

BUILDING SUPERSTRUCTURE WORKS II

UNIT CODE: 0732 551 21A

TVET CDACC UNIT CODE: CON/CU/BUT/CC/09/6/MA

UNIT DURATION: 80 Hours

Relationship to Occupational Standards

This unit addresses the Unit of Competency: **Carry out building superstructure works**

Unit Description

This unit cover the principles required by a building technician in acquiring knowledge, skills and attitude required in building Superstructure works which largely include: Erection of Columns and beams, Construction of staircases and Construction of fire places and chimneys

Summary of Learning Outcomes

S/no	Learning outcomes	Duration (hours)
1	Erect Columns and beams	30
2	Construct staircases	24
3	Construct fire places and chimneys	26

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods

1. Erect Columns and beams	1.1 Structural elements tools and equipment's 1.2 Structural element materials 1.3 Fixing Reinforcement bar 1.4 Erecting Formwork 1.4.1 Formwork materials 1.4.2 Methods of erecting formwork 1.4.3 Formwork dismantling 1.4.4 Types of formworks 1.4.5 Requirements of good formwork 1.4.6 Formwork failures 1.5 Placing of Concrete 1.5.1 Procedure 1.5.2 Compaction of concrete 1.5.3 Curing of concrete	• Practical assessment • Projects • Third party report • Written assessment • Oral assessment • Portfolio of evidence
2. Construct staircases	2.1 Stair's construction 2.1.1 Terms 2.1.2 Building code requirements 2.1.3 Design requirements 2.1.4 Types of stairs 2.1.5 Materials	
3. Construct fire places and chimneys	3.1 Fireplace and chimney design layout 3.2 Fireplace and chimney elements	• Practical assessment • Projects • Third party report

	3.3 Fireplace and chimney construction 3.3.1 Fireplace and chimney finishing	• Written assessment • Oral assessment • Portfolio of evidence
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Suggested Methods of Instruction

- Demonstration
- Practical work
- videos
- Projects
- Site visits
- group discussions

Recommended Resources for 25 trainees

S/No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	Learning Materials			
1.	Textbooks	Recommended publisher	8 pcs	1:3
2.	Drawing sheets	A3 size	25	1:1
3.	Field notebook	A5 size	25	1:1
4.	Charts	With data	25	1:1
5.	White board	For trainer's use	1	-
6.	Manuals	Latest edition	25	1:1
B	Learning Facilities &			

	infrastructure			
1.	Lecture/theory room	72 Square Meter	1	1:25
2.	Computer Lab	96 Square Meter	1	1:25
C	Consumable materials			
1.	Ink	Assorted Colours for trainer's use	500ml per term.	-
2.	White board Marker	Refillable type	10 pcs per term	-
3.	Lime	Sufficient	-	-
4.	Hoop iron	Sufficient	-	-
5.	Cement	Approved by KEBS	sufficient	-
6.	Sand	Without silt	sufficient	-
7.	Ballast	20mm aggregate	sufficient	-
8.	Steel reinforcement bars	Approved by KEBS	sufficient	-
9.	Building stones	Machine cut	sufficient	-
10.	Bricks	Standard	sufficient	-
11.	Blocks	Standard	sufficient	-
12.	Timber	Sawn softwood	sufficient	-

13.	Marine boards	16mm thick	sufficient	-
14.	Pipes	PVC & PPR	sufficient	-
D	Tools and Equipment			
1.	Levelling Staffs	Adjustable	5	1:5
2.	Ranging Rods	Appropriate	15	1:3
3.	Tape measures	30 metres long	5	1:5
4.	Plumb bob	Appropriate	25	1:1
5.	Spirit level	Appropriate	25	1:1
6.	Pipe level	Appropriate	1	1:25
7.	Hammer	Appropriate	25	1:1
8.	Trowel	Appropriate	25	1:1
9.	Spade	Appropriate	25	1:1
10.	Wood float	Appropriate	25	1:1
11.	Wheel barrow	Appropriate	5	1:5
12.	Vibrator	Appropriate	1	1:25
13.	Trowel	Appropriate	25	1:1
14.	Hacksaw	Appropriate	25	1:1
15.	Pegs	Metallic	100	4:1
16.	Projector	Latest version	1	1:25

17.	Calculator	Scientific	25	1:1
18.	Laptop	Intel corei5	25	1:1
19.	PPEs	Trainer Use (dust coat)	1 pc	-
20.	Dumpy Levels	Latest version	5	1:5
21.	Printers	Latest version	1	1:25

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