



Republic of Rwanda
Ministry of Education



RTB | RWANDA
TVET BOARD

BDCTW001

TILES WORKS

Competence: PERFORM TILES WORKS

RQF Level: N/A

Learning Hours



Credits: 12

Sector: CONSTRUCTION AND BUILDING SERVICES

Program: MASONRY

Module Type: SPECIFIC

Curriculum: DUAL TRAINING SHORT COURSE IN MASONRY

Copyright: © Rwanda TVET Board, 2023

Issue Date: February 2023

Purpose statement	This core module describes the knowledge, skills and right attitude required to perform tiles works. It is designed for a trainee undergoing dual training program in masonry. Trainee graduated in this module will be able to select materials, tools and equipment for tiles works. She/he will be also able to cut and apply tiles on walls, stairs, skirting and floors according to the standards.					
Learning assumed to be in place	Maintain SHE at workplace, Building set out, Bricks and blocks masonry wall elevation, Plastering of structure elements and Cement flooring.					
Delivery modality	Training delivery	100%	Assessment		Total 100%	
	Theoretical content	22.5%	Formative assessment in school	30%	50%	
	Delivered in company		77.5%	Workplace comprehensive assessment in company		70%
	• Demonstration and practice	27.5%				
	• Individual project /Independent Work	50%				
			Summative Assessment	50%		

Elements of Competency and Performance Criteria		
Elements of competence	Performance criteria	Learning site
1. Perform preliminary tiles works	1.1. PPE is appropriately selected and used according to the work to be performed	School & Company
	1.2. Tools and equipment are appropriately selected and used according to the work to be performed	School & Company
	1.3. Materials are appropriately selected and used according to the work to be performed	School & Company
2. Apply tiles	2.1. Work area is properly cleaned and set out in accordance with work specification	School & Company
	2.2. Cement mortar is appropriately mixed according to the work to be performed	School & Company
	2.3. Tiles are accurately cut according to the area of application	School & Company
	2.4. Tiles are appropriately applied according to the standards	School & Company

	2.5. Pointing of joints is appropriately done according to the standards	School & Company
3. Perform closing tiles works activities	3.1 Tools and equipment are properly cleaned according to their type	School & Company
	3.2 Workplace is properly cleaned as per work requirements	School & Company
	3.3 Tools and equipment are properly stored according to their type	School & Company
	3.4. Wastes are properly managed according to environment policy	Company

Course content

Learning outcomes	At the end of the module the trainee will be able to: <ol style="list-style-type: none"> 1. Perform preliminary tiles works 2. Apply tiles 3. Perform closing tiles works activities
--------------------------	--

Preliminary tiles works

Learning outcomes	Indicative content	Learning Hours: 10	
		School	Company
1. Perform preliminary tiles works	<ul style="list-style-type: none"> ● PPE used for tiles works: <ul style="list-style-type: none"> ✓ Definition ✓ Function ✓ Advantages and disadvantages ✓ Types of PPE for tiles works <ul style="list-style-type: none"> ✚ Helmet ✚ Gloves ✚ Goggles ✚ Dust mask ✚ Overall ✚ Safety shoes(boots) ✚ Ear protector ✓ Maintenance of PPE for tiles works 	1	

	<ul style="list-style-type: none"> • Tools and equipment for tiles works <ul style="list-style-type: none"> ✓ Classification of tools and equipment for tiles works: <ul style="list-style-type: none"> ✚ Setting out tools and equipment ✚ Cutting tool and equipment ✚ Mixing tools and equipment ✚ Fixing tools ✚ Measuring tools 	1	
	<ul style="list-style-type: none"> ✓ Use and maintenance of tools and equipment for tiles works 	1	2
	<ul style="list-style-type: none"> • Materials for tiles works. <ul style="list-style-type: none"> ✓ Materials: <ul style="list-style-type: none"> ✚ Sand ✚ Cements ✚ Water ✚ Tiles ✚ Adjuvant / admixture ✓ Qualities of mortar ingredients for tiles works ✓ Characteristics of mortar for tiles works 	1	4
Resources required for the learning outcome		School	Company
Equipment	Helmet, gloves, goggles, dust mask, overall, safety shoes (boots), ear protector, wheelbarrow, pan, bucket, etc.		
Materials	Ceramic tiles, granite tiles, rough tiles, smooth tiles, Portland cement, white cement, tile spacers, water, etc		
Tools	Spades, trowel, spirit level, squares, mallet hammer, building line, tape measure, pincers, tile cutter, etc		
Facilitation techniques / learning activities	<ul style="list-style-type: none"> • Demonstration and simulation • Individual and group work • Practical exercise • Individualized • Trainer guided • Group discussion 		
Formative assessment methods	<ul style="list-style-type: none"> • Written assessment • Oral based assessment 		

Tiles application

Learning outcomes	Indicative content	Learning Hours: 100	
		School	Company
2. Apply tiles	<ul style="list-style-type: none"> • Clean and set out the work area <ul style="list-style-type: none"> ✓ Technics of surface cleaning ✓ Procedures of setting out the surface area • Batching and mixing of mortar ingredients for tiles works: <ul style="list-style-type: none"> ✓ Batching methods ✓ Mixing ratio ✓ Mortar mixing procedures • Cutting tiles: <ul style="list-style-type: none"> ✓ Technics of tiles cutting ✓ Procedures of tiles cutting • Procedures of tiles applying: <ul style="list-style-type: none"> ✓ Tiles humidification ✓ Prepare mortar ✓ Mark the level ✓ Spread the mortar on the surface ✓ Press and level the first tile in place ✓ Install more tiles ✓ Cut tiles to fit • Techniques of tiles grouting 	20	80
Resources required for the learning outcome		School	Company
Equipment	Helmet, gloves, goggles, dust mask, overall, safety shoes (boots) ear protector, wheelbarrow, pan, bucket, etc.		
Materials	Ceramic tiles, granite tiles, rough tiles, smooth tiles, Portland cement, white cement, tile spacers, water, etc		
Tools	Spades, trowel, spirit level, squares, mallet hammer, building line, tape measure, pincers, tile cutter, etc		
Facilitation techniques and	<ul style="list-style-type: none"> • Demonstration and simulation • Individual and group work 		

learning activities	<ul style="list-style-type: none"> • Practical exercise • Individualized • Trainer guided • Group discussion 		
	<ul style="list-style-type: none"> • Practical work • Demonstration 		
Formative assessment methods	<ul style="list-style-type: none"> • Written assessment • Oral based assessment 		
	<ul style="list-style-type: none"> • Product Evidence • Performance evidence 		

Tiles works closing activities

Learning outcomes	Indicative content	Learning Hours: 10	
		School	Company
3.Perform closing tiles works activities	<ul style="list-style-type: none"> • Methods of cleaning tools and equipment: <ul style="list-style-type: none"> ✓ By water ✓ By oil ✓ By brush ✓ By air compressor • Methods of cleaning work place: <ul style="list-style-type: none"> ✓ By water ✓ By brush ✓ By air compressor • Storing tools and equipment procedures: <ul style="list-style-type: none"> ✓ Selection of area for storing tools and equipment ✓ Prioritize tools and equipment ✓ Separate tools and equipment ✓ Discard unused tools and equipment • Environmental management is ensured <ul style="list-style-type: none"> ✓ Minimize wastage ✓ Propose the place the wastage can be applied 	3	7
Resources required for the learning outcome		School	Company
Equipment	Helmet, gloves, goggles, dust mask, overall, safety shoes (boots) ear protector, wheelbarrow, pan, bucket, etc.		

Materials	Ceramic tiles, granite tiles, rough tiles, smooth tiles, portland cement, white cement, tile spacers, water, etc		
Tools	Spades, trowel, spirit level, squares, mallet hammer, building line, tape measure, pincers, tile cutter, etc		
Facilitation techniques and learning activities	<ul style="list-style-type: none"> • Demonstration and simulation • Individual and group work • Practical exercise • Individualized • Trainer guided • Group discussion 		
	<ul style="list-style-type: none"> • Practical work • Demonstration 		
Formative assessment methods	<ul style="list-style-type: none"> • Written assessment • Oral based assessment 		

Integrated/Summative assessment

NCC LTD has a tender of applying tiles in the building located at KACYIRU in GASABO district, but the company does not have a professional tile mason to apply the tiles in that building. As mason you are called by the company to perform the work and you are requested to apply tiles on floor of the room; on scating of that room; and the toilet's wall.

- The first work must be done on the floor in one of the rooms of the building which is 2m*1m within three hours.
- The second work must be done on scating of that room which is 6m linear by 15 cm within two hours.
- The third work must be done on toilet's wall which is 2m*1m within three hours.

All materials are available at NCC ltd stores. Use of spacers; grouting and cleaning must be respected. The mixing ratio of 1:2 must be respected.

Tools	Spades, Trowel, Spirit level, Squares, Mallet hammer, Tape measure, Pincers, tile cutter, hose pipe.
Equipment	Helmet, Gloves, Goggles, Dust mask, Overall, Safety shoes (boots) Ear protector, Wheelbarrow, Pan, Bucket.
Materials/ Consumables	Ceramic tiles, Granite tiles, rough tiles, Smooth tiles, Portland cement, White cement, Tile spacers, Water, Building line.

Assessable outcomes	Assessment criteria (Based on performance criteria)	Indicator	Observation		Marks allocation
			Yes	No	
Learning outcome 1: Perform preliminary tiles works (20%)	1.1. PPE is appropriately selected and used according to the work to be performed	Helmet is used			5
		Gloves are used			
		Goggles are used			
		Dust mask is used			
		Overall is used			
		Safety shoes are used			
	1.2. Tools and equipment are appropriately selected and used according to the work to	Spade is used			10
		Trowel is used			
		Spirit level is used			

	be performed	Square is used			
		Mallet hammer is used			
		Tape measure is used			
		Pincer is used			
		Tile cutter is used			
		Wheelbarrow is used			
		Pan is used			
		Bucket is used			
	1.3. Materials are appropriately selected and used according to the work to be performed	Appropriate tiles are used			5
		Appropriate cement is used			
		Clean water is used			
		Building line is used			
Learning outcome 2: Apply tiles (70%)	2.1. Work area is properly cleaned and set out in accordance with work specification	Work area is clean			20
		Tools and equipment are arranged			
		Materials are arranged			
		Reference level is marked			
		Reference tile is positioned			
	2.2. Cement mortar is appropriately mixed according to the work to be performed	Mixing ratio is respected			10
		Mortar is homogeneous			
		Mortar is workable			
		No impurities observed			
	2.3. Tiles are accurately cut according to the area of application	Required size is measured			15
		Tiles are marked			
		Tiles are cut			
		Tiles are not broken			
	2.4. Tiles are appropriately applied according to the standards	Tiles are leveled			20
		Tiles are fixed			
		Joints are uniform			
		Joints are straight			
		Design pattern is respected			
	2.5. Pointing of joints is appropriately done according to the standards	Joints are prepared			5
		Grouting is applied			
Grouting level is respected					
Grouting adhesion is achieved					
Learning outcome 3: Perform closing tiles works	3.1 Tools and equipment are properly cleaned according to their type	Used tools are cleaned			3
		Used equipment are cleaned			
	3.2 Workplace is properly	Used tools and equipment are			3

activities (10%)	cleaned as per work requirements	corrected			4
		Remaining materials are removed			
		Working area is clean			
	3.3 Tools and equipment are properly stored according to their type	Tools and equipment are dried			
		Tools and equipment are classified			
		Storing area is cleaned			
3.4 Waste management is respected	Wastes are minimized				
	Proposal of area to be used				
Total marks		100			
Percentage Weightage		100%			
Minimum Passing line % (Aggregate): 70%					

References

1. <http://www.diynetwork.com/how-to/rooms-and-spaces/floors/how-to-install-a-hardwood-floor>
2. https://www.google.rw/search?dcr=1&source=hp&ei=n68CWqOfC8PxUo68pKgG&q=wood+floor+installation&oq=wood+floor+inst&gs_l=psyab.1.0.0l10.1354108.1366976.0.1370892.43.24.16.0.0.0.345.3151.2-1j9.11.0....0...1.1.64.psyab..17.26.3333.6..35i39k1j0i10k1j0i22i30k1.397.a-kXHXCv7K