# National Vocational Certificate in Electrical Engineering (Level 3) (Instrumentation and control)

## Level of qualification: 3

	Compulsory	Elective
level 3 credits available	110	-
minimum totals required	110	-

#### Registration date:

Scheduled review date:

Body responsible for the qualification: Namibia Training Authority

Other bodies whose unit standards are included in the qualification: None

#### 1. Purpose

This qualification recognises people who have the competencies required to performing electronics tasks. It is awarded to people who have demonstrated the skills and knowledge required to Interpret and Prepare instrumentation and electrical diagrams, Install instrumentation and control equipment, Maintain instrumentation and control equipment, Troubleshoot instrumentation and control equipment, Use and maintain specialised instrumentation and control measuring equipment. Apply knowledge of speed (Velocity) Measurement. Demonstrate knowledge of process control system, Apply knowledge of Mass/ Weight Measurement, Maintain and service Mass/ Weight devices, Demonstrate knowledge of Industrial communication, Demonstrate Knowledge of Supervisory Control and Data Acquisition (SCADA) Apply knowledge of combinational digital electronic circuits, Apply knowledge of sequential digital , apply knowledge of basic mathematics in different electronic circuits context, and apply knowledge of fundamental engineering science and engineering drawing in different contexts, provide general First Aid, ensure own actions reduce risk to health and safety, identify, create and select business opportunities, develop a business plan as part of business start-up activities.

This qualification is designed to be accessible and flexible. The entry requirement is the National Vocational Certificate in Electrical Engineering level 2 (Instrumentation and Control).

This qualification leads to the National Vocational Certificate in Electrical Engineering (Level 4) (Instrumentation and Control)

The main focus is on the outcomes of this qualification, not the how, when and where learning occurred. Some people applying to do this qualification may currently be competent in one or more of the unit standards and should then be given the opportunity to apply for recognition of prior learning.

#### 2. Regulations for the qualification

#### 2.1 Summary of qualification requirements

This qualification will be awarded to people who are credited with 110 credits and have met the requirements of the compulsory sections.

# 2.2 Detailed qualification requirements

# Compulsory

All the unit standards listed below are required.

FIELD: Manufacturing and Engineering Technology

Subfield: Electrical Engineering Domain: Instrumentation and Control

Unit ID	Unit Standard Title	Level	Credits
XXXX	Interpret and Prepare instrumentation and electrical diagrams	3	7
XXXX	Install instrumentation and control equipment	3	5
XXXX	Maintain instrumentation and control equipment	3	4
xxxx	Troubleshoot instrumentation and control equipment	3	5
xxxx	Use and maintain specialised instrumentation and control measuring equipment	3	3
XXXX	Apply knowledge of speed (Velocity) Measurement	3	2
xxxx	Demonstrate knowledge of process control system	3	4
XXXX	Apply knowledge of Mass/ Weight Measurement	3	3
XXXX	Maintain and service Mass/ Weight devices	3	3
xxxx	Demonstrate knowledge of Industrial communication	3	12
xxxx	Demonstrate Knowledge of Supervisory Control and Data Acquisition (SCADA)	3	3

# AND

FIELD: Manufacturing and Engineering Technology

Subfield: Electrical Engineering

Domain: Electronic

XXXX	Apply knowledge of combinational digital electronic circuits	3	10
XXXX	Apply knowledge of sequential digital electronic circuits	3	10

## **AND**

FIELD: Health Sciences and Social Services

Subfield: Preventative Health

Domain: Occupational Health and Safety

Unit ID	Unit Standard Title	Level	Credits
846	Ensure own actions reduce risk to health and safety	3	3

## **AND**

FIELD: Business, Commerce and Management Studies

Subfield: Business Development

Domain: Entrepreneurship

Unit ID	Unit Standard Title	Level	Credits
733	Identify, create and select business opportunities	3	5
734	Develop a business plan as part of business start-up activities	3	12

#### **AND**

FIELD: Physical, Mathematics and Computer Science

Subfield: Numeracy

Domain: Foundation Numeracy Skills

Unit ID	Unit Standard Title	Level	Credits
891	Apply knowledge of basic mathematics in different context	3	6

#### **AND**

FIELD: Engineering and Technology

Subfield: Foundational Engineering Science and engineering drawing

Domain: Foundation Engineering Science and Drawing skills

Unit ID	Unit Standard Title	Level	Credits
894	Apply knowledge of fundamental engineering science in different contexts	3	6
901	Apply fundamental knowledge of engineering drawing in different contexts	3	6

## 3. Credit recognition and transfer arrangements

Credits for any version of a unit standard of the same identification number will be recognised in the award of this qualification.

## 4. Special arrangements

Providers seeking accreditation to deliver this qualification must meet the following special arrangements.

1. Providers involved in the assessment of this qualification and the associated unit standards must comply with the national assessment arrangements for the VET system up to and including level 5 of the Namibia Qualifications Framework. These arrangements apply to all occupations and industries, including Instrumentation and Control, which are encompassed in the vocational education and training sector. A copy of the national assessment arrangements is available from:

Namibia Training Authority

Rand Street

Khomasdal

Namibia

Telephone number: 207 8550 Facsimile number: 207 8551

Email info@nta.com.na

- 2. Providers of this qualification and the associated unit standards must be accredited.
- 3. Providers of this qualification and the associated unit standards must have access to all equipment and facilities detailed in the Special Notes and / or Range Statements in the unit standards that comprise this qualification.
- Providers in receipt of funding through the NTA to deliver this qualification must use the national curriculum and training materials developed by the NTA for the National Vocational Certificate in in Electrical Engineering (Level 3) (Instrumentation and Control)
- 5. The national curriculum and training materials for this qualification are available from:

Namibia Training Authority

Rand Street

Khomasdal

Namibia

Telephone number: 207 8550 Facsimile number: 207 8551

Web: www.nta.com.na

# 5. Transition arrangements

5.1 Non National Qualifications Framework transition

None.

#### 5.2 National Qualifications Framework transition

This is the first version of this qualification.