

Domain**Control and Instrumentation****Title:****Apply knowledge of data communication****Level:****Credits: 3****Purpose**

This unit standard specifies the competencies required to apply knowledge of data communication. This unit standard is intended for those who work in instrumentation industry.

Special Notes

1. Entry information:

Prerequisite

- Unit I&C21 - Demonstrate knowledge of Industrial communication
- Unit I&C37- Demonstrate knowledge of data communication

2. Assessment evidence may be collected from a real workplace or an appropriate simulated realistic environment in which Instrument and Control operations are carried out.

3. To demonstrate competence, minimum evidence of designing and configuring at least two data communication systems/protocols as per functional specification requirement and application

4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' guidelines and instructions

4. Glossary of terms:

- 'specifications' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements.
- IEC 61334 – Distribution automation using distribution carrier systems- a standard for low speed reliable power line communication
- IEC 61158 – industrial communication network - FIELDBUS specification
- IEC 61784 – industrial communication network - Profile
- DNP3 – Distributed Network Protocol 3
- IEC 60870 – standard for Tele-control equipment and systems
- IEC 61850 – standard for communication network and power utility automation
- IEC 62734 – industrial networks – wireless communication network and communication profile

5. Regulations and legislation relevant to this unit standard include the following:

- Labour Act 2007, No. 11, 2007
- IEC 61334
- IEC 61158
- IEC 61784
- IEC 60870
- IEC 61850
- Regulations relating to the health & safety of employees at work under Schedule 1 (2) of the Labour Act No.11 of 2007

- And all subsequent amendments
6. Performance of all elements in this unit standard must comply with industry standards.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website www.nta.com.na.

Elements and Performance Criteria

Element 1: Apply knowledge on ETHERNET communication (IEEE802.3)

- 1.1 ETHERNET communication components are selected
- 1.2 ETHERNET communication components are installed
- 1.3 ETHERNET communication components are configured

Element 3: Apply knowledge on LAN/WLAN communication network

Performance criteria

- 3.1 LAN/WLAN communication network and components are selected
- 3.2 LAN/WLAN communication network are and components installed
- 3.2 LAN/WLAN communication components are configured

Element 4: Apply knowledge on wireless communication fundamentals

Performance criteria

- 4.1 wireless communication access point (APs) are selected
- 4.2 wireless communication access point are installed
- 4.3 wireless communication access point configured

Registration Data

Subfield:	Electrical Engineering
Date first registered:	
Date this version registered:	

Anticipated review:	
Body responsible for review:	Namibia Training Authority