

Domain**METAL FABRICATION-CORE****Title:****Estimate production costs****Level: 3****Credits: 5****Purpose**

This unit standard is intended for those who estimate production costs. People credited with this unit standards are able to analyse project documentation with reference to quantities; calculate quantities of material; estimate the required human and equipment resources; prepare a work plan.

This unit standard is intended for those who works as Welders and Boilermakers

Special Notes

1. Entry information:

Prerequisite

- Unit 228 - Apply safety rules and regulations in a metal fabrication work environment or demonstrated equivalent knowledge and skills
- Unit 229- Plan and organise metal farication work

2. To demonstrate competence, at a minimum, requires evidence of calculate quantities of different building materials according to given drawing. Perform these tasks ensuring correct interpretation of working drawing, bill of quantities and specification.

3. Bill of quantity refers to a document used in tendering in the construction industry in which materials, parts, and labour (and their costs) are itemized.

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

- Labour Act 2007,(Act no. 11, 2007)
- Local Authority (Act no. 23,1992)
- Town Planning Scheme
- SABS 0400
- NOSA
- Occupational Health and Safety Regulations under schedule 1(1) of Labour Act No. 11of 2007 No. 18, 1997
- Government Notice No. 156 Labour Act, 1992: "Regulations Relating to the Health and Safety of Employees at Work"
- Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977)

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 on www.nta.com.na

Elements and Performance Criteria

Element 1: Analyse project documentation with reference to quantities.

Performance criteria

- 1.1 Drawings are interpreted in terms of project documentation.
- 1.2 Bills of quantities are interpreted in terms of project documentation.
- 1.3 Project specifications are integrated with drawings, bills of quantities and general conditions of a given task.
- 1.4 Project documentation is controlled in line with workplace procedures and practices

Element 2: Calculate quantities of material.

Performance criteria

- 2.1 Correct units of measurement are identified for the different types of material specified in terms of the project specification.
- 2.2 Accurate calculations of required materials are made, taking into account material manufacturer specifications, material properties and work area size.

Element 3: Estimate the required human and equipment resources.

Performance criteria

- 3.1 Production rates for human and equipment resources are selected/ determined for the activities and quantities involved.
- 3.2 Human and equipment resource requirements are worked out from quantities calculated and project specifications/time frames.

Element 4: Prepare a work plan.

Performance criteria

- 4.1. Time durations for work activities are calculated.
- 4.2 A feasible work plan is developed.
4. 3. Work plan is communicated to responsible person.

Registration Data

Subfield:	Manufacturing Engineering
Date first registered:	29 November 2018
Date this version registered:	29 November 2018
Anticipated review:	2023
Body responsible for review:	Namibia Training Authority