



## **NATIONAL UNIFORM ELECTRICAL LICENSING ADVISORY COUNCIL**

### **CAPSTONE ASSESSMENT REQUIREMENTS FOR PROSPECTIVE ELECTRICIANS**

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Developed by the NUELAC Electrician Working Group

This document outlines regulatory requirements for the scope and implementation of a Capstone Assessment to be applied by Registered Training Organisations (RTOs) on apprentice electricians during the late part of their training.

It was endorsed at the meeting of NUELAC on 13 February 2001 and subsequently approved for use by the various Licensing Authorities, by the Electrical Regulatory Authorities Council (ERAC).

The document should be read in conjunction with the companion “List of Essential Performance Capability Requirements for Licensed Electricians” and in particular, the critical items within that list. These detail part of the requirements for the “Capstone Assessment” of each trainee.

Successful completion of the Capstone Assessment is one of the cornerstone requirements for the issue of an Electrician licence by a State or Territory Licensing Authority.

The overarching objective is that the training for a prospective electrician must deliver at least the “essential performance capability” requirements, and that the Capstone Assessment will confirm that the most critical of these has been attained by the applicant. Concurrently the requirements of an \*approved National Training Package qualification must have been met.

The Capstone Assessment format and other implementation requirements are detailed in the following tables.

\*Approved National Training Package means an ANTA National Training Quality Council endorsed National Training Package qualification, that includes the “Capstone Assessment Test” as approved by ERAC/NUELAC, within the respective industry’s training program where recommended.

***For enquiries:***

*Please contact the Electrical Licensing Authority in your Australian State/Territory.*

**CAPSTONE ASSESSMENT REQUIREMENTS**  
**FOR PROSPECTIVE ELECTRICIANS**

ITEM	REQUIREMENT
1. When to apply the Capstone assessment.	After the completion of all other assessment requirements of the *approved National Training Package, and prior to application for an electrician’s licence.
2. Content and scope of the overall Capstone Assessment (written and practical).	All “critical items” of the Essential Capabilities List must be covered by the Capstone Assessment.
3. Format of Assessment	May be ‘open book’ style, with use of standards and published reference books permitted (programmable calculators, PCs and personal notes etc excluded).
4. Written component of the Capstone Assessment	<ul style="list-style-type: none"> <li>• Objective assessment methods to be used, including a sensible proportion of Multiple Choice questions (‘essay style’ to be avoided);</li> <li>• Also require some written answers to the objective questions, aimed at demonstrating a trainee’s understanding of the critical concepts as specified at Item 2 above.</li> </ul>
5. Practical component of the Capstone Assessment.	Require demonstration of fundamental knowledge and comprehension of electrical concepts and safety principles, as specified at Item 2, using (where possible) problems that test a combination of practical and theoretical knowledge and skills.
6. Nominal duration of Capstone Assessment	The Capstone Assessment should require a typical trainee one full training day to complete, with the practical component representing about 70% of the whole test e.g. written test 2-3 hours and practical test 4-6 hours.
7. Minimum requirements for both Written and Practical component of the Capstone Assessment..	<ul style="list-style-type: none"> <li>• Written: The apprentice is required to demonstrate satisfactory performance in every critical item tested.</li> <li>• Practical: The apprentice is required to have demonstrated competence** for the critical items tested.</li> </ul> <p>**Note: Competence in this setting means that it is evident that the person comprehends the key safety issues and the practical work performed does not suffer from any defects of the kind described in the attached list (Appendix A).</p> <ul style="list-style-type: none"> <li>• Trainees’ results to be retained by the RTO for minimum of three (3) years.</li> </ul>

<b>ITEM</b>	<b>REQUIREMENT</b>
8. Reporting the Capstone Assessment outcome to the State/Territory Licensing Authority.	The RTO is to provide each trainee with an approved transcript/report to certify that this person has successfully completed the Capstone Assessment in accordance with NUELAC/ERAC requirements. Additionally, for the purpose of obtaining a licence the person is required to furnish documentation attesting to having gained an appropriate *approved National Training Package qualification.
9. Responsibility for implementation	<p>Each RTO will be responsible for:</p> <ul style="list-style-type: none"> <li>• Delivery of an approved National Training Package qualification and any industry recommended training program that includes the 66 “essential capabilities”;</li> <li>• Provision of adequate resources to permit valid and reliable assessment against the Capstone requirements;</li> <li>• Liaison with the respective State or Territory Licensing Authority to achieve its approval for the RTO’s implementation of the Capstone Assessment to NUELAC/-ERAC requirements (failure to do so will in normal circumstances require trainees to undergo external licensing examinations, prior to the issue of a licence); and</li> <li>• Cooperating with the local Licensing Authority in regard to their auditing (via their chosen agent) of the RTOs Capstone Assessment and training delivery generally.</li> </ul>
9. Development and control of the Capstone Assessment tools	As part of (8) above, each RTO must compile and provide to the respective State/Territory Licensing Authority details of their assessment materials and security controls.
10. Person supervising the Capstone Assessment and marking the apprentice’s work.	To ensure the integrity of the Capstone Assessment (CA), which is intended to have a substantial degree of independence from the normal continuing assessment throughout training, the RTO is to make reasonable endeavour to avoid administering the CA through an assessor who was a past instructor to the person being assessed. If this is not feasible for logistical reasons (e.g. remote location) then the RTO is to apply training industry accepted standards for supervising and marking the trainee’s assessment work.

## **AUDIT OF CAPSTONE ASSESSMENT DELIVERY BY RTOS**

This document provides information about the auditing of the delivery of training and the Capstone Assessment by Registered Training Organisations (RTOs).

### **Part 1 - ADMINISTRATIVE REQUIREMENTS**

Item	Detail
1. RTO Capstone Assessment auditing.	<p>Each RTO who delivers Electrician training is required to be audited for the purpose of:</p> <ul style="list-style-type: none"> <li>• Ensuring the NUELAC/ERAC required 66 Essential Capabilities are adequately covered through an *approved National Training Package qualification, delivered by the RTO</li> <li>• Compliance with the NUELAC/ERAC document “Capstone Assessment Requirements for Prospective Electricians”</li> </ul>
2. Frequency of Audit.	<ul style="list-style-type: none"> <li>• Upon initial application to a Licensing Authority (LA) to participate in the scheme (under which apprentices receive licences without further external examination) the LA will conduct an audit of training delivery, then a further audit when the first Capstone Assessments have been completed.</li> <li>• The frequency of subsequent audits will occur randomly with a duration between audits of not longer than two years.</li> <li>• The RTO is to provide notification of any proposed major changes to the training to be delivered, to the LA.</li> </ul>
3. Who is to audit the RTOs.	<p>The auditor will be an individual authorised by the Licensing Authority, and who has the following credentials as a prerequisite:</p> <ul style="list-style-type: none"> <li>• Thorough understanding of assessment procedures under the VET system.</li> <li>• Thorough understanding of vocational training systems and programs</li> <li>• Is a qualified and experienced assessor</li> <li>• Some electrical and teaching experience is desirable although not an essential prerequisite</li> </ul>
4. Audit report distribution	<p>The report produced by the auditor is to be made available to:</p> <ul style="list-style-type: none"> <li>• The Licensing Authority</li> <li>• The audited RTO</li> <li>• The relevant ITAB/ITC</li> <li>• The State Training Authority/Department</li> </ul>
5. Audit appeal process	<p>An RTO will be able to appeal to the Licensing Authority to request an independent review of the auditor’s findings. The cost of that work is to be recovered from the RTO or the Licensing Authority, in accordance with the findings of the review.</p>

6. Compliance Certification	A “Certificate of Approval” valid for a defined period (to show the RTO is part of the scheme) can be presented to an RTO by the Licensing Authority if compliance has been demonstrated by the audit of the first Capstone Assessments, and subsequently .
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**Part 2 - SYSTEMS AUDIT CHECK LIST**

This document provides information to a Capstone Assessment auditor regarding the required checks to be performed during an audit of the RTO.

	<b>Item</b>	<b>Detail</b>
1.	Application of the Essential Capabilities, identified Critical Items and the Capstone Assessment	Confirm the: <ul style="list-style-type: none"> <li>• 66 Essential Capabilities are embedded within the *approved National Training Package qualification being delivered for the qualification sought.</li> <li>• Capstone Assessment is being applied following the completion of all other training package assessment requirements and prior to licence application.</li> <li>• All “critical items” of the 66 Essential Capabilities are adequately covered within the Capstone Assessment material</li> </ul>
2.	Content and scope	Confirm that the content and scope of the applied Capstone Assessment (desktop and workshop) meets NUELAC/ERAC requirements.
3.	Format of assessment	Check that the format of the Capstone Assessment meets the requirement and that the RTO is following acceptable assessment standards.
4.	Written component	Check the format of the written component of the Capstone Assessment for compliance.
5.	Practical component	Check the format of the practical component of the Capstone Assessment for compliance.
6.	Minimum requirements	Confirm the “minimum requirements” satisfy the competence requirements specified.
7.	Security measures	Check that appropriate security measures are in place and applied to the assessment documentation, with a view to eliminating fraud.
8.	Remediation - Trainees retested	Confirm that appropriate RTO procedures are in place for the re-testing of apprentices after remediation.
9.	RTO issued documentation	Check that the documentation issued to the trainee upon the successful passing of the assessment contains the correct and specified information.
10.	Test Analysis	Validate the capstone assessment system used, i.e. make an assessment of the reliability and validity of the test, based on statistics drawn from the assessment results over a period.

## **APPENDIX 'A'**

### **EXAMPLES OF INSTALLATION DEFECTS CATEGORISED AS “SERIOUS” BY ELECTRICAL REGULATORS**

1. Dangerous or Unsafe Installations:
  - a) Exposed live parts/conductors (including fittings left off)
  - b) Equipment not earthed
  - c) Equipment not earthed correctly or earthing not installed correctly (including MEN connections)
  - d) Electrical Equipment is unsafe or defective
  - e) Circuit protection/switches not correct for cable size/MD/equipment (overload/short circuit/RCD)
  
2. Testing Incorrect or Not Carried Out:
  - a) Insulation resistance not correct
  - b) Earth resistance not correct
  - c) Active not switched or socket outlet/polarity not correct
  
3. Faulty or Incorrect Installation/Equipment:
  - a) Equipment exposed to the weather and not protected
  - b) Equipment installed in a restricted zone (damp situation) which is not in accordance
  - c) Equipment installed in a hazardous area which does not meet classification/protection criteria
  - d) Equipment that does not operate correctly (switches, RCD, ACBS, etc. that are provided for protection/safety)
  
4. Installing Work Not Complete:
  - a) Notice of Completion submitted prior to adequate completion of the work (the subject of that Notice) [i.e. some important aspects of the work not yet completed].

(Document issued 1 March 2001)

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