

## WINDOWS & WINDOW FRAMES

**UNIT CODE: CON/CU/CAJ/CR/02/4/A**

### Relationship to Occupational Standards

This unit addresses the unit of competency: construct windows and window frames

**Duration of Unit:** 80 hours

### Unit Description

This Unit describes the competencies required to construct windows and window frames. It involves interpreting working drawing, preparing construction materials, marking out product profile, cutting out product profile and performing fixing of the joints. It also includes performing finishing processes, examining quality of the finished product and performing workplace housekeeping

### Summary of Learning Outcomes

1. Interpret working drawing
2. Prepare construction materials
3. Mark out product profile
4. Cut out product profile
5. Perform fixing of the joints
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"><li>• Elevation</li><li>• Sections</li><li>• Dimensions</li><li>• Scale</li><li>• Symbols</li></ul>	<ul style="list-style-type: none"><li>• Practical assignment</li><li>• Oral/written tests</li></ul>
2. Prepare Construction materials	<ul style="list-style-type: none"><li>• Interpretation of working drawing</li><li>• Types of windows</li><li>• Preparation of a cutting list</li><li>• Types of construction materials</li></ul>	<ul style="list-style-type: none"><li>• Practical assignment</li><li>• Oral/ Written tests</li></ul>

	<ul style="list-style-type: none"> <li>✓ Timber</li> <li>✓ Ply wood</li> <li>✓ Nails and screws</li> <li>✓ Wood glue</li> <li>✓ Sand paper</li> </ul> <ul style="list-style-type: none"> <li>• Uses and specifications of materials, tools and equipment</li> <li>• Safety Practices <ul style="list-style-type: none"> <li>✓ PPE</li> <li>✓ Handling of tools, materials and equipment</li> <li>✓ Good housekeeping</li> </ul> </li> </ul>	
3. Mark out product profile	<ul style="list-style-type: none"> <li>• Marking out tools <ul style="list-style-type: none"> <li>✓ Tape measure</li> <li>✓ Try square</li> <li>✓ Marking gauge</li> <li>✓ Workshop rod</li> </ul> </li> <li>• Marking out procedures <ul style="list-style-type: none"> <li>✓ Mark mortise</li> <li>✓ Mark tenons</li> <li>✓ Mark grooves</li> <li>✓ Mark rebate</li> <li>✓ Mark chamfer</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Practical assignment</li> <li>• Oral/ Written tests</li> </ul>
4. Cut out product profile	<ul style="list-style-type: none"> <li>• Types of cutting out tools <ul style="list-style-type: none"> <li>✓ Saws</li> <li>✓ Chisels</li> <li>✓ Mallet</li> <li>✓ Planes</li> </ul> </li> <li>• Cutting procedure <ul style="list-style-type: none"> <li>✓ Cut out mortises</li> <li>✓ Cut out tenons</li> <li>✓ Cut out the grooves</li> <li>✓ Cut out rebates</li> <li>✓ Cut out chamfers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Practical assignment</li> <li>• Oral/ Written tests</li> </ul>
5. Perform fitting of the joints	<ul style="list-style-type: none"> <li>• Types of fitting tools <ul style="list-style-type: none"> <li>✓ Hammers</li> <li>✓ Screw drivers</li> <li>✓ Wood glue</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Oral tests</li> </ul>

	<ul style="list-style-type: none"> <li>✓ Nails</li> <li>✓ Screws</li> <li>✓ Clamps</li> <li>✓ Dowels</li> <li>• Types of joints <ul style="list-style-type: none"> <li>✓ Mortise and tenon</li> <li>✓ Tongue and grooves</li> <li>✓ Scribes joints</li> <li>✓ Rebate</li> </ul> </li> <li>• Procedure of fitting joints <ul style="list-style-type: none"> <li>✓ Apply glue to tenons and mortises</li> <li>✓ Fit tenons to mortises</li> <li>✓ Fit battens to grooves</li> <li>✓ Fit stiles</li> <li>✓ Clamp the window</li> <li>✓ Fix the joints</li> <li>✓ Cut and fix the braces</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• practical assignment</li> </ul>
6. Perform finishing processes	<ul style="list-style-type: none"> <li>• Types of finishing processes <ul style="list-style-type: none"> <li>✓ Wipe excessive glue</li> <li>✓ Apply filler to any dent</li> <li>✓ Sanding and applying coat of varnish</li> </ul> </li> <li>• Hanging window in the frame</li> <li>• Fixing ironmongery /hardware <ul style="list-style-type: none"> <li>✓ Lock</li> <li>✓ Tower bolts</li> <li>✓ Fasteners</li> <li>✓ Stays</li> <li>✓ Hooks</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Oral assignment</li> <li>• practical assignments</li> <li>• Written tests</li> </ul>

7. Examine quality of the finished product	<ul style="list-style-type: none"> <li>• Fitness and joint quality</li> <li>• Final appearance</li> <li>• Function-ability of the door</li> </ul>	<ul style="list-style-type: none"> <li>• Practical assignments</li> <li>• Oral/ written tests</li> </ul>
8. Perform workplace Housekeeping	<ul style="list-style-type: none"> <li>• Housekeeping procedures <ul style="list-style-type: none"> <li>✓ Gather off cuts</li> <li>✓ Gather shavings/ saw dust</li> <li>✓ Clean the floor return tools to the store</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Practical assignments</li> <li>• Oral/ written</li> </ul>

### Suggested Methods of Instruction

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

### Recommended Resources

- Carpentry and joinery hand tools
  - ✓ Saws
  - ✓ Hammers
  - ✓ Planes
  - ✓ Gauges
  - ✓ Chisels
  - ✓ Squares
  - ✓ Tape measure
- Codes of practice
- Reference books
- Timber
- Screws
- Nails
- Wood glue
- Varnish

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

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