

Domain**Control and Instrumentation****Title:****Demonstrate knowledge of data communication****Level: 5****Credits: 2****Purpose**

This unit standard specifies the competencies required to demonstrate knowledge of data communication. It includes demonstrate fundamental knowledge on wireless communication Demonstrate knowledge on LAN/WLAN communication network and network security Demonstrate knowledge on ETHERNET communication (IEEE802.3), INTERNET, HOST-TO-HOST and APPLICATION LAYER PROTOCOL. 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*

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. 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

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

- Labour Act 2007, No. 11, 2007
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- 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: Demonstrate knowledge on ETHERNET communication (IEEE802.3), INTERNET, HOST-TO-HOST and APPLICATION LAYER PROTOCOL

- 1.1 Main features of ETHERNET, INTERNET, HOST-TO-HOST and APPLICATION LAYER PROTOCOL communication are explained
- 1.2 ETHERNET, INTERNET, HOST-TO-HOST and APPLICATION LAYER PROTOCOL communication related problem is explained

Element 2: Demonstrate knowledge on LAN/WLAN communication network and network security

Performance criteria

- 2.1 Main features of LAN/WLAN communication network are explained
- 2.2 LAN/WLAN communication related problem is explained
- 2.3 Main features of network security are explained
- 2.4 Network security related problem are listed

Element 3: Demonstrate fundamental knowledge on wireless communication

Performance criteria

- 3.1 Main features of wireless communication are explained
- 3.2 Different types of antennas are described
- 3.3 Wireless network security guidelines are explained
- 3.4 Wireless PAN (personal Area network) Bluetooth is explained

Registration Data

Subfield:	Electrical Engineering
Date first registered:	
Date this version registered:	
Anticipated review:	
Body responsible for review:	Namibia Training Authority