Mechanical Engineering* qualifications

National Certificate in Engineering - Fabrication (Level 5) with strands in Heavy Fabrication, Light Fabrication, and Welding [Ref: 0681]

National Certificate in Engineering Machining and Toolmaking (Level 5) [Ref: 0719]

National Certificate in Fixed Fire Protection Systems (Level 5) [Ref: 0865]

National Certificate in Heating, Ventilating, and Air Conditioning (Mechanical Services) (Level 5) [Ref: 0897]

National Certificate in Maintenance and Diagnostics in Mechanical Engineering (Level 5) [Ref: 0718]

National Certificate in Refrigeration and Air Conditioning (Level 5) [Ref: 0720]

National Diploma in Fire Detection and Alarm Systems (Level 5) [Ref: 0866]

National Diploma of Fire Protection Systems Technology (Certification of Fire Safety Systems) (Level 5) [Ref: 0867]

Competenz has completed the review of the qualifications listed above.

Replacement qualification

National Certificate in Mechanical Engineering (Level 5) with strands in Engineering Fabrication, Fire Protection, General and Maintenance Engineering, Mechanical Services, and Precision Engineering [Ref: 1545]

Date new versions published

April 2010

The next qualification review is planned to take place during 2016.

Summary of review and consultation process

Early in 2009, Competenz embarked on a review of the suite of Level 5 qualifications serving the mechanical engineering industry. The existing qualifications (Engineering – Fabrication, Engineering Machining and Toolmaking; Heating, Ventilating, and Air Conditioning; Maintenance and Diagnostics in Mechanical Engineering; and Refrigeration and Air Conditioning) had overall poor uptake within industry and less than satisfactory completion rates. The review was initiated in response to industry feedback across a number of mechanical engineering sectors that identified a clear demand for advanced trade qualifications which did not appear to be met by the existing qualifications.

During 2009, Competenz undertook extensive consultation with all relevant sectors of the mechanical engineering industry, including the Fire Protection industry. A series of industry focus groups were held around the country, interviews were conducted with employers, trainees and providers, and a thorough review of achievement towards the existing qualifications was carried out.

During the consultation phase, a number of common themes and issues emerged and it became apparent that demand for an advanced trade qualification which further developed the technical, business and overall leadership skills of the workforce could be well served by a single Level 5 qualification, with strands to meet the particular needs of the sectors. Common themes and issues included the need:

- to reduce the size of the qualification to between 70 and 80 credits so that the qualification is achievable within a year to 18 months
 - for core standards that are commonly available from providers through a range of delivery mechanisms
 - to provide a clear pathway to a higher level qualification
 - to provide maximum flexibility to allow employers to select standards directly relevant to their business operations
 - for the qualification to adapt rapidly to advances in technology and work practices.
- In addition, many employers indicated they prefer to train and assess against these standards using the facilities and expertise within their own workplace.

Based on the initial consultation, a qualification was drafted and then refined through further consultation meetings. The final version was endorsed by each of the relevant Competenz Strategic Advisory Groups.

Main changes resulting from the review

The eight qualifications listed below have been replaced by a single stranded qualification.

National Certificate in Engineering - Fabrication (Level 5) with strands in Heavy Fabrication, Light Fabrication, and Welding [Ref: 0681]
 National Certificate in Engineering Machining and Toolmaking (Level 5) [Ref: 0719]
 National Certificate in Fixed Fire Protection Systems (Level 5) [Ref: 0865]
 National Certificate in Heating, Ventilating, and Air Conditioning (Mechanical Services) (Level 5) [Ref: 0897]
 National Certificate in Maintenance and Diagnostics in Mechanical Engineering (Level 5) [Ref: 0718]
 National Certificate in Refrigeration and Air Conditioning (Level 5) [Ref: 0720]
 National Diploma in Fire Detection and Alarm Systems (Level 5) [Ref: 0866]
 National Diploma of Fire Protection Systems Technology (Certification of Fire Safety Systems) (Level 5) [Ref: 0867]

replaced by

National Certificate in Mechanical Engineering (Level 5) with strands in Engineering Fabrication, Fire Protection, General and Maintenance Engineering, Mechanical Services, and Precision Engineering [Ref: 1545]

Review category	C	See Key to Qualification Review Categories at the end of report
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Differences between the qualifications

- A single qualification was introduced to reflect common skills and knowledge relevant across mechanical engineering industries.
- The qualification was structured to include a mixture of core compulsory, core elective, and strand elective components.
- The core compulsory standards reflect pan-industry requirements.
- The core elective standards allow selection of skills relevant to an individual's role within a particular enterprise.
- Industry specific strands were introduced to recognise particular industry requirements.
- The strands were designed to provide maximum flexibility for employers by listing domains rather than specific standards.
- The overall credit total was reduced from between 100 and 317 to 78 to better reflect industry requirements.
- New standards were included to reflect current industry requirements.

Transition

People currently working towards qualifications Refs: 0681, 0718, 0719 and 0720 have until 31 December 2012 to complete their assessments; alternatively they can transfer to the new qualification. Because there are standards in these qualifications that expire in December 2011, trainees will need to check the expiry date of any standards they have yet to complete.

Qualifications Refs: 0865, 0866, 0867 and 0897 have never been used and have no candidates enrolled in courses leading to them so the decision has been made to let them **expire immediately**.

It is intended that all new trainees from July 2010 will be enrolled in an appropriate strand of the new National Certificate in Mechanical Engineering (Level 5) [Ref: 1545].

For those electing to transfer to the new qualification, the following table shows the most appropriate strand within the National Certificate in Mechanical Engineering (Level 5) [Ref: 1545].

Qualification	Recommended strand in National Certificate in Mechanical Engineering (Level 5) [Ref: 1545]
National Certificate in Engineering – Fabrication (Level 5) with strands in Heavy Fabrication, Light Fabrication, and Welding [Ref: 0681]	Engineering Fabrication
National Certificate in Engineering Machining and Toolmaking (Level 5) [Ref: 0719]	Precision Engineering
National Certificate in Fixed Fire Protection Systems (Level 5) [Ref: 0865]	Fire Protection
National Certificate in Heating, Ventilating, and Air Conditioning (Mechanical Services) (Level 5) [Ref: 0897]	Mechanical Services
National Certificate in Maintenance and Diagnostics in Mechanical Engineering (Level 5) [Ref: 0718]	General and Maintenance Engineering
National Certificate in Refrigeration and Air Conditioning (Level 5) [Ref: 0720]	Mechanical Services
National Diploma in Fire Detection and Alarm Systems (Level 5) [Ref: 0866]	Fire Protection
National Diploma of Fire Protection Systems Technology (Certification of Fire Safety Systems) (Level 5) [Ref: 0867]	Fire Protection

Industry will continue to recognise the former qualifications and there is no requirement for people who hold the replaced qualifications or have demonstrated equivalent knowledge and skills to 'upgrade' to the new qualification.

This qualification contains standards that replace or have been substituted for expiring standards. For the purposes of this qualification, people who have gained credit for the expiring or substituted standards are exempt from the requirement to gain credit for the replacement or substitute standards – see table below.

Credit for	Exempt from
2438	21772
2439	21772
4803	20800
7452	25463
11387	21781
11388, 11389	21773
11394	21785
11395, 11396	21787
11397	21788

Please note that all of the standards on the left side of the table, except for standard 7452, expire on 31 December 2012 and must not be assessed against after that date. Standard 7452 expires in December 2011 and must not be assessed against after that date.

It is not intended that anyone be disadvantaged by this review, and the above arrangements have been designed for a smooth transition. However, anyone who feels they have been disadvantaged may appeal to Competenz at the address below.

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Key to Qualification Review Categories

Category A The qualification is published as a new version with the same NQF ID	Changes are made to SSB name, contact details or purpose statement
	No change is made to title, rules or components of the qualification
	No transition arrangements are required
Category B The qualification is published as a new version with the same NQF ID	Changes are made to title, rules or components
	The new version of the qualification recognises a similar skill set to that recognised by the previous version
	The SSB is confident that people awarded the new or previous version are comparable in terms of competence
	Transition arrangements are required if candidates must gain additional/different credits for the new version
Category C A new (replacement) qualification is published with new NQF ID	Significant changes are made to the qualification in terms of components, structure, type or level
	The SSB views people with the replacement qualification as being significantly different in terms of competence from those with the replaced qualification
	Transition arrangements are required
	Transition may be limited to phase-out dates
Category D Qualification will expire. There is no replacement qualification	Qualification is no longer required by industry
	The qualification is designated as expiring and a last date for meeting the qualification requirements is set