

CONTENT AREAS FOR CERAMICS

	Content Areas	Competencies	Descriptive statement	Course Objectives/Outcomes (Dok)				Total
				Level 1 (Recall)	Level 2 (Skills)	Level 3 (Strategic Thinking)	Level 4 (Extended Thinking)	
1	Ceramics as a Vocation	<ul style="list-style-type: none"> • Demonstrate understanding of the ceramic field • Demonstrate understanding of the rationale of ceramics education. • Describe career options available to ceramic learners. 	<ul style="list-style-type: none"> • Explain the concept of ceramics • Differentiate among the various types of ceramic products • Discuss career options available to ceramic students 	6	2	2	-	10
2	Introduction to Ceramic Tools, Equipment, and Raw Materials	<ul style="list-style-type: none"> • Demonstrate basic competencies in the handling, care, and maintenance of basic studio tools and equipment. • Design and make basic tools using available local materials. • Explore local raw materials for ceramic production. 	<ul style="list-style-type: none"> • Classify ceramic tools and equipment according to use and function. • Identify ceramic raw materials for ceramic production. • Demonstrate responsible ways of handling, using, maintaining, and storing tools and equipment. • Describe the process of designing and construction of basic tools using local raw materials. 	3	2	3	-	8
3	Safety and Healthy Studio Practices	<ul style="list-style-type: none"> • Identify hazardous materials, chemicals, tools, and equipment in the ceramic studio. • Demonstrate knowledge of safety precautions to be observed in the ceramic studio. • Demonstrate knowledge of the rationale for observing healthy studio practices. 	<ul style="list-style-type: none"> • Classify ceramic materials, tools, and equipment according to the danger they pose to the user. • Describe safety guidelines for a Senior High School Ceramics Studio. • Explain the rationale behind the safety precautions to be taken in the ceramic studio. 	1	2	4	-	7

4	Idea development in Ceramics	<ul style="list-style-type: none"> • Demonstrate knowledge of the design of original ceramic products based on natural objects, African material culture, and African philosophical ideology and concepts. 	<ul style="list-style-type: none"> • Describe the processes of designing and producing ceramic products using manual and computer-assisted techniques. • Critique the functionality and aesthetic values of the designs produced 	-	-	4	2	6
5	Clay Prospecting and Preparation	<ul style="list-style-type: none"> • Demonstrate knowledge of the processes of clay formation. • Demonstrate knowledge of the characteristics of primary and secondary clays. • Demonstrate knowledge of the processes of exploring the environment with local tools for local raw materials. • Demonstrate knowledge of basic ceramic tests. 	<ul style="list-style-type: none"> • Describe the processes of clay formation. • Discuss the key characteristics of primary and secondary clays. • Discuss the processes of exploring the environment for local clay. • Justify the rationale for conducting the following tests in ceramics: <ol style="list-style-type: none"> 1. Plasticity; 2. Shrinkage; 3. Porosity. • Distinguish between studio clay preparation and industrial clay preparation. 	-	2	4	2	8
6	Forming Methods in Ceramics	<ul style="list-style-type: none"> • Demonstrate basic skills in the following building techniques: <ol style="list-style-type: none"> 1. Pinching; 2. Coiling; 3. Slab work; 4. Throwing; 5. Casting. 	<ul style="list-style-type: none"> • Describe the process of designing and producing a ceramic product to solve an identified problem in your community using any of the following building techniques: <ol style="list-style-type: none"> 1. Pinching; 2. Coiling; 3. Slab work; 4. Throwing; 5. Casting. 	-	-	4	5	9
7	Ceramic Decoration, Finishing, Packaging and Exhibition	<ul style="list-style-type: none"> • Demonstrate knowledge in ceramics decoration and finishing. • Demonstrate knowledge in the design of suitable packaging for ceramic products. 	<ul style="list-style-type: none"> • Explain the decoration and finishing options available to the ceramist at the following production stages: <ol style="list-style-type: none"> 1. Soft or plastic state; 2. Leather hard state; 3. Dry state; 4. Bisque state. • Explain the challenges associated with finishing and decorative techniques in ceramics. • Explain the factors that are considered in the design and production of ceramic packages. • Explain the factors to consider in mounting an 	-	4	3	3	10

			exhibition in ceramics.					
8	Glaze Formation and Types	<ul style="list-style-type: none"> Demonstrate knowledge in the process of glaze composition. 	<ul style="list-style-type: none"> Classify glaze components according to fluxes, stabilizers, and glass formers. Calculate the formulate for a basic recipe of an earthenware glaze. Describe the processes of glaze application methods on ceramic wares. 	-	1	3	-	4
9	Kiln Construction and Design	<ul style="list-style-type: none"> Demonstrate knowledge of general features of kilns. Demonstrate knowledge of suitable local materials for kiln construction. Demonstrate knowledge of the principles underlying kiln construction. Demonstrate knowledge in kiln stocking and firing. 	<ul style="list-style-type: none"> Label the features of an up-draught and down-draught kilns. Classify kiln materials based on their refractory or insulating properties. Examine the comparative advantages of kilns based on fuel type, type of loader, draft, and firing cycle. Describe the processes of packing and unpacking a kiln. 	4	4	3	2	13
10	Ceramic Cottage Industries	<ul style="list-style-type: none"> Demonstrate knowledge of the development of contemporary ceramic industries in Ghana 	<ul style="list-style-type: none"> Explain the key landmarks of the historical development of the ceramic industry in Ghana. Evaluate the successes and challenges of the ceramic industry in Ghana Explore new opportunities for the ceramic industry in Ghana. 	2	2	2	2	8
11	Sustainable Development and Entrepreneurial Skills	<ul style="list-style-type: none"> Demonstrate knowledge of costing and pricing in ceramics. Demonstrate knowledge of branding and niche market creation. 	<ul style="list-style-type: none"> Differentiate between direct cost and fixed cost. Demonstrate knowledge of profit margins determination. Differentiate among market penetration price, market price, and price discrimination. Critique the processes of developing an efficient marketing plan for a ceramic product in your community. 	2	6	2	3	13

12	Digital Ceramics	<ul style="list-style-type: none"> Demonstrate knowledge of the application of digital electronic technology in the design and production of ceramic products. 	<ul style="list-style-type: none"> Discuss the processes of designing and producing ceramic products assisted by digital technology, e.g. AutoCAD, 3-D ceramics printing, ceramic stencil designing, glass etching, etc. 	2	-	1	1	4
Total				15%	25%	30%	30%	100%

	CONTENT AREAS	Course Objectives/Outcomes (DoK)				Total
		Level 1 (Recall)	Level 2 (Skills/Concepts)	Level 3 (Strategic Thinking)	Level 4 (Extended Thinking)	
1	Ceramics as a Vocation	6	2	2	-	10
2	Introduction to Ceramic Tools, Equipment, and Raw Materials	3	2	3	-	8
3	Safety and Healthy Studio Practices	1	2	4	-	7
4	Idea Development in Ceramics	-	-	3	3	6
5	Clay Prospecting and Preparation	-	2	3	3	8
6	Forming Methods in Ceramics	-	-	3	6	9
7	Ceramic Decoration, Finishing, Packaging and Exhibition	-	4	2	4	10
8	Glaze Formation and Types	-	1	3	-	4
9	Kiln Construction and Design	2	4	3	4	13
10	Ceramic Cottage Industries	1	2	1	4	8
11	Sustainable Development and Entrepreneurial Skills	1	6	2	4	13
12	Digital Ceramics	1	-	1	2	4
Total		15%	25%	30%	30%	100%