



Republic of Rwanda  
Ministry of Education



**RTB** | RWANDA  
TVET BOARD

## CUPBOARDS AND SHELVES INSTALLATION

**WOTCS301**

### INSTALL CUPBOARDS AND SHELVES

#### Competence

RQF Level: 3

Learning Hours



Credits: 5

Sector: Agriculture and Food Processing

Trade: Wood Technology

Module Type: Specific

Curriculum: AFPWOT3002- TVET Certificate 3 in Wood Technology

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<b>Purpose statement</b>	This module describes employable and practicable skills, knowledge and right attitudes required by the student to prepare the workplace, cut and plan for shelves, install cabinet and apply finishing touches. The contents provided in this course are packages reserved for a student pursuing TVET certificate III in wood technology. Graduates at this level will have knowledge and skills for initial work, community involvement and/or further learning.				
<b>Delivery modality</b>	<b>Training delivery</b>	<b>100%</b>	<b>Assessment</b>	<b>Total 100%</b>	
	Theoretical content	30%	Formative assessment	30%	
	Practical work:	70%		70%	50%
	<ul style="list-style-type: none"> <li>Group project and presentation 20%</li> <li>Individual project /Work 50%</li> </ul>				
				Summative Assessment	50%

## Elements of Competency and Performance Criteria

Elements of competency	Performance criteria
<b>1. Prepare the workplace</b>	1.1. Cabinet space is perfectly prepared prior to the work to be done
	1.2. Cabinet space is accurately measured and it is equivalent to the size of the cabinet
	1.3. Wall mark up is perfectly performed in accordance with the given dimension
	1.4. Cabinet position is properly located as indicated on the drawing
<b>2. Cut and plan shelves</b>	2.1. Shelves are accurately measured and cut to their respective dimensions.
	2.2. Edges are perfectly smoothed by using appropriate sand papers
	2.3. Edges are perfectly varnished/stained with appropriate varnish/stain
<b>3. Install cabinet</b>	3.1. Shelf brackets' positions are correctly marked according to the drawing provided.
	3.2. Cabinet members are strongly clamped and fastened together to ensure the cabinet is tight
	3.3. Diagonals are properly checked as all the angles are the same
	3.4. Cabinet is correctly raised and mounted to wall by respecting the prepared positions
	3.5. Doors are correctly fixed to the cabinet members by appropriate hinges
<b>4. Apply finishing touches</b>	4.1. Cabinet handles and locks are correctly fixed according to the standard height.
	4.2. Scratches are properly masked and painted in accordance with the given specifications
	4.3. Cabinet edges and mouldings are correctly smoothed
	4.4. Cabinet is properly cleaned as free from all kind of dust

# Course content

<b>Learning outcomes</b>	<b>At the end of the module the learner will be able to:</b> <ol style="list-style-type: none"> <li>1. Prepare the workplace</li> <li>2. Cut and plan shelves</li> <li>3. Install cabinet</li> <li>4. Apply finishing touches</li> </ol>
<b>Learning outcome 1: Prepare the workplace</b>	<b>Learning hours: 10</b>
<b>Indicative content</b>	
<ul style="list-style-type: none"> <li>• <b>Preparation of cabinet space</b> <ul style="list-style-type: none"> <li>✓ Condition for cabinet space</li> <li>✓ Cleaning</li> <li>✓ Securing the site</li> <li>✓ Removing existing items</li> </ul> </li> <li>• <b>Cabinet space measurement</b> <ul style="list-style-type: none"> <li>✓ Height with countertop</li> <li>✓ Depth without countertop</li> <li>✓ Depth with countertop</li> <li>✓ Cabinet base</li> <li>✓ Cabinet width</li> </ul> </li> <li>• <b>Performing wall mark-up</b> <ul style="list-style-type: none"> <li>✓ Marking process</li> <li>✓ Marking standards</li> </ul> </li> <li>• <b>Locating cabinet position</b> <ul style="list-style-type: none"> <li>✓ Opening positions</li> <li>✓ Position of hinges</li> </ul> </li> </ul>	
<b>Resources required for the learning outcome</b>	
Equipment	<ul style="list-style-type: none"> <li>• Vacuum cleaner</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Marking pen</li> <li>• Ropes</li> <li>• Chalk line</li> </ul>
Tools	<ul style="list-style-type: none"> <li>• Tape measure</li> <li>• Spade</li> <li>• Trowel</li> <li>• Wheelbarrow</li> <li>• Pick axe</li> <li>• Broom</li> </ul>
Facilitation techniques	<ul style="list-style-type: none"> <li>• Group discussion</li> <li>• Trainer guided</li> </ul>

	<ul style="list-style-type: none"> <li>• Assignments</li> <li>• Site visit</li> <li>• Brainstorming</li> <li>• Practical exercises</li> </ul>
Formative assessment methods	<ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Performance assessment</li> </ul>

<b>Learning outcome 2: Cut and plan shelves</b>		<b>Learning hours: 15</b>
<b>Indicative content</b>		
<ul style="list-style-type: none"> <li>• <b>Measuring and cutting shelves</b> <ul style="list-style-type: none"> <li>✓ Cutting techniques</li> <li>✓ Measuring techniques</li> </ul> </li> <li>• <b>Smoothing edges</b> <ul style="list-style-type: none"> <li>✓ Sanding techniques</li> <li>✓ Use of sanding sealer</li> </ul> </li> <li>• <b>Varnishing/staining edges</b> <ul style="list-style-type: none"> <li>✓ Varnish type</li> <li>✓ Spray gun varnishing</li> <li>✓ Brush varnishing</li> </ul> </li> </ul>		
<b>Resources required for the indicative content</b>		
Equipment	<ul style="list-style-type: none"> <li>• Table saw machine</li> <li>• Arm saw machine</li> <li>• Spray gun</li> </ul>	
Materials	<ul style="list-style-type: none"> <li>• Sanding sealer</li> <li>• Varnish</li> <li>• Sand paper</li> </ul>	
Tools	<ul style="list-style-type: none"> <li>• Hand saws</li> <li>• Brush</li> <li>• Sanding blocks</li> </ul>	
Facilitation techniques	<ul style="list-style-type: none"> <li>• Practical exercise</li> <li>• Group discussions</li> <li>• Brainstorming</li> <li>• Trainer guided</li> </ul>	
Formative assessment methods	<ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Performance assessment</li> </ul>	

<b>Indicative content</b>
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- **Marking shelf brackets' positions**
  - ✓ Strength of the stud
  - ✓ Stud location
- **Clamping and fastening cabinet members together**
  - ✓ Types of fasteners
  - ✓ Clamping techniques
  - ✓ Fastening techniques
- **Checking diagonals**
  - ✓ 3-4-5 rule
  - ✓ Use a tape measure
  - ✓ Pythagoras theorem
- **Raising and mounting cabinet to wall**
  - ✓ Fixing wall plugs techniques
  - ✓ Screw driving techniques
- **Fixing doors to the cabinet members**
  - ✓ Cabinet hinges
  - ✓ Door alignment
  - ✓ Door levelling

<b>Resources required for the indicative content</b>
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Equipment	<ul style="list-style-type: none"> <li>• Drill machine,</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Hinges, screws, wall plugs, rope</li> </ul>
Tools	<ul style="list-style-type: none"> <li>• Clamps, hammer, screw driver, tape measure</li> </ul>
Facilitation techniques	<ul style="list-style-type: none"> <li>• Demonstration and simulation</li> <li>• Individual and group work</li> <li>• Practical exercise</li> <li>• Trainer guided</li> <li>• Group discussion</li> </ul>
Formative assessment methods	<ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Performance assessment</li> </ul>

Learning outcome 4: Apply finishing touches		Learning hours: 10
<b>Indicative content</b>		
<ul style="list-style-type: none"> <li>• <b>Fixing cabinet handles and locks</b> <ul style="list-style-type: none"> <li>✓ Handle types</li> <li>✓ Lock types</li> <li>✓ Techniques of fixing handles and locks</li> <li>✓ Positioning handles and locks</li> </ul> </li> <li>• <b>Puttying and painting scratches</b> <ul style="list-style-type: none"> <li>✓ Masking techniques</li> <li>✓ Painting methods</li> </ul> </li> <li>• <b>Smoothing cabinet edges and moldings</b> <ul style="list-style-type: none"> <li>✓ Sanding edges</li> <li>✓ Edge moulding</li> <li>✓ Varnishing techniques</li> </ul> </li> <li>• <b>Cleaning cabinet</b> <ul style="list-style-type: none"> <li>✓ Cleaning materials</li> <li>✓ Cleaning techniques</li> </ul> </li> </ul>		
<b>Resources required for the indicative content</b>		
Equipment	<ul style="list-style-type: none"> <li>• Sanding machine,</li> <li>• spray gun</li> </ul>	
Materials	<ul style="list-style-type: none"> <li>• Varnish</li> <li>• Cabinet handles</li> <li>• Cabinet locks</li> <li>• Paint</li> <li>• Cleaning materials</li> <li>• Sanding sealer</li> <li>• Sand paper</li> </ul>	
Tools	<ul style="list-style-type: none"> <li>• Broom</li> <li>• Screw driver</li> <li>• Painting brush</li> </ul>	
Facilitation techniques	<ul style="list-style-type: none"> <li>• Demonstration and simulation</li> <li>• Individual and group work</li> <li>• Practical exercise</li> <li>• Trainer guided</li> <li>• Group discussion</li> </ul>	
Formative assessment methods	<ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Oral presentation</li> <li>• Performance assessment</li> </ul>	

## Integrated/Summative assessment (For specific module)

### Integrated situation

BKK Construction & supply Ltd located in Gasabo District is a company dealing with construction and furniture supply. The company has owned a tender to install kitchen cabinet and shelves in an apartment located in Kinyinya Sector. The company is running out of joiners and is hiring you to install this kitchen cabinet and shelves. The room to receive the shelf is 2m wide and 3m high. The side of the kitchen that will accommodate the cabinet is 3m wide and 3m high. The installation of the kitchen cabinet is supposed to be done within 4 hours and the installation of shelves is supposed to be done within 2 hours.

All materials for this work are provided by the company.

#### Resources

Tools	<ul style="list-style-type: none"> <li>• Tape measure</li> <li>• Spade</li> <li>• Trowel</li> <li>• Wheelbarrow</li> <li>• Pick axe</li> <li>• Broom</li> <li>• Hand saws</li> <li>• Brush</li> <li>• Sanding blocks</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>• Vacuum cleaner</li> <li>• Table saw machine</li> <li>• Arm saw machine</li> <li>• Spray gun</li> <li>• Drill machine,</li> <li>• Sanding machine,</li> </ul>
Materials/ Consumables	<ul style="list-style-type: none"> <li>• Marking pen</li> <li>• Ropes</li> <li>• Chalk line</li> <li>• Hinges,</li> <li>• screws,</li> <li>• wall plugs,</li> <li>• rope</li> <li>• Varnish</li> <li>• Cabinet handles</li> <li>• Cabinet locks</li> <li>• Paint</li> <li>• Cleaning materials</li> <li>• sanding sealer</li> <li>• Sand paper</li> </ul>

Assessable outcomes	Assessment criteria (Based on performance criteria)	Indicator	Observation		Marks allocation
			Yes	No	
<b>Learning outcome 1:</b>  <b>Prepare the workplace</b>  (30%)	1.1. Cabinet space is perfectly prepared prior to the work to be done	Cabinet space is perfectly prepared			5
	1.2. Cabinet space is accurately measured and it is equivalent to the size of the cabinet	Cabinet space is accurately measured and it is equivalent to the size of the cabinet			4
	1.3. Wall mark-up is perfectly performed in accordance with the given dimension	Wall mark-up is perfectly performed			4
	1.4. Cabinet position is properly located as indicated on the drawing	Cabinet position is properly located as indicated on the drawing			3
<b>Learning outcome 2:</b>  <b>Cut and plan shelves</b>  (30%)	2.1. Shelves are accurately measured and cut to their respective dimensions.	Shelves are accurately measured and cut to their respective dimensions.			5
	2.2. Edges are perfectly smoothed by using appropriate sand papers	Edges are perfectly smoothed by using appropriate sand papers			6
	2.3. Edges are perfectly varnished/stained with appropriate varnish/stain	Edges are perfectly varnished/stained with appropriate varnish/stain			5
<b>Learning outcome 3:</b>  <b>Install cabinet</b>  (30%)	3.1. Shelf brackets' positions are correctly marked according to the drawing provided.	Shelf brackets' positions are correctly marked			3
	3.2. Cabinet members are strongly clamped and fastened together to ensure the cabinet is tight	Cabinet members are strongly clamped and fastened together			5
	3.3. Diagonals are properly checked as all the angles are the same	Diagonals are properly checked as all the angles are the same			4
	3.4. Cabinet is correctly raised and mounted to wall by respecting the prepared positions	Cabinet is correctly raised and mounted to wall by respecting the prepared positions			3
	3.5. Doors are correctly fixed to the cabinet members by appropriate hinges	Doors are correctly fixed to the cabinet members			3
<b>Learning outcome 4:</b>  <b>Apply finishing touches</b>  (10%)	4.1. Cabinet handles and locks are correctly fixed according to the standard height.	Cabinet handles and locks are correctly fixed according to the standard height.			3
	4.2. Scratches are properly masked and painted in accordance with the given specifications	Scratches are properly masked and painted			3
	4.3. Cabinet edges and mouldings are correctly smoothed	Cabinet edges and mouldings are correctly smoothed			2
	4.4. Cabinet is properly cleaned as free from all kind of dust	Cabinet is properly cleaned			2
<b>Total marks</b>					<b>100</b>
<b>Percentage Weightage</b>					<b>100%</b>

**Minimum Passing line % (Aggregate): 70%**