

APPLY BUILDING WORKS MEASUREMENTS PRINCIPLES

UNIT CODE: 0731 551 /18/A

UNIT DESCRIPTION:

This unit covers the principles required by an architectural technician in applying building works measurement principles. These principles include applying substructure works taking off principles, applying superstructure works taking off principles applying construction external work taking off principles and applying building works estimating and costing principles.

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function	These are assessable statements which specify the required level of performance of each of the elements <i>Italicized</i> terms are elaborated in the Range of Variables
1. Apply substructure works taking off principles	1.1 <i>Substructure elements</i> are documented as per work requirement. 1.2 Substructure elements quantities are quantified as per work requirement. 1.3 Substructure elements quantities are booked as per work requirement.
2. Apply superstructure works taking off principles.	2.1 <i>Superstructure elements</i> are documented as per work requirement. 2.2 Superstructure elements quantities are quantified as per work requirement. 2.3 Superstructure elements quantities are booked as per work requirement.
3. Apply construction external work taking off principles	3.1 <i>External works elements</i> are documented as per work requirement. 3.2 External works elements quantities are quantified as per work requirement.

	3.3 External works elements quantities are booked as per work requirement.
4. Apply building works Estimating and costing principles	4.1 Construction preliminary work unit rate build up is carried out as per work requirement. 4.2 Substructure work unit rate build up is carried out as per work requirement. 4.3 Superstructure work unit rate build up is carried out as per work requirement. 4.4 External work unit rate build up is carried out as per work requirement. 4.5 Bill of quantities is prepared as per work requirement.

RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1.Substructure elements may include but not limited to:	1.1 Trench excavation 1.2 Reducing level 1.3 Foundation strip 1.4 Foundation walling 1.5 Hard core fill 1.6 Floor bed
2.Superstructure elements may include but not limited to:	2.1 Walling units 2.2 Doors 2.3 Windows 2.4 Roof work 2.5 Fittings and fixtures

	2.6 Finishes
3. External works elements may include but not limited to:	3.1 Landscaping works 3.2 Rendering works 3.3 Drainage works
4. Construction preliminary work may include but not limited to:	4.1 Access roads 4.2 Site clearance 4.3 Demolition work
5. Substructure works estimating and costing may include but not limited to:	5.1 Excavation works 5.2 Walling works 5.3 Concreting works 5.4 Hard-core fill 5.5 Blinding
6. Superstructure works estimating and costing may include but not limited to:	6.1 Superstructure walling 6.2 Doors and windows 6.3 Roofing 6.4 Finishes
7. Construction external work estimating and costing may include but not limited to:	7.1 Landscaping works 7.2 Drainage works 7.3 Paving works

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills:

The individual needs to demonstrate the following skills:

1. Drafting skills
2. Technical drawing skills
3. Sketching skills
4. Analytical skills
5. Construction drawings interpretation skills
6. Cost estimation

7. Communication skills
8. Management skills

Required Knowledge:

The individual needs to demonstrate knowledge of:

1. Mathematical knowledge
2. General building construction knowledge
3. Occupational Health and Safety
4. Construction materials
5. Building codes and standards
6. Unit measurement systems
7. Measurement tools

EVIDENCE GUIDE

These provides advice on assessment and must be read in conjunction with performance criteria, required skills, knowledge and range.

1. Critical aspect of competency	Assessment requires evidence that the candidate: 1.1 Substructure elements quantities are quantified as per work requirement. 1.2 Substructure elements quantities are booked as per work requirement. 1.3 Superstructure elements quantities are quantified as per work requirement. 1.4 Superstructure elements quantities are booked as per work requirement. 1.5 External works elements quantities are quantified as per work requirement.
2. Resource Implications	The following resources should be provided: 2.1 Access to relevant workplace or appropriately simulated environment where assessment can take place

	2.2 Resources appropriate for performance of assessment tasks
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Practical 3.2 Project 3.3 Third party report 3.4 Portfolio of evidence 3.5 Written tests 3.6 Oral questioning
4. Context of Assessment	This competency may be assessed in a workplace or in a simulated workplace.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

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