



REPUBLIC OF KENYA

COMPETENCY BASED CURRICULUM

FOR

CARPENTRY AND JOINERY

LEVEL 5

PROGRAMME CODE:0722 554B



TVET CDACC

**P.O BOX 15745-00100
NAIROBI**

DOORS AND DOOR FRAMES

UNIT CODE:CON/CU/CAJ/CR/01/5/B

Relationship to Occupational Standards

This unit addresses the unit of competency: Construct doors and door frames

Duration of Unit: 120 hours

Unit Description

This unit describes the competence required to construct doors and door frames. It involves; interpreting working drawing, preparing construction materials, constructing basic doors, constructing special doors & door frames, constructing fire check doors & door frames, performing finishing processes, examine quality of the finished product and performing workplace housekeeping.

Summary of Learning Outcomes

1. Interpret working drawing
2. Prepare Construction materials
3. Construct basic doors
4. Construct special doors & door frames
5. Construct fire check doors & door frames
6. Perform finishing processes
7. Examine quality of the finished product
8. Perform workplace housekeeping

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Interpret working drawing	<ul style="list-style-type: none">• Elevation• Sections• Dimensions• Scale• Symbols	<ul style="list-style-type: none">• Practical assignment• Oral Questioning• Written Tests
2. Prepare Construction materials	<ul style="list-style-type: none">• Interpretation of working drawing• Preparation of a cutting list• Types of construction materials	<ul style="list-style-type: none">• Practical assignment• Oral Questioning• Written Tests

	<ul style="list-style-type: none"> • Timber • Ply wood • Nails and screws • Wood glue • Sand paper • Block board • Plaster boards • Asbestos • Uses and specifications of materials, tools and equipment • Safety Practices <ul style="list-style-type: none"> • PPE • Handling of tools, materials and equipment • Good housekeeping 	
3. Construct basic doors and door frames	<ul style="list-style-type: none"> • Marking out tools <ul style="list-style-type: none"> • Tape measure • Try square • Marking gauge • Workshop rod • Marking out procedures <ul style="list-style-type: none"> • Mark mortise • Mark tenons • Mark grooves • Mark rebate • Mark chamfer • Types of cutting out tools <ul style="list-style-type: none"> • Saws • Chisels • Mallet • Planes • Cutting procedure <ul style="list-style-type: none"> • Cut out mortises • Cut out tenons • Cut out the grooves • Cut out rebates • Cut out chamfers 	<ul style="list-style-type: none"> • Practical assignment • Oral Questioning • Written Tests

	<ul style="list-style-type: none"> • Types of fitting tools <ul style="list-style-type: none"> • Hammers • Screw drivers • Wood glue • Nails • Screws • Clamps • Dowels • Types of joints <ul style="list-style-type: none"> • Mortise and tenon • Tongue and grooves • Scribes joints • Rebate • Procedure of fitting joints <ul style="list-style-type: none"> • Apply glue to tenons and mortises • Fit tenons to mortises • Fit battens to grooves • Fit stiles • Clamp the door • Fix the joints • Cut and fix the braces • Hanging door in frame • Fixing ironmongery /hardware <ul style="list-style-type: none"> • Lock • Tower bolts • Door closers • Door pullers 	
4. Construct special doors & door frames	<ul style="list-style-type: none"> • Marking special doors <ul style="list-style-type: none"> • Marking special joints 	<ul style="list-style-type: none"> • Practical assignment • Oral Questioning

	<ul style="list-style-type: none"> • Marking special shapes • Cutting product profile of special doors <ul style="list-style-type: none"> • Cutting special joints • Cutting shapes • Types of cutting out tools <ul style="list-style-type: none"> • Saws • Chisels • Mallet • Planes • Spoke shave • Cutting procedure <ul style="list-style-type: none"> • Cut out mortises • Cut out tenons • Cut out the grooves • Cut out rebates • Cut out chamfers • Cut out special shapes • Types of joints <ul style="list-style-type: none"> • Mortise and tenon • Tongue and grooves • Scribes joints • Rebate • Hammer headed key • Dove tail key • Procedure of fitting joints <ul style="list-style-type: none"> • Apply glue to tenons and mortises • Fit tenons to mortises 	<ul style="list-style-type: none"> • Written Tests
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	<ul style="list-style-type: none"> • Fit battens to grooves • Fit stiles • Clamp the door • Fix the joints • Cut and fix the braces • Fixing door in the frame • Fixing ironmongery /hardware <ul style="list-style-type: none"> • Lock • Tower bolts • Door closers • Door pullers 	
5. Construct fire check doors & door frames	<ul style="list-style-type: none"> • Marking out tools <ul style="list-style-type: none"> • Tape measure • Try square • Marking gauge • Workshop rod • Marking out procedures <ul style="list-style-type: none"> • Mark mortise • Mark tenons • Mark grooves • Mark rebate • Mark chamfer • Types of cutting out tools <ul style="list-style-type: none"> • Saws • Chisels • Mallet • Planes • Spoke shave • Cutting procedure <ul style="list-style-type: none"> • Cut out mortises • Cut out tenons • Cut out the grooves • Cut out rebates 	<ul style="list-style-type: none"> • Written Tests • Oral Questioning • practical assignment

- Cut out chamfers
- Cut out special shapes
- Types of joints
 - Mortise and tenon
 - Tongue and grooves
 - Scribes joints
 - Rebate
 - Hammer headed key
 - Dove tail key
- Procedure of fitting joints
 - Apply glue to tenons and mortises
 - Fit tenons to mortises
 - Fit battens to grooves
 - Fit stiles
 - Clamp the door
 - Fix the joints
 - Cut and fix the braces
- Assembly of fire check doors
 - Fixing fire check materials
 - Covering both sides with plywood
 - Fixing lipping all round
 - Hanging door in the frame
 - Fixing ironmongery /hardware
 - Lock

	<ul style="list-style-type: none"> • Tower bolts • Door closers • Door pullers 	
6. Perform finishing processes	<ul style="list-style-type: none"> • Types of finishing processes <ul style="list-style-type: none"> • Wipe excessive glue • Apply filler to any dent • Sanding • Varnishing or painting 	<ul style="list-style-type: none"> • Oral Questioning • practical assignments • Written Tests
7. Examine quality of the finished product	<ul style="list-style-type: none"> • Fitness and joint quality • Final appearance • Function ability of the door 	<ul style="list-style-type: none"> • Oral Questioning • practical assignments • Written Tests
8. Perform workplace Housekeeping	<ul style="list-style-type: none"> • Housekeeping procedures <ul style="list-style-type: none"> • Gather off cuts • Gather shavings/ saw dust • Clean the floor • return tools to the store 	<ul style="list-style-type: none"> • Oral Questioning • practical assignments • Written Tests

Suggested Methods of Instruction

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

Recommended Resources

Tools and equipment

- Carpentry and joinery hand tools
 - Saws
 - Hammers
 - Planes
 - Gauges

- Chisels
- Squares
- Tape measure
- Spoke shave

Materials and supplies

- Codes of practice
- Reference books
- Timber nails
- Screws
- Sand papers
- Varnish
- Wood glue
- Plaster boards
- asbestos

Personal protective equipment (PPEs)

- dust coat
- First aid kits
- Googles
- Gloves
- Safety boots