Qualification Title: New Zealand Certificate in Electrical Engineering Theory (Level 3)

Qualification number: 2387

Date of review: 18 and 19 March 2019

This report refers to graduates awarded this qualification prior to: **31 December 2018**

Final decision on consistency of the qualification: National consistency is confirmed

Threshold:

The threshold to determine sufficiency with the graduate profile was determined as evidence of:

Graduates being able to apply an introductory level of knowledge, that underpins safe electrical installation, testing, commissioning, and servicing of electrical installations and equipment, to a limited range of prescribed electrical work under general supervision in accordance with the Electricity Act 1992 and in a controlled environment. This includes the ability to:

- Apply fundamental knowledge and principles of electrical theory and practice, including electrical protection, to the installation and maintenance of electrical systems and equipment
- Apply fundamental knowledge of fault diagnosis and testing techniques of electrical systems and equipment
- Apply safe working procedures and practices, and identify and report electrical and other hazards
- Ensure their own activities are within legal limitations of the electrical legislation
- Apply fundamental knowledge and principles to the installation and maintenance of electrical machines
- Apply fundamental knowledge and principles to the installation and maintenance of electrical equipment in special electrical situations
- Work ethically and professionally within the electrical industry, as an electrical worker, including maintaining current competency and communicating with stakeholders on electrical and related matters

Education Organisations with sufficient evidence

The following education organisations have been found to have sufficient evidence.

Education Organisation	Final rating
Ara Institute of Canterbury	Sufficient
Manukau Institute of Technology	Sufficient
Northland Polytechnic	Sufficient
Skills Update Training and Education Group	Sufficient

Toi Ohomai Institute of Technology	Sufficient
Universal College of Learning (UCOL)	Sufficient
Eastern Institute of Technology (EIT)	Sufficient
Otago Polytechnic	Sufficient
Southern Institute of Technology (SIT)	Sufficient
Unitec Institute of Technology	Sufficient
Waikato Institute of Technology	Sufficient
Wellington Institute of Technology	Sufficient
Western Institute of Technology (WITT)	Sufficient
Whitireia Community Polytechnic	Sufficient
New Zealand Management Academies Ltd (NZMA)	Sufficient

Introduction

This qualification provides a pathway to work in the electrical industry for those who do not yet have an electrical apprenticeship agreement. Providers mostly deliver a 120-credit programme of fulltime study over one year. Over the period covered by this review there was a total of 748 graduates from 15 providers.

The review was conducted over 2 days with meetings, in both Auckland and Wellington. Each education organisation attended one of the review days and the qualification developer (The Skills Organisation) was represented at both days. The threshold statement was developed with input from providers on both days and the final version was circulated to all providers soon after the review meetings were completed.

Evidence

The education organisations provided a range of evidence to demonstrate that their graduates met the graduate profile outcomes.

The criteria used to judge the evaluation question were:

- The nature, quality and integrity of the evidence presented by the education organisation:
- How well the organisation has analysed, interpreted and validated the evidence, and used the understanding gained to achieve actual or improved consistency
- The extent to which the education organisations can reasonably justify and validate claims and statements relating to the consistency of graduate outcomes, including in relation to other providers of programmes leading to the qualification

Evidence provided

- Programme alignment mapping documents
- Evidence of applied delivery and use of simulated real-world situations
- Internal moderation outcomes and plans for external moderation additional to that completed with the standard setting body.
- Survey outcomes from both employers and graduates.
- Alternative methods of measurement to gain additional survey responses.

How well does the self-assessment and supporting evidence provided by the education organisation demonstrate that its graduates match the graduate outcomes at the appropriate threshold?

Programme mapping to the graduate profile and to The Skill Organisation's programme generally provided good evidence that programmes of study were designed to develop the graduate outcomes in the learners. This was strengthened by the applied nature of programmes and the use of simulated real-world situations.

Internal and external moderation by some organisations demonstrated that assessment of learning was appropriate and provided confidence that graduates met the graduate profile.

However, most education organisations had not undertaken post-assessment external moderation and consequently did not demonstrate they had taken all reasonable steps to ensure their graduates matched the graduate profile outcomes. Subsequent provision of partnerships and plans, by these education organisations, implementing external moderation provide confidence that they would be effective in determining that assessment was appropriate and ensured their graduates matched the graduate profile outcomes

Some education organisations provided sound evidence from graduates, employers and other stakeholders that graduates matched the graduate profile outcomes at the threshold. However, for others the quality and quantity of evidence from key stakeholders, including graduates, employers and tutors on higher level programmes that graduates had enrolled in, was variable. Most organisations had surveyed employers and graduates however, the quality of the survey tools and response rates varied significantly between providers.

In response to low response rates some providers used different methods to gain additional information from employers.

It should be noted that the timing of this review meant that for December 2018 graduates, evidence of the application of skills in the real world was limited. This has occurred because of the short time graduates had been in the workplace or further study and, for these cohorts, a significant proportion of graduates were still seeking work.

Overall, this evidence makes a convincing case demonstrating that their graduates match the graduate outcomes at the appropriate threshold.

Special Focus (includes special focus on a strand or outcome)

There was no special focus for this review

Examples of good practice

The graduate and employer surveys conducted by one education organisation collected useful quantitative and qualitative data. Respondents were asked to rate the graduate's ability for each graduate profile outcome as well as to provide examples of the graduate's application of the skills in the workplace.

Additionally, when the initial survey response rates were low, alternative methods of gather the data were used.

Issues and concerns

Whilst some education organisations had joined together to form moderation clusters, the lack of external moderation by several education organisations is a concern. Several submissions noted that the standard setting body had not requested assessments for

2387: New Zealand Certificate in Electrical Engineering Theory (Level 3)

moderation during the two years the programme had operated. One education organisation had submitted assessments to the standard setting body and had received a delayed response that limited the effectiveness of the moderation feedback.

Recommendations to Qualification Developer

It is recommended that the title of the qualification is changed to better reflect the applied nature of the graduate profile outcomes.