

Title	Explain basic atomic principles as applied to the electrotechnology industry		
Level	1	Credits	1

Purpose	People credited with this unit standard are able to: <ul style="list-style-type: none"> – describe the atomic and electrical relationship between protons, electrons, and neutrons; – describe the formation of ions and molecules; and – describe movement of electrons.
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Classification	Electrical Engineering > Core Electrical
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Available grade	Achieved
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Explanatory notes

This unit standard has been developed for learning and assessment off-job.

Outcomes and evidence requirements

Outcome 1

Describe the atomic and electrical relationship between protons, electrons, and neutrons.

Range hydrogen or helium, copper or silicon.

Evidence requirements

1.1 A sketch of an atom is developed to show the position of protons, electrons, and neutrons.

1.2 The electrical charge assigned to protons, electrons, and neutrons is stated.

Outcome 2

Describe the formation of ions and molecules.

Evidence requirements

2.1 The electrical charge resulting from a gain or loss of electrons is explained.

Range anion, cation.

2.2 Sketches are developed to illustrate the formation of a molecule.

Range anion, cation, simple molecule.

Outcome 3

Describe movement of electrons.

Evidence requirements

3.1 Movement of electrons is explained in terms of the process that occurs.

3.2 Causes of movement of electrons are stated and explained.

Range heat, friction, electromotive force (e.m.f.).

Planned review date	31 December 2014
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 April 1996	31 December 2013
Revision	2	3 April 2001	31 December 2013
Review	3	26 May 2005	N/A
Rollover and Revision	4	15 March 2012	N/A
Revision	5	15 January 2014	N/A

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing

to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.