



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

BUILDING SERVICES

UNIT CODE:CON/CU/BUT/CR/09/6/B

Relationship to Occupational Standards

This unit addresses the unit of competency: Install building services

Duration of Unit: 120 hours

Unit Description

This Unit describes the competencies required to install building services. It involves installing ICT and specialised services, installing electrical services and installing mechanical services

Summary of Learning Outcomes

1. Install ICT and specialized services
2. Install electrical services
3. Install mechanical services

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Install ICT and specialised services	<ul style="list-style-type: none">• Range of ICT and specialised services in building• Communication ICT requirements• CCTV/security services• Materials, tools and equipment• Automated control systems• Intelligent buildings• Drafting of ICT and specialised service drawings• Installation procedures for ICT and specialised services	<ul style="list-style-type: none">• Project/practical assignment• Written Tests• Oral Questioning
2. Set up electrical system	<ul style="list-style-type: none">• Drafting electrical services drawings• Electrical wiring and connections• Electrical materials• Electrical tools and equipment• IEE regulations• Plastering• Mortar mixing	<ul style="list-style-type: none">• Project/practical assignment• Written Tests• Oral Questioning

	<ul style="list-style-type: none"> • Conduit connections and layout • Surface preparation 	
3. Install mechanical services	<ul style="list-style-type: none"> • Drafting mechanical service drawings • Water supply systems • Testing plumbing systems • Types of mechanical systems • Connection tools, equipment and materials • Connection channels • Pipe works • Conduit layout • Gas systems • Gas connection methods • Safety and health standards • Survey instruments • Survey methods • Site investigation/exploration • Drainage materials • Collection chamber types • Collection chamber construction • Types of drainage systems • Drainage system installation • Drainage pipes • Drainage system testing • Waste disposal Act • Plumbing materials • Types of pipes • Plumbing tools and equipment • Pipe connection sockets • Pipe bending and cutting • Pipe alignment • Pipe threading • Plumbing layout 	<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**

- Concrete mixer
- Trowel
- Plumb bomb
- Spirit levels
- Pipe wrench
- Pliers
- Hacksaw
- Welding machine
- Tester
- Voltmeter
- Ammeter
- Hammer

Materials and supplies

- Cement
- Water
- Sand
- Ballast
- Timber
- Damp proof materials
- Hessian cloth
- Reinforcement bars
- Steel
- Hoop iron
- BRC
- Masonry units
- Iron sheets
- Nails
- Pipes
- Pipe fittings

- Wires
- Meter box
- Gutters
- Rainwater drop pipe
- Manhole covers
- Sockets
- CCTVs
- Air conditioners
- Fans

Personal protective equipment (PPEs)

- Overall
- Helmet
- Safety boots
- Masks
- Gloves
- First aid kit
- Reflectors
- Safety goggles