



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

SUBSTRUCTURE WORKS

UNIT CODE:CON/CU/BUT/CR/05/6/B

Relationship to Occupational Standards

This unit addresses the unit of competency: execute substructure works

Duration of Unit: 100 hours

Unit Description

This unit describes the competences required to perform substructure work. It involves setting out the building, excavating foundation, laying building foundation, erecting foundation walls, constructing solid ground floor and finishing substructure works.

Summary of Learning Outcomes

1. Set out the building
2. Excavate foundation trench
3. Lay building foundation
4. Erect foundation walls
5. Construct solid ground floor

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Set out the building	<ul style="list-style-type: none">• Site investigation/surveying• Building Drawings and interpretation• Construction dimensions• Setting out tools and equipment• Setting out procedure• Building codes	<ul style="list-style-type: none">• Practical assignment/project• Oral Questioning• Written Tests
2. Excavate building foundation	<ul style="list-style-type: none">• Building foundations• Soil analysis• Timbering• Dewatering methods• Excavation plant and equipment	<ul style="list-style-type: none">• Practical assignment/project• Oral Questioning• Written Tests
3. Lay building foundation	<ul style="list-style-type: none">• Types of foundations• Working drawings• Foundation reinforcement• Architectural layout	<ul style="list-style-type: none">• Practical assignment/project• Oral Questioning• Written Tests

4. Erect foundation walls	<ul style="list-style-type: none"> • Masonry • Building codes • Working drawing • Levelling • Mortar/ concrete technology • Damp proof membrane 	<ul style="list-style-type: none"> • Written Tests • Oral Questioning • Projects/practical assignment
5. Construct solid ground floor	<ul style="list-style-type: none"> • Construction materials • Termite control • Damp proof membrane • Concrete technology • Floor reinforcement 	<ul style="list-style-type: none"> • Oral Questioning • Projects/practical assignments • Written Tests

Suggested Methods of Instruction:

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

Recommended Resources

Tools and equipment

- measuring and drawing tools
- computers/internet
- Masonry/building tools and equipment
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Materials and supplies

- Building Codes
- Sand
- Ballast
- Cement
- Damp proofing materials
- Anti-termite
- Reinforcement/reinforcing bar
- Dewatering equipment

- Blinding material
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Personal protective equipment (PPEs)

- dust coat
- First aid kits
- Overalls
- Gum boots
- Safety goggles
- Helmets
- Gloves