



THE REPUBLIC OF KENYA

COMPETENCY BASED CURRICULUM

FOR

BUILDING TECHNOLOGY

KNQF LEVEL 6

ISCED PROGRAM CODE: 0732 554B



TVET CDACC

P.O BOX 15745-00100

NAIROBI

SUPERSTRUCTURE WORKS

UNIT CODE:CON/CU/BUT/CR/06/6/B

Relationship to Occupational Standards

This unit addresses the unit of competency: Execute superstructure works

Duration of Unit: 120 hours

Unit Description

This Unit describes the competencies required to perform superstructure works. It involves setting out and erecting superstructure walls, constructing superstructure columns, stairs, beams and upper floors, erecting building roof, constructing fire place and installing fixtures and fittings.

Summary of Learning Outcomes

1. Set out and erect superstructure walling
2. Construct superstructure columns
3. Construct superstructure beams, stairs and upper floors
4. Erect building roof
5. Construct fireplace
6. Install fixtures and fittings

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Construct superstructure columns	<ul style="list-style-type: none">• Structural elements• Codes of practice• Design dimensions• Column design• Structural design drawings• Reinforcement steel• Formwork• Concrete materials• Concrete mix design• Concrete testing methods• Concrete compaction methods	<ul style="list-style-type: none">• Project/practical assignment• Written Tests• Oral Questioning
2. Set out and erect superstructure walling	<ul style="list-style-type: none">• Wall dimensions• Structure openings• Building and design plans• Mortar materials and mixing	<ul style="list-style-type: none">• Project/practical assignment• Written Tests• Oral Questioning

	<ul style="list-style-type: none"> • Mortar joints • Codes of practice • Wall construction • Occupational safety and health standards • Environment Act and by laws 	
3. Construct superstructure beams, stairs and upper floor	<ul style="list-style-type: none"> • Beam design • Stair design • Slab design • Formwork props • Compaction methods • Floor finishing methods 	<ul style="list-style-type: none"> • Project/practical assignment • Written Tests • Oral Questioning
4. Erect building roof	<ul style="list-style-type: none"> • Types of roofs • Roof materials • Timber properties • Steel properties • Truss design • Truss installation • Roof material installation method 	<ul style="list-style-type: none"> • Project/practical assignment • Written Tests • Oral Questioning
5. Construct fireplace	<ul style="list-style-type: none"> • Fireplace design layout • Fireplace elements • Fireplace construction • Fireplace finishing 	<ul style="list-style-type: none"> • Project/practical assignment • Written Tests • Oral Questioning
6. Install fixtures and fittings	<ul style="list-style-type: none"> • Types of fixtures • Types of fittings • Installation methods • Installation tools and equipment 	<ul style="list-style-type: none"> • Project/practical assignment • Written Tests • Oral Questioning

Suggested Methods of Instruction:

- Demonstration by trainer
- Practical work by trainee
- Demonstration videos
- Projects
- Group discussions

Recommended Resources

Tools and equipment

- Builders square
- Builders line
- Plumb bob
- Poker vibrator
- Tape measure
- Hammer
- Nails
- Spade
- Trowel
- Concrete mixer
- Float
- Brush
- Spirit level
- Wheelbarrow

Materials and supplies

- Cement
- Water
- Sand
- Ballast
- Timber
- Damp proof materials
- Hessian cloth
- Reinforcement bars
- Steel
- Hoop iron
- BRC
- Masonry units
- Iron sheets
- Warning signs

Personal protective equipment (PPEs)

- Overall
- Helmet
- Safety boots
- Masks

- Gloves
- First aid kit
- Reflectors
- Safety goggles