



Republic of Rwanda
Ministry of Education



RTB | RWANDA
TVET BOARD

CERAMIC ARTWORK

Code
FPACA501

MAKE CERAMIC ARTWORK

RQF Level: 5

Learning Hours 90



Credits: 9

Sector: Arts and Craft

Trade: Fine and Plastic Arts

Module Type: Specific module

Curriculum: ACPFA 5002- TVET Certificate 5 in Fine and Plastic Arts

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Purpose statement	This module describes the skills, knowledge and attitude required to the trainee to be able to create ceramic statuette, create ceramic mould, make monument and perform ceramic firing, means that he/she will be able to make all kinds of ceramic artworks by using all methods and techniques used in ceramic.					
Learning assumed to be in place	History of Arts, sketch Scene and Artistic Drawing					
Delivery modality	Training delivery		100%	Assessment		Total 100%
	Theoretical content		30%	Formative assessment	30%	50%
	Practical work:		70%		70%	
	• Group work and presentation	30%				
	• Individual work	40%				
			Summative Assessment		50%	

Elements of Competency and Performance Criteria

Elements of competency	Performance criteria
1.Create ceramic statuette	1.1. The theme is correctly identified according to the source of inspiration.
	1.2. Materials, tools and equipment are correctly selected according to their types.
	1.3. Materials, tools and equipment are rightly prepared according to their methods.
	1.4. Ceramic statuette models are correctly drafted according to the theme.
	1.5. Ceramic statuette model is properly selected according to the rules of composition.
	1.6. Ceramic statuette model is correctly enlarged according to the transfer methods.
	1.7. Clay is properly prepared according to the preparation techniques.

	1.8. Ceramic statuette structure is properly modelled according to the modelling techniques.
	1.9. Ceramic statuette is properly finished according to the finishing techniques.
2. Create ceramic mould	2.1. The master form is clearly positioned according to the methods.
	2.2. Raw materials are properly mixed according to the desired mixing ratio.
	2.3. Pour raw material mixture into the container to cover master form completely
	2.4. The mould frame is correctly removed according to their methods.
	2.5. The mould is properly finished referring to their quality
3. Make monument	3.1. The steels bare are appropriately cut according to the dimensions.
	3.2. The structures are properly shaped according to the standard.
	3.3. The forms are correctly executed according to the techniques.
	3.4. Sculpture monument is properly finished according to their requirement.
4. Perform ceramic firing	4.1. The kilns are properly identified according to their types.
	4.2. Ceramic artwork is properly loaded according to the set methods.
	4.3. The kiln is correctly adjusted according to their levels of temperature.
	4.4. The products are properly unloaded according to the unloading methods.
	4.5. The final products are properly stored according to the storing standard.
Knowledge	
Skills	
Attitude	

ESSENTIAL KNOWLEDGE	ESSENTIAL SKILLS	WORKER BEHAVIOUR/ATTITUDES
✓ Identify client's requirements ✓ Gather artistic drawing references ✓ Enumerate art principles ✓ Differentiate types of artistic drawing ✓ Enumerate Canons of proportion	✓ Prepare a workplace ✓ Prepare tools, materials and equipment ✓ Apply SHE at workplace ✓ Apply rules of composition ✓ Generate the ceramic designs ✓ Create the ceramic model ✓ Enlarge the ceramic model ✓ Refine the ceramic details ✓ Package the ceramic product	✓ Use creativity and innovation throughout the design works ✓ Pay attention to design projects details ✓ Demonstrate punctuality during the implementation of the design project ✓ Demonstrate resourcefulness in the new design trends

Course content	
Learning outcomes	At the end of this module the learner will be able to: • Create ceramic statuette • Create ceramic mould • Make monument • Perform ceramic firing
• Learning outcome 1: Create ceramic statuette.	Learning hours: 20
Indicative content	
• Identification the themes. ✓ The themes of statuette model + Religion + Daily life ✓ Sources of inspiration. + Nature + Internet + Books • Selection of tools, materials and equipment. ✓ Classification of ceramic tools + Modelling tools + Textures tools + Trimming tools + Polymer clay tools + Slab tools ✓ Classification of ceramic equipment + Electric machines + Gas machines + Grazing machine ✓ Classification of ceramic materials + Metals + Polymers + Composites • Preparation of tools, material and equipment ✓ Methods of preparation tools and equipment + Manuel preparation + Mechanic preparation	

- ✓ Tools and equipment preparation
 - + Sharpening and cleaning tools.
 - + Lubrication
- ✓ Material Preparation
 - + Clay preparation
 - + Mortar mixing
- ✓ Arranging/ organising equipment

- **Drafting ceramic statuette model**

Elements of arts

- + Lines
- + Forms
- + Shape
- + Texture
- + Value
- + Space
- + colour
- ✓ Principles of arts
 - + Balance
 - + Unity
 - + Variety
 - + Proportion
 - + Harmony
 - + Emphasis
 - + Rhythm
- ✓ Canon of proportions
 - + Lysippus canon
 - + Polyclitus canon

- **Selecting ceramic statuette model**

- ✓ Selection criteria for ceramic statuette model
 - + Meaning of model
 - + Expression of model
 - + Feasibility study
- ✓ The rules of composition
 - + The rule of thirds
 - + Iconic
 - + Leading
- ✓ Selection ceramic model
 - + Dimensional stability

✚ Resistance to chemical

✚ Melting point

- **Enlargement ceramic statuette model**

- ✓ Techniques of enlargement.

- ✚ Sketching

- ✚ Stencilling

- ✚ Projection

- **Clay preparation.**

- ✓ Methods of clay preparation

- ✚ Mechanic preparation

- ✚ Manuel preparation

- **Modelling Ceramic statuette model.**

- ✓ Techniques of modelling

- ✚ Additive technique

- ✚ Subtractive technique

- ✚ Coiling techniques

- **Finishing ceramic statuette models.**

- ✓ Methods of finishing ceramic artworks

- ✚ Smoothing

- ✚ Roughness

- ✓ Glazing

- ✓ Painting

Resources required for the learning outcome

Equipment	▪ Pottery wheel, mix with helix, Kneads, electric kilns, traditional kilns, slab rollers, grazing machine.
Materials	▪ Clay, water, skimmers, bricks, glaze, firewood.
Tools	▪ Sieve, pestle, blanket, plastic sack, sketch out tools, press roller, Clay, knives, concrete back, wheelbarrow.
Facilitation techniques	• Demonstration ,group work, practical exercise ,individualized, trainer guided ,group discussion
Formative assessment methods /(CAT)	• Written assessment ,Oral presentation ,Performance assessment

Learning outcome 2: Create ceramic mould.	Learning hours: 10
Indicative content	
• Dividing master form ✓ Parts of statuette model. + Vertical + Horizontal + Longitudinal • Mixing raw material ✓ Types of materials, tools and equipment for making mould. + Types of materials(Hard materials .Liquid materials) + Types of tools(Wheelbarrow ,Bucket ,Plastic bags ,Sieve) + Types of equipment • Pouring the mixture ✓ Technique for making the mould. + Slurry processing. + Plastic forming. + Dry pressing. • Removal of mould ✓ Methods of removing mould + Position + Rinse and let dry it. + Clean the surface + Using vinegar for mould removal + Baking soda + Dry zone mould remover	
Resources required for the learning outcome	
Equipment	▪ Pottery wheel, mix with helix, kneads, electric kilns, slab rollers, grazing machine.
Materials	▪ Clay, water, skimmers, bricks, glaze, firewood, cement.
Tools	▪ Sieve, pestle, blanket, plastic sack, sketch out tools, press roller, knives,

	concrete back, wheelbarrow.
Facilitation techniques	▪ Brainstorming, observation ,practical exercises,practical exercises
Formative assessment methods /(CAT)	• Written assessment ,oral presentation, performance assessment

Learning outcomes	At the end of the module the learner will be able to : • Create ceramic statuette • Create ceramic mould • Make monument • Perform ceramic firing
Learning outcome 3: Make monument	Learning hours: 40

Indicative content	
• Identification of the types of steel bars. ✓ Dimension of steel bars ✚ Steel bars of 8mm ✚ Steel bars of 10 mm ✚ Steel bars of 12mm ✚ Steel bars of 16 mm ✚ Steel bar of 20 mm ✚ Steels bars of 25 mm ✚ Steels bars of 32 mm ✚ Steel bars of 32mm • Constructing the shape of monuments. ✓ Methods of constructing the shape of monument ✚ Bending metals ✚ Welding metals ✚ Joining the metals ✓ Components of ceramic statuette model ✚ Meaning of model ✚ Expression of model	

 Feasibility study

• **Modelling monument.**

- ✓ Technique of modelling.
 -  Additive technique
 -  subtractive technique
 -  Coiling techniques
 -  Mass production
 -  Wheel throwing
 -  Pinching
- ✓ Methods for using cement
 -  Prepare concrete
 -  Sand
 -  Cement
- ✓ Method for using clay

• **Finishing monument.**

- ✓ Methods of finishing monuments
 -  Smoothing
 -  Roughness
 -  Painting
- ✓ Grazing
- ✓ Firing

Resources required for the learning outcome

Equipment	▪ Pottery wheel, mix with helix, kneads, slab rollers, kilns.
Materials	▪ Clay, water, bricks, cement, electricity.
Tools	▪ Knives, concrete back, wheelbarrow
Facilitation techniques	• Demonstration ,group work, Practical exercises Individualized ,Trainer guided ,Group discussion
Formative assessment methods /(CAT)	• Written assessment ,Oral presentation ,Performance assessment

Learning outcome 4: Perform ceramic firing

Learning hours: 20

Indicative content

- **Identification of types of kilns**

- ✓ Traditional kilns

- ✚ The kiln with vertical ascendant extraction
 - ✚ The kiln with horizontal extraction
 - ✚ Vertical kiln with reverses flames

- ✓ Electric Modern kilns

- ✚ Tunnel kiln
 - ✚ kiln with passages

- **Loading ceramic artwork in the kiln**

- ✓ Methods of loading the products in the kiln

- ✚ In charge putting kiln
 - ✚ Escape or floor putting in kiln
 - ✚ In gazettes kiln or cassettes

- **Adjusting the kiln**

- ✓ Types of monitoring.

- ✚ Electric monitoring (The pyrometers with canes)
 - ✚ Traditional monitoring (the fusible watches ,the coloration of fire in the kiln, the witness watches)

- ✓ Methods of propagation the heat in ceramic kiln.

- ✚ Ressuage
 - ✚ Little fire
 - ✚ Big fire
 - ✚ Cooling

- ✓ Types of propagation of the heat

- ✚ Radiation
 - ✚ Conduction
 - ✚ Convection

- **Unloading the products in the kiln.**

- ✓ Methods of unloading the products in the kiln.

- ✚ Manual
 - ✚ Modern
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- ✓ Maintaining ceramic kilns
 - ✚ Verify damaged places
 - ✚ Repair damaged places
 - ✚ Rebuild damaged areas
 - ✚ Clean the kiln
- **Storing ceramic products.**
 - ✓ Process of preparing the storing place
 - ✚ Cleanness
 - ✚ Safety equipment
 - ✚ Electricity
 - ✓ Methods of storing ceramic products.
 - ✚ Mezzanine flooring
 - ✚ Pallet
 - ✚ Shelve
 - ✓ Clay report.
 - ✚ Record of chemical elements of clay
 - ✚ Record of the impurities of clay
 - ✚ Record on plasticity of clay
 - ✚ Shrinkage
 - ✚ Temperature to be used during firing

Resources required for the learning outcome

Equipment	▪ Electric kilns, traditional kilns, grazing machine, car, wheelbarrow.
Materials	▪ Clay, firewood, electricity, brick.
Tools	▪ The pyrometers with canes
Facilitation techniques	• Brainstorming, Observation , Practical exercises ,Practical exercises.
Formative assessment methods /(CAT)	• Written assessment ,Oral presentation .Performance assessment

Integrated/Summative assessment

Integrated situation

URUGO Ltd located at Kimihurura village kN: 004 has contracted with URUBENGO Ltd to decorate the roundabout located at Gisimenti/ Remera, to make monumental of Nyirarumaga. As ceramist from URUGO Ltd you are required to make this monument in one month.

- Base is 150cm x 120cm x 50cm x 100cm.
- You have to make mould by using cement for keeping really image.
- The woman monument must wear in tradition fashion.
- In finishing, you are required to use bronze colour.

All material and tools are available at workspace.

Resources

Tools	Pencils, rule, cutter, razor, eraser, feather birds, drawing board.
Equipment	Potter wheels, kneads, mixer with helix, tunnel kilns, pug mills, pugger mixer, projector, drawing paper.
Materials/ Consumables	Soap, water, powder soap, spray, detergent, sponges.

Assessable outcomes	Assessment criteria (Based on performance criteria)	Indicator	Observation		Marks allocation
			Yes	No	
Learning outcome 1: Create ceramic	1.1. The theme is correctly identified according to	✓ Religion is identified			1
		✓ Daily life is identified			1

statuette model (20%)	the source of inspiration				
		✓ Nature is identified			1
	1.2. Materials, tools and equipment are correctly selected according to their types ...	✓ Modelling tools are selected			1
		✓ Trimming tools are selected			1
		✓ Electric kiln is selected			1
	1.3. Materials, tools and equipment are rightly prepared according to their methods.	✓ cleaning techniques are applied			4
		✓ Tools are identified			1
		✓ Equipment is identified			1
	1.4. Ceramic statuette models are correctly drafted according to the theme	✓ Element of arts are used			1
		✓ Principals of arts are used			1
		✓ Details are identified			1
	1.5. Ceramic statuette model is properly selected according to the rules of composition.	✓ Leading line			1
		✓ Horizon line is used			1
		✓ Negative space is applied			1
	1.6. Ceramic statuette model is correctly enlarged according to	✓ Grid enlargement is applied			1

	the transfer methods.	✓ Enlarging scales is applied			1
		✓ Projector is used			1
	1.7. Clay is properly prepared according to the preparation techniques.	✓ Mechanic preparation is identified ✓ Manuel preparation is identified			1
	1.8. Ceramic statuette structure is properly modelled according to the modelling techniques.	✓ Base is identified			1
		✓ Modelling techniques is applied			1
		✓ Wheel throwing			1
		✓ Coiling techniques is identified			1
	1.9. Ceramic statuette is properly finished according to the finishing techniques.	✓ Smoothness and roughness is performed			1
		✓ Drying is performed			1
		✓ Grazing is performed			1
		✓ firing is performed			1

Learning outcome 2: create ceramic mould (20%)	2.1. The master form is clearly divided according to the mould function.	✓ Longitudinal cutting is divided			1
		✓ Vertical cutting is divided			2
		✓ Horizontal cutting is divided			2
	2.2. Barbotine is properly mixed according to the paste qualities of clay.	✓ Concrete is prepared			2
		✓ Bronze is melted			2
		✓ Clay is viscous			2
	2.3. The mould frame is correctly removed according to their methods	✓ Dry mould is performed.			2
		✓ Vinegar is applied			2
		✓ Positions are applied			2
Learning outcome 3: Make monument (40%)	3.1. The steels bare are appropriately cut according to the dimensions.	✓ Steel bars of 8mm is catted			2
		✓ Steel bars of 10 mm is catted			2
		✓ Steel bars of 12 mm is catted.			2
	3.2. The structures are properly shaped according to the standard	✓ Rectangle shape is applied			2
		✓ Triangle shape is applied			2

		✓ Square shape is applied			2
	3.3 The forms are correctly executed according to the techniques	✓ Additive technique is applied			2
		✓ Mass production is applied			2
		✓ Pinching is applied			2
	3.4 Sculpture monument is properly finished according to their requirement	✓ Smoothing is applied			2
		✓ Roughness is applied			2
		✓ Glazing is applied			2
Learning outcome 4: Perform ceramic firing (20%)	4.1. The kilns are properly identified according to their types	✓ Traditional kilns are identified			2
		✓ Tunnel kiln is identified			2
		✓ kiln with passages is identified			2
	4.2. Ceramic artwork is properly loaded according to the set methods.	✓ In charge putting kiln is applied			2
		✓ Escape or floor putting in kiln is applied			2
		✓ In gazettes kiln or cassettes is applied			2
	4.3. The kiln is correctly adjusted according to their	✓ Ressuage is applied			2
		✓ Little fire is applied			2

	levels of temperature	✓ Big fire is applied			2
	4.4. The products are properly unloaded according to the unloading methods.	✓ Cleanness is applied			2
		✓ Safety equipment is applied			2
		✓ Electricity is applied			2
	4.5. The final products are properly stored according to the storing standard	✓ Dimension of product is correctly applied			1
		✓ Shelves is applied			2
		✓ Mezzanine flooring is applied			2
	Total marks				
Percentage Weightage		100%			
Minimum Passing line % (Aggregate): 70%					

List of abbreviations

References

- ♣ www.ceramicor.com/cooking
 - ♣ www.larousse.fr
 - ♣ GLAZE (Ultimate ceramic artist's guide to glaze and colour) by Brian Taylor and Kate Doody
 - ♣ The Ceramics bible by Louisa Taylor
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