



**REPUBLIC OF KENYA**

**NATIONAL OCCUPATIONAL STANDARDS  
FOR  
CARPENTRY AND JOINERY CRAFTSPERSON  
KNQF LEVEL 5**

**PROGRAMME CODE:0722 554B**



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

## CONSTRUCT TIMBER STAIRS

UNIT CODE: CON/OS/CAJ/CR/07/5/B

### UNIT DESCRIPTION

This unit describes the competences required to construct timber stairs. It entails designing timber stairs, selecting materials, tools and equipment, marking out joints, cutting out joints, performing trial and final assembly of staircase and performing finishing processes.

### ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA ( <i>Bold and italicized terms are elaborated in the Range</i> )
1. Design timber stairs	<ul style="list-style-type: none"><li>1.1 <b>Type of stair</b> is determined according to design and specifications</li><li>1.2 Total going is determined as per the available horizontal distance</li><li>1.3 Total rise is determined according to the headroom</li><li>1.4 Determined size of risers and treads as per building regulations H1</li><li>1.5 Determined the angle of pitch of the stair as per the building regulations 1985: Part K- EUROCODE</li><li>1.6 Prepare architectural drawing as per the design specifications</li></ul>
2. Select materials, tools and equipment	<ul style="list-style-type: none"><li>2.1 Safety is observed during selection of materials, tools and equipment.</li><li>2.2 Cutting list of materials is prepared as per the working drawing</li><li>2.3 Materials, tools and equipment are selected and prepared as per the work place procedures</li></ul>
3. Mark out joints	<ul style="list-style-type: none"><li>3.1 Marking tools are identified as per the job requirements</li><li>3.2 Marking is carried out according to the architectural drawing</li></ul>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>(Bold and italicized terms are elaborated in the Range)</i>
4. Cut out joints	4.1 Cutting out tools and equipment are identified as per the job requirements 4.2 Cutting out is done as per the job requirements
5. perform trial and final assembly of staircase.	5.1 Trial assemble of all the joints is performed as per the job requirements 5.2 Fixed the staircase using glue, nails or screws
6. perform finishing processes	6.1 Scrapping is performed as per job requirement 6.2 Sanding is done as per the job requirements 6.3 Staining conducted according to job requirement 6.4 Painting/ varnishing is performed based on the manufacturer's instructions

## RANGE

<b>Variable</b>	<b>Range</b>
1. Type of stair may include but is not limited to:	<ul style="list-style-type: none"> <li>• Straight flight</li> <li>• Quarter-turn</li> <li>• Half-turn</li> <li>• Geometrical</li> </ul>
2. Tools and equipment may include but is not limited to:	<ul style="list-style-type: none"> <li>• Planes</li> <li>• Square</li> <li>• Saws</li> <li>• chisel saws</li> <li>• claw hammer</li> <li>• mallet</li> <li>• tape measure</li> <li>• screw driver</li> </ul>

## REQUIRED KNOWLEDGE

- Basic calculations
- Selection of materials
- Various types of timber
- Joining materials
- Design
- Types of stairs

## SKILLS

- Interpretation of working drawing
- Handling of tools and equipments
- Measuring, marking & cutting skills

## EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"><li>1.1 Interpreted structural drawing correctly</li><li>1.2 Selected materials, tools and equipment appropriately</li><li>1.3 Was able to prepare a cutting list of materials</li><li>1.4 Carried out marking accurately</li><li>1.5 Demonstrated ability to cut out product profile accurately</li><li>1.6 Performed trial assemble of all the joints appropriately</li><li>1.7 Fixed the staircase using glue, nails or screws</li><li>1.8 Was able to perform scrapping appropriately</li><li>1.9 Was able to perform Sanding appropriately</li><li>1.10 Was able to perform Staining accordingly</li><li>1.11 Was able to perform Painting/ varnishing neatly</li></ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"><li>2.1 Training/assessment workshops</li><li>2.2 Construction tools and equipment</li><li>2.3 Occupational Safety and health manuals</li><li>2.4 Construction manuals</li><li>2.5 Construction materials</li><li>2.6 Qualified trainers</li></ul>

3. Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Written Test</li> <li>3.2 Demonstration</li> <li>3.3 Practical assignment</li> <li>3.4 Interview/Oral Questioning</li> </ul>
4. Context of Assessment	<p>Competency may be assessed</p> <ul style="list-style-type: none"> <li>4.1 On job</li> <li>4.2 Off job</li> <li>4.3 During industrial attachment.</li> </ul>
5. Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>