



FEDERAL MINISTRY OF EDUCATION

**National Technical
Certificate (NTC)
Curriculum in**

**WALL/FLOOR
TILING AND
CLADDING**

February, 2025



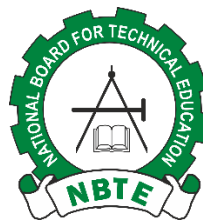
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**Innovation Development
and Effectiveness in the
Acquisition of Skills
(IDEAS) Project**

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NATIONAL BOARD FOR TECHNICAL EDUCATION

Plot B, Bida Road, P.M.B. 2239, Kaduna, Nigeria



NATIONAL TECHNICAL CERTIFICATE

**CURRICULUM AND
MODULE SPECIFICATIONS**

IN

WALL/FLOOR TILING AND CLADDING

2025

GENERAL INFORMATION

AIM

To give training and impart the necessary skills leading to the production of skilled personnel that can fit into the building construction industry as craftsmen and self-reliant entrepreneurs.

ENTRY QUALIFICATIONS

Craft Programme

Candidates should not be less than 14 years of age and must have successfully completed three years of Junior Secondary education or its equivalent. Special consideration may be given to sponsored candidates with lower academic qualifications who hold NSQ qualification or National trade test certificate and are capable of benefiting from the programme.

The Curriculum

The Curriculum of each programme is broadly divided into three components:

- a. General Education, which accounts for 30% of the total hours required for the programme.
 - b. Trade Theory, Trade Practice and Related Studies which account for 65% and,
 - c. Supervised Industrial Training/Work Experience which accounts for about 5% of the total hours required for the programme. This component of the course which may be taken in industry or in the College production unit is compulsory for the full-time students
- Included in the curriculum are the teacher's activity and learning resources required for the guidance of the teacher.

Unit Course/Modules

A course/ module is defined as a body of knowledge and skills capable of being utilized on its own or as a foundation or pre-requisite knowledge for more advanced work in the same or other fields of study. Each trade course/ module when successfully completed can be used for employment purposes.

Behavioural Objectives

These are educational objectives, which identify precisely the type of behaviour a student should exhibit by the end of a course/module or programme.

Two types of behavioural objectives have been used in the curriculum. They are:

- a. General Objectives
- b. Specific Learning Outcomes

General objectives are concise but general statements of the behaviour of the students on completion of a unit of week such as understanding the fundamentals of:

- a Tiling and cladding
- b Measurement
- c Surface preparation

Specific learning outcomes are concise statements of the specific behaviour expressed in units of discrete practical tasks and related knowledge the students should demonstrate as a result of the educational process to ascertain that the general objectives of course/programme have been achieved. They are more discrete and quantitative expressions of the scope of the tasks contained in a teaching unit.

General Education in Technical Colleges

The General Education component of the curriculum aims at providing the trainee with knowledge in critical subjects like English Language, Mathematics, Economics, Physics, Chemistry, Biology, Entrepreneurial Studies etc. to enhance the understanding of machines, tools and materials of their trades and their application as a foundation for post-secondary technical education for the above average student. Hence, it is hoped that students who successfully complete their trade and general education may be able to compete with their secondary school counterparts for direct entry into Universities, Polytechnics or Colleges of Education (Technical) for degree, ND or NCE courses respectively.

For the purpose of certification, only the first three courses in mathematics will be required. The remaining modules are optional and are designed for the above average students.

National Certification

The NTC programme is run by Technical Colleges accredited by N.B.T.E.

NABTEB conducts the final national examination and awards certificates.

Students who successfully complete all the courses/modules specified in the curriculum table and passed the national examinations in the trade will be awarded the following certificate:

S/NO	LEVEL	CERTIFICATE
	Technical Programme	
1.	NTC	National Technical Certificate

Guidance Notes For Teacher implementing the Curriculum

The number of hours stated in the curriculum table may be increased or decreased to suit individual institutions' timetable provided the entire course content is properly covered and goals and objectives of each module are achieved at the end of the term.

The maximum duration of any module in the new scheme is 260 hours. This means that for a term of 13 weeks, the course should be offered for 20 hours a week. This can be scheduled in sessions of 4 hours in a day leaving the remaining hours for general education. However, properly organized and if there are adequate resources, most of these courses can be offered in two sessions a day, one in the morning and the other one in the afternoon. In doing so, some of these programmes may be completed in lesser number of years than at present.

The sessions of 4 hours include the trade theory and practice. It is left to the teacher to decide when the class should be held in the workshop or in a lecture room.

INTEGRATED APPROACH IN THE TEACHING OF TRADE

Theory, Trade Science and Trade Calculation

The traditional approach of teaching trade science and trade calculation as separate and distinct subjects in Technical College programmes is not relevant to the new programme as it will amount to a duplication of the teaching of mathematics and physical science subjects in the course. The basic concepts and principles in mathematics and physical science are the same as in the trade calculation and trade science. In the new scheme therefore, qualified persons in these fields will teach mathematics and physical science and the instructors will apply the principles and concepts in solving trade science and calculation problems in the trade theory classes. To this end, efforts have been made to ensure that mathematics and science modules required to be able to solve technical problems were taken as pre-requisite.

Evaluation of Programme/Module

For the programme to achieve its objectives, any course started at the beginning of a term must terminate at the end of the term.

Teachers should therefore device methods of accurately evaluating the students to enable them give them final grades at the end of the term. A national examination will be taken by all students who have successfully completed their modules. The final award will be based on the aggregate of the scores obtained in the course work and the national examination.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING

GOAL: The wall/floor tiling and cladding Programme is intended to produce a craftsman who should be able to read and interpret plans, measure areas to be tiled, prepare surfaces, identify materials and tools to be used in tiling/cladding, fix tiles/clads on surfaces, carry out repairs and maintenance to faulty tiles and work safely at all times. The student should also have an in-depth theoretical knowledge of tiling and cladding operations.

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CURRICULUM TABLE AND COURSE HOURS/WEEK

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE

Module Code	MODULE	YEAR 1						YEAR 2						YEAR 3						TOTAL HOURS	
		Term 1		Term 2		Term 3		Term 1		Term 2		Term3		Term 1		Term 2		Term 3			
		T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P		
CAM 12 - 15	Mathematics	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	216	
CEN 11 - 17	English	2	-	2	-	2	-	3	-	3	-	3	-	3	-	3	-	3	-	288	
CPH 10 - 12	Physics	2	-	2	-	2	-	2	1	2	1	2	1	2	1	2	1	2	1	288	
CCH 10 - 12	Chemistry	2	-	2	-	2	1	2	1	2	1	2	1	2	1	2	1	2	1	288	
CEC 11 - 13	Economics	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	216	
CBM 11	Entrepreneurship	-	-	-	-	-	-	2	-	2	-	2	-	-	-	-	-	-	-	72	
ICT 11 - 15	Computer Studies	-	-	-	-	-	-	1	2	1	2	1	2	1	2	1	2	-	-	180	
CTD	Drawing	-																			
YEAR 1 SUBJECTS																					
CTC111	Tiling Fundamentals	1	2	1	3	2	4	-	-	-	-	-	-	-	-	-	-	-	-	144	
CTC112	Cladding Fundamentals																				
CTC113	Layout in tiling work	-	-	-	-	-	-	2	3	1	3	1	3	1	2					192	
CTC121	Surfaces for tiling	-	-	-	-	-	-	2	3	2	4	2	4								
CTC 122	Surfaces for cladding	2	3	2	4	2	4														
CTC123	Team work in tiling/Cladding	-	-	-	-	-	-	-	-	-	-	-	-	2	4		2	4	2	4	204
CTC131	Tiling installations	2	3	2	2	2	4														
CTC132	Layout for walls	1	2	2	4	2	4														
CTC133	Layout for floor	2	3	2	4	2	4														
YEAR 2 SUBJECTS																					
CTC211	Measurements in tiling\cladding							2	4	2	4	2	4								

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CTC212	Mixing adhesive							2	4	2	4	2	4							
CTC213	Estimate for tiling\cladding							2	2	3	4	2	4							
CTC221	Scaffolds and ladders for tiling\cladding							2	4	2	4	2	5							
CTC222	Erecting/Dismantling of scaffolds and ladders							2	4	2	2	2	4							
CTC223	Wall tiling							2	2	4	2	2	4							
CTC 231	Grouting and Finishing for Tiling							2	4	2	4	2	4							
CTC 232	Floor Tiling	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	3	2	3	
CTC233	Drawing		-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	
YEAR 3 SUBJECTS																				
CTC311	Cladding Installation I										-	-	-	-2	-4	-2	4-	2-	-4	
CTC312	Cladding Installation II													2	4	2	4	2	4	
CTC313	Cladding Installation III													2	4	2	4	2	4	
CTC321	Cladding Installation III													2	4	2	4	2	4	
CTC322	Repair and maintenance of tiling surface													2	4	2	4	2		
CTC323	Field work													2	2	2	2	2	2	
Term 3	SIWES/Field work																			

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Tiling Fundamentals			COURSE CODE: CTC111	CONTACT HOURS: 30
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 1 Practical: Hours: 2	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Tiling Fundamentals				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1. Understand tiling fundamentals 2. Understand Health and safety in tiling 3. Understand communication skills				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Tiling fundamentals				COURSE CODE: CTC111	CONTACT HOURS: 30	
YEAR: 1		TERM: 1	PRE-REQUISITE:	Theoretical: 1 Practical: 2		
GOAL: This module is designed to introduce the students to tiling fundamentals						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand tiling/cladding fundamentals						
	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week	1.1 Define tiling 1.2 List types of tiling	Explain tiling Differentiate types of tiling and cladding	<ul style="list-style-type: none">● Pictures/chart● Drawing set● Tiling Tools and equipment	Identify the types of tiles	Guide leaners on How to use tiling tools	<ul style="list-style-type: none">● Textbooks● Pictures/charts● Drawing set

	<p>1.3 List the importance of tiling</p> <p>1.4 Explain the uses of tiling and tools</p> <p>1.5 Draw tiling tools</p> <p>1.6 Explain materials and tools for tiling</p>	<p>List the importance of tiling</p> <p>Explain the uses of tiling tools</p> <p>Sketch and Label tiling tools</p> <p>Explain materials and tools for tiling</p>	<p>Tiling material</p>	<p>Identify tiling and cladding tools (cutting, measuring, fastening, laying tools etc)</p> <p>Identify tiling and materials</p> <p>Sketch and Label tiling tools</p>	<p>Sketch and Label tiling tools</p> <p>select materials and tools for tiling</p>	<ul style="list-style-type: none"> ● Tiling Tools and equipment ● Tiling materials
GENERAL OBJECTIVE 2.0: Understand health and safety in Tiling						
week 6-10	<p>2.1 Define health and Safety in tiling</p> <p>2.2 List the different PPEs</p> <p>2.3 State the importance of using PPE in tiling</p> <p>2.4 Explain potential hazards associated with Tiling work</p> <p>2.5 Discuss actions to take in preventing accidents and injuries</p> <p>2.5 List the steps of maintaining good personal hygiene in the work place</p> <p>2.6 State the importance of complying with health, safety and other relevant regulations/guidelines</p> <p>2.7 Explain the roles of;</p>	<p>Explain health and Safety in tiling and cladding</p> <p>Explain the different PPEs</p> <p>State the importance of using PPE in tiling</p> <p>Explain potential hazards associated with Tiling work</p> <p>Discuss actions to take in preventing accidents and injuries</p> <p>List the steps of maintaining good personal hygiene in</p>	<ul style="list-style-type: none"> ● Helmet ● Goggles ● Ear muff ● Nose mask ● Hand gloves ● Safety boots ● Knee pads ● First Aid box ● Accident books ● First aid records ● Safety signs and symbols etc. 	<p>Identify the different PPEs</p> <p>Demonstrate how to use PPE</p> <p>Demonstrate first aid procedures</p> <p>Describe potential hazards associated with Tiling work.</p> <p>Demonstrate actions to take in preventing accidents and injuries</p> <p>Demonstrate how to maintain good personal hygiene</p>	<p>Identify the use of PPE</p> <p>Carry out activities in a safe and responsible manner</p> <p>Communicate health and safety issues relevant to tiling work</p>	<ul style="list-style-type: none"> ● Helmet ● Goggles ● Ear muff ● Nose mask ● Hand gloves ● Safety boots ● Knee pads ● First Aid box ● Accident books ● First aid records ● Safety signs and symbols etc.

	First Aiders Safety Officers	the work place State the importance of complying with health, safety and other relevant regulations/guidelines Explain the roles of; First Aiders Safety officer		working safely		
GENERAL OBJECTIVE 3.0: Understand Communication skills						
week 8-9	1.1 Define communication 1.2 List the types of communication in the work place. 1.3 Explain the importance of communication in the work place. 1.4 Identify the various sources of information. 1.5 Identify ways of using various means of communication. 1.6 Report findings in accordance to procedure in a work environment.	Explain communication List the types of communication in the work place Discuss the the importance of communication Discuss the sources of information in the work place Explain how to report findings in accordance to procedure in a work environment.	<ul style="list-style-type: none"> • Posters • Sample of letters and memos • Communication devices like phones, megaphones, etc • signs and symbols 	Define communication List the types of communication in the work place Discuss the importance of communication Discuss the sources of information in the work place Explain how to report findings in accordance to procedure in a work environment.	Guide students to; Use simple verbal means to pass on necessary information Use a non-verbal means to pass on necessary information Interpret symbols and signs appropriately Demonstrate the use of various communication means in a work environment	<ul style="list-style-type: none"> • Posters • Sample of letters and memos • Communication devices like phones, megaphones, etc • signs and symbols

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					carryout field trip (within the school) to locate the sources of information like notice boards, school filing cabinets etc	
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING			
MODULE: Cladding Fundamentals		COURSE CODE: CTC112	CONTACT HOURS: 50
YEAR: 1	TERM: 2	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 3
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Cladding Fundamentals			
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1. Prepare different surfaces for cladding 2. Select appropriate tiles for various applications 3. Understand Team work in the work place			

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Cladding fundamentals				COURSE CODE: CTC112		CONTACT HOURS: 50
YEAR: 1		TERM: 2	PRE-REQUISITE:	Theoretical: 2 Practical: 3		
GOAL: This module is designed to introduce the students to cladding fundamentals						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand how to prepare different surfaces for cladding						
weeks	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define surface preparation 1.2 State the importance of Preparing surfaces for cladding 1.3 List the types of surfaces for cladding 1.4 Outline the procedures in surface preparation 1.5 List tools and equipment for surface preparation	Eplain surface preparation Explain the importance of PrepareIng surfaces for tiling and cladding List types of surfaces	● Samples of tools and equipment for surface preparation for tiling/ cladding	Identify types of surfaces for cladding Demonstrate procedures in surface preparation Use tools and	Guide students to; Identify types of surfaces for cladding Demonstrate procedures in surface preparation	● Samples of tools and equipment for surface preparation for cladding

	<p>1.6 Explain the uses of tools and equipment for surface preparation</p> <p>1.7 State the steps in;</p> <ul style="list-style-type: none"> • Carrying out maintenance • Storage of the tools and equipment <p>1.8 Explain the importance of house keeping after surface preparation</p>	<p>for tiling and cladding</p> <p>Explain Procedures in surface preparation</p> <p>List tools and equipment for surface preparation</p> <p>Explain the uses of tools and equipment for surface preparation</p> <p>Discuss the care, maintenance and storage of the tools and equipment</p> <p>Discuss house keeping after surface preparation</p>		<p>equipment to prepare a surface</p> <p>Carry out care, maintenance and storage of the tools and equipment</p> <p>Carry out house keeping after surface preparation</p>	<p>Use tools and equipment to prepare a surface</p> <p>Carry out care, maintenance and storage of the tools and equipment</p> <p>Carry out house keeping after surface preparation</p>	
GENERAL OBJECTIVE 2.0: Understand selection of appropriate tiles for various applications						
week 6-10	<p>2.1 List the different types of cladding</p> <p>2.2 Identify the different types of cladding</p> <p>2.3 List different types of surfaces for tiling/cladding</p> <p>2.4 Explain the factors to be considered when selecting types of tiles for different surfaces</p>	<p>Discuss the different types of cladding</p> <p>Explain the different types of tiles</p> <p>Describe different types of surfaces for cladding</p> <p>Explain the factors to be considered when</p>	<ul style="list-style-type: none"> • Pictures • Chart • And catalogue • Samples of different types of tiles • Samples of different adhesives 	<p>Identify the different types of tiles</p> <p>Distinguish the difference between various types of cladding</p> <p>Describe different kinds of surfaces for cladding</p>	<p>Guide students to;</p> <p>identify the different types of cladding to students</p> <p>Distinguish the difference between various types of tiles</p>	<ul style="list-style-type: none"> • Pictures • Chart • And catalogue • Samples of different types of tiles

		selecting types of cladding for different surfaces			Describe different kinds of surfaces for cladding	
GENERAL OBJECTIVE 3.0: Understand Team work in the work place						
week 8-9	1.1 Define team work 1.2 Explain the concept of team work in the work place 1.3 State the importance of developing positive working relationship among colleagues 1.4 State the importance of taking responsibilities within the team 1.5 Comply with +rules/regulations of work place	Explain team work Discuss the concept of team work in the work place Explain the importance of developing positive working relationship among colleagues Discuss the importance of taking responsibilities within the team Explain the importance of complying with rules and regulations of work place	<ul style="list-style-type: none"> • Posters • Videos on team work 	Work effectively in a team Describe roles within the team	Guide Students to; Demonstrate team work using drawings/sketches Role play team work.	<ul style="list-style-type: none"> • Posters • Pictorials • Videos on team work etc
GENERAL OBJECTIVE 2.0: Understand health and safety in Cladding						
week 6-10	2.1 Define health and Safety in cladding 2.2 List the different PPEs 2.3 State the importance of using PPE in cladding	Explain health and Safety in cladding Explain the different PPEs	<ul style="list-style-type: none"> • Helmet • Goggles • Ear muff • Nose mask • Hand gloves • Safety boots 	Identify the different PPEs Demonstrate how to use PPE Demonstrate first	Identify the use of PPE Carry out activities in a safe and responsible	<ul style="list-style-type: none"> • Helmet • Goggles • Ear muff • Nose mask • Hand gloves • Safety boots

	<p>2.4 Explain potential hazards associated with cladding work</p> <p>2.5 Discuss actions to take in preventing accidents and injuries</p> <p>2.5 List the steps of maintaining good personal hygiene in the work place</p> <p>2.6 State the importance of complying with health, safety and other relevant regulations/guidelines</p> <p>2.7 Explain the roles of; First Aiders Safety Officers</p>	<p>State the importance of using PPE in cladding</p> <p>Explain potential hazards associated with cladding work</p> <p>Discuss actions to take in preventing accidents and injuries</p> <p>List the steps of maintaining good personal hygiene in the work place</p> <p>State the importance of complying with health, safety and other relevant regulations/guidelines</p> <p>Explain the roles of; First Aiders Safety Officers</p>	<ul style="list-style-type: none"> • Knee pads • First Aid box • Accident books • First aid records • Safety signs and symbols etc. 	<p>aid procedures</p> <p>Describe potential hazards associated with cladding work.</p> <p>Demonstrate actions to take in preventing accidents and injuries</p> <p>Demonstrate how to maintain good personal hygiene working safely</p>	<p>manner</p> <p>Communicate health and safety issues relevant to cladding work</p>	<ul style="list-style-type: none"> • Knee pads • First Aid box • Accident books • First aid records Safety signs and symbols etc.
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: LAYOUT IN TILING WORK			COURSE CODE: CTC113	CONTACT HOURS: 60
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Tiling/Cladding installation				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1. Create layouts for wall tiling 2. Create layout for floor tiling 3. Carryout Measurement for both floor and wall tiling				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Tiling Installation				COURSE CODE: CTC113		CONTACT HOURS: 60
YEAR: 1		TERM: 3	PRE-REQUISITE:	Theoretical: 2 Practical: 4		
GOAL: This module is designed to introduce the students to Tiling installation						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Create layouts for wall and floor tiling						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define layout 1.2 List types of layouts for tiling work 1.3 State the importance of layouts in tiling 1.4 Draw different types of layouts 1.5 Create layout for wall tiling 1.6 Create layout for floor tiling	Explain layouts with examples Explain the different types of layouts	<ul style="list-style-type: none">• Graph paper• Charts• Cardboard paper• Drawing set• Tiles• Adhesives (Lime)	Draw different types of layouts Create layout for wall tiling Create layout for floor tiling	Guide students to; Draw different types of layouts Create layouts for wall	<ul style="list-style-type: none">• Graph paper• Charts• Cardboard paper• Drawing set• Tiles• Adhesives (Lime)

		<p>Explain the importance of layouts in tiling</p> <p>Sketch some layouts on the board for the students</p> <p>Sketch some patterns for the students</p>			Create layouts for floor	
GENERAL OBJECTIVE 2.0: Learn how to mix adhesive for different tiles						
week 6-10	<p>2.1 Define adhesives</p> <p>2.2 List different types of adhesives including acrylic, cementitious, epoxy etc</p> <p>2.3 State the uses of adhesives</p> <p>2.4 Explain mix ratio</p> <p>2.5 Understand mix ratios for different surfaces</p> <p>2.6 List the steps in mixing adhesives using different mix ratios</p>	<p>Explain adhesives</p> <p>List different types of adhesives including acrylic, cementitious, epoxy etc</p> <p>Explain the uses of adhesives</p> <p>Explain mix ratio</p> <p>Discuss mix ratios for different surfaces</p> <p>Explain the steps in mixing adhesives using different mix ratios</p>	<ul style="list-style-type: none"> • Samples of Adhesives (cement, lime, etc) • Measuring equipment (cup, head-pan etc) • Mixing tools • PPE 	<p>Identify different types of adhesives including acrylic, cementitious, epoxy etc</p> <p>Describe the uses of adhesives</p> <p>Apply mix ratio</p> <p>Prepare and Mix adhesives using different mix ratios</p>	<p>Guide students to;</p> <p>Identify different types of adhesives including acrylic, cementitious, epoxy etc</p> <p>Prepare and Mix adhesives using different mix ratios</p> <p>Apply the adhesives to the surface</p>	<ul style="list-style-type: none"> • Samples of Adhesives (cement, lime, etc) • Measuring equipment (cup, head-pan etc) • Mixing tools • PPE
GENERAL OBJECTIVE 3.0: Carryout Measurement for tiling/cladding works						
week 8-9	<p>3.1 Define measurement</p> <p>3.2 List measuring tools</p>	<p>Explain measurement</p>	<ul style="list-style-type: none"> • Pictures 	<p>Calculate area and volume.</p>	<p>Guide students to;</p>	<ul style="list-style-type: none"> • Pictures

	<p>3.3 Use measuring instruments to measure lengths in meters, millimeters etc</p> <p>3.4 Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume 	<p>Discuss measuring tools like analog and digital tapes</p> <p>Demonstrate measuring instruments to measure lengths in meters, millimeters etc</p> <p>Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume 	<ul style="list-style-type: none"> • Measuring tape/equipment • Scientific Calculator 	<p>Demonstrate measurement using measuring tools</p>	<p>Use measuring tools like analog and digital tapes to students to measure lengths in meters, millimeters etc</p> <p>Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume 	<ul style="list-style-type: none"> • Measuring tape/equipment • Scientific Calculator
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: SURFACES FOR TILING			COURSE CODE: CTC 121	CONTACT HOURS: 60
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Tiling/Cladding installation				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1 Understand surfaces 2 understand surface preparation in tiling 3 understand the importance of surfaces in tiling				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: SURFACES FOR TILING				COURSE CODE: CTC121		CONTACT HOURS: 60
YEAR:1		TERM: 2	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to different surfaces in tiling						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: understand surfaces in tiling						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define surface 1.2 List the types of surfaces 1.3 Outline the advantages and Disadvantages 1.3 Methods of surface cleaning 1.4 Stages of cleaning a surface	Explain Surface preparation Explain the types of surfaces <ul style="list-style-type: none">ConcreteCement based underlaymentPlywood’sPlaster	<ul style="list-style-type: none">PicturesCharts Clearing tools/ equipment	Demonstrate s Surface preparation Explain the types of surfaces in tiling Explain the types of surfaces in	Guide students to; Carryout surface preparation Demonstrate the methods of surface cleaning	<ul style="list-style-type: none">PicturesMeasuring tape/equipmentClearing tools\equipment

		<ul style="list-style-type: none"> Discuss Advantages and disadvantages of surface preparations <p>Explain methods of surface cleaning</p> <p>Discuss steps for surface cleaning</p>		<p>tiling</p> <p>Discuss the advantages & disadvantages of surface cleaning</p> <p>Demonstrate the methods of surface cleaning</p> <p>Carry out the stages in surface cleaning</p>		
	GENERAL OBJECTIVE 2.0: understand surface preparation in tiling					
	<p>2.1 Define surface preparation in tiling</p> <p>2.2 List procedures in surface preparation</p> <p>2.3 State the importance of surface preparation in tiling</p> <p>2.4 explain the importance of housekeeping after surface preparation</p>	<p>Explain surface preparations in tiling</p> <p>Explain the procedures in surface preparation</p> <p>Discuss the importance of surface preparation in tiling</p> <p>Explain the importance of housekeeping after surface preparation</p>	<ul style="list-style-type: none"> Pictures Charts Clearing tools/ equipment in tiling 	<p>Demonstrate surface preparation</p> <p>Carry out procedures in surface preparations</p> <p>Outline the importance of surface preparation</p> <p>Carry out house keeping</p>	<p>Guide students in surface preparation</p> <p>procedures in surface preparations</p> <p>guide students to outline the importance of surface preparation</p> <p>Carry out house keeping</p>	<ul style="list-style-type: none"> Pictures Charts Clearing tools/ equipment in tiling
	4 GENERAL OBJECTIVE 3.0: understand the importance of surfaces in tiling					
week 6-10	3.1 Explain the importance of surfaces in tiling	Discuss the importance of surfaces in tiling	<ul style="list-style-type: none"> Pictures Charts 	Identify various types of tiling materials	Guide students to select appropriate materials	<ul style="list-style-type: none"> Pictures Charts

	<p>3.2 state the materials use in surface tiling</p> <p>3.3 explain the steps in surface tiling</p>	<p>list the materials use in surface tiling</p> <p>Explain the steps in surface tiling</p>	<p>Clearing tools/ equipment in tiling</p> <p>Marker and Marker board</p>		<p>Carry out steps in surface tiling</p>	<p>Clearing tools/ equipment in tiling</p> <p>Marker and marker board</p>
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: SURFACES FOR CLADDING			COURSE CODE: CTC 122	CONTACT HOURS: 60
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of surfaces for Cladding				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1.Understand surfaces 2 understand surface preparation in cladding 3 understand the importance of surfaces in cladding				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: SURFACES FOR CLADDING				COURSE CODE: CTC121	CONTACT HOURS: 60	
YEAR:1	TERM: 2	PRE-REQUISITE:	Theoretical:2 Practical:4			
GOAL: This module is designed to introduce the students to different surfaces in tiling						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: understand surfaces in cladding						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define surface cladding 1.2 List the types of surface cladding 1.3 Outline the advantages and Disadvantages of surface	Explain Surface preparation in cladding Explain the types of surfaces <ul style="list-style-type: none">ConcreteCement basedunderlayment	<ul style="list-style-type: none">PicturesCharts Clearing tools/ equipment	Demonstrate s Surface preparation Explain the types of surfaces in cladding	Guide students to; Carryout surface preparation Demonstrate the methods of surface cleaning	<ul style="list-style-type: none">PicturesMeasuring tape/equipmentClearing tools/equipment

	cladding 1.4 Methods of surface cleaning 1.5 Stages of cleaning a surface	<ul style="list-style-type: none"> • Plywood's • Plaster • Discuss Advantages and disadvantages of surface preparations in cladding <p>Explain methods of surface cleaning in cladding</p> <p>Discuss steps for surface cleaning in cladding</p>		<p>Explain the types of surfaces in cladding</p> <p>Discuss the advantages & disadvantages of surface cleaning in cladding</p> <p>Demonstrate the methods of surface cleaning in cladding</p> <p>Carry out the stages in surface cleaning in cladding</p>		
	GENERAL OBJECTIVE 2.0: understand surface preparation in cladding					
	2.1 Define surface preparation in cladding 2.2 List procedures in surface preparation in cladding 2.3 State the importance of surface preparation in cladding 2.4 explain the importance of	<p>Explain surface preparations in cladding</p> <p>Explain the procedures in surface preparation in cladding</p> <p>Discuss the importance of surface preparation in</p>	<ul style="list-style-type: none"> • Pictures • Charts <p>Clearing tools/ equipment in cladding</p>	<p>Demonstrate surface preparation</p> <p>Carry out procedures in surface preparations</p> <p>Outline the importance of surface preparation</p>	<p>Guide students in surface preparation</p> <p>procedures in surface preparations in cladding</p> <p>guide students to outline the importance of surface preparation in cladding</p> <p>Carry out house keeping in cladding</p>	<ul style="list-style-type: none"> • Pictures • Charts <p>Clearing tools/ equipment in cladding</p>

	housekeeping after surface preparation in cladding	cladding Explain the importance of housekeeping after surface preparation in cladding		Carry out house keeping		
GENERAL OBJECTIVE 3.0: understand the importance of surfaces in cladding						
week 6-10	3.1 Explain the importance of surfaces in cladding 3.2 state the materials use in surface tiling 3.3 explain the steps in surface tiling	Discuss the importance of surfaces in tiling list the materials use in surface tiling Explain the steps in surface tiling	<ul style="list-style-type: none"> • Pictures Charts Clearing tools/ equipment in tiling Marker and Marker board 	Identify various types of tiling materials	Guide students to select appropriate materials Carry out steps in surface tiling	<ul style="list-style-type: none"> • Pictures Charts Clearing tools/ equipment in tiling Marker and marker board

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING					
MODULE: Teamwork in Tiling and Cladding				COURSE CODE: CTC 122	CONTACT HOURS: 60
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4		
GOAL: This Module is designed to equip the students with the basic knowledge and skills of surfaces for Cladding					
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1.0 Understand Teamwork. 2.0 Understand Concept of Teamwork 3.0 Understand the importance of Developing Positive Working Relationship among Team Members 4.0 Understand the Rules and regulations of Work place					

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Teamwork				COURSE CODE: CTC 123		CONTACT HOURS: 60
YEAR:1		TERM: 2	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to different surfaces in tiling						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand Teamwork						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 8-9	1.1 Define team work	Define team work	<ul style="list-style-type: none">• Posters• Videos on team work	Work effectively in a team	Guide Students to;	<ul style="list-style-type: none">• Posters• Pictorials• Videos on team work etc
	1.2 State examples of teamwork in tilling	State examples of teamwork in tilling		Describe roles within the team	Demonstrate team work using drawings/sketches	
	1.3 Explain responsibility among team members	Explain responsibility among team members			Role play team work.	

	1.4 Explain Key aspects of teamwork in tilling and cladding	Explain Key aspects of teamwork in tilling and cladding				
	5.0 GENERAL OBJECTIVE 2.0: Understand Concept of Teamwork					
	1.6 Explain concept of teamwork	Discuss concept of teamwork	<ul style="list-style-type: none">• Posters• Videos on team work	Work effectively in a team	Guide Students to;	<ul style="list-style-type: none">• Posters• Pictorials• Videos on team work etc
	1.7 Discuss Roles and Responsibility in team work	Discuss Roles and Responsibility in team work		Describe roles within the team	Demonstrate team work using drawings/sketches	
	1.8 Explain Communication in work place	Explain Communication in work place			Role play team work.	
	1.9 Discuss Coordination in work place	Discuss Coordination in work place				
	1.10 Explain Quality control in teamwork	Explain Quality control in teamwork				
GENERAL OBJECTIVE 3.0: Understand the importance of Developing Positive Working Relationship among Team Members						
	3.1 Explain benefits of Team work	Explain benefits of Team work	<ul style="list-style-type: none">• Posters• Videos on team work	Work effectively in a team	Guide Students to;	<ul style="list-style-type: none">• Posters• Pictorials• Videos on team work etc
	3.2 Explain Team work in complex tilling layout	Explain Team work in complex tilling layout		Describe roles within the team	Demonstrate team work using drawings/sketches	
	3.3 Explain team work in large scale tilling	Explain team work in large scale tilling			Role play team work.	
		Discuss safety				

	3.4 Discuss safety protocols of Teamwork in tilling/Cladding	protocols of Teamwork in tilling/Cladding				
GENERAL OBJECTIVE 4.0: Understand the Rules and regulations of Work place						
	4.1 Explain Rules and Regulations in work place	Explain Rules and Regulations in work place				•
	4.2 Explain Manufacturer rules and regulations	Explain Manufacturer rules and regulations				
	4.3 Adhere to safety protocols	Adhere to safety protocols				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING			
MODULE: Tiling Installation		COURSE CODE: CTC131	CONTACT HOURS: 60
YEAR: 1	TERM: 3	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Tiling/Cladding installation			
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1.0 Understand Tiling Installation 2.0 Understand layout for Wall tiling Installation 3.0 Understand layout for Floor tiling Installation			

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Tiling Installation				COURSE CODE: CTC113		CONTACT HOURS: 60
YEAR: 1		TERM: 3	PRE-REQUISITE:	Theoretical: 2 Practical: 4		
GOAL: This module is designed to introduce the students to Tiling installation						
Theoretical Content				Practical Content		
4.0 GENERAL OBJECTIVE 1.0: Understand Tilling Installation						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define Tilling Installation 1.2 List types of layouts for tiling work 1.3 State the importance of layouts in tiling 1.4 Draw different types of layouts Create layout for wall tiling 1.5 Create layout for floor tiling	Explain Tilling Installation Explain the different types of layouts for tiling work Explain the importance of layouts in tiling	<ul style="list-style-type: none">• Graph paper• Charts• Cardboard paper• Drawing set• Tiles• Adhesives (Lime)	Draw different types of layouts Create layout for wall tiling Create layout for floor tiling	Guide students to; Draw different types of layouts Create layouts for wall	<ul style="list-style-type: none">• Graph paper• Charts• Cardboard paper• Drawing set• Tiles• Adhesives (Lime)

		Sketch different types of layouts Create layout for wall tiling Create layout for floor tiling			Create layouts for floor	
	5.0 GENERAL OBJECTIVE 2.0: Understand layout for Wall tiling Installation					
week 6-10	2.1 Define Wall Tiling Installation 2.2 List types of layouts for wall tiling Installation 2.3 State the importance of layouts in wall tiling 2.4 Draw different types of layouts in wall tiling 2.5 Create layout for wall tiling	Define Wall Tiling Installation List types of layouts for wall tiling Installation State the importance of layouts in wall tiling Sketch different types of layouts in wall tiling Create layout for wall tiling	<ul style="list-style-type: none"> • Samples of Adhesives (cement, lime, etc) • Measuring equipment (cup, head-pan etc) • Mixing tools • PPE 	Identify different types of adhesives including acrylic, cementitious, epoxy etc Describe the uses of adhesives Apply mix ratio Prepare and Mix adhesives using different mix ratios	Guide students to; Identify different types of adhesives including acrylic, cementitious, epoxy etc Prepare and Mix adhesives using different mix ratios Apply the adhesives to the surface	<ul style="list-style-type: none"> • Samples of Adhesives (cement, lime, etc) • Measuring equipment (cup, head-pan etc) • Mixing tools • PPE
	6.0 GENERAL OBJECTIVE 3.0: Understand layout for Floor tiling Installation					
week 8-9	3.1 Define Floor Tiling Installation 3.2 List types of layouts for Floor tiling Installation 3.3 State the importance of layouts in Floor tiling 3.4 Draw different types of layouts in Floor tiling	Define Wall Tiling Installation List types of layouts for wall tiling Installation	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment • Scientific Calculator 	Calculate area and volume. Demonstrate measurement using measuring tools	Guide students to; Use measuring tools like analog and digital tapes to students to	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment • Scientific Calculator

	3.5 Create layout for Floor tiling	<p>State the importance of layouts in wall tiling</p> <p>Draw different types of layouts in wall tiling</p> <p>Create layout for wall tiling</p>			<p>measure lengths in meters, millimeters etc</p> <p>Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume 	
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Wall Tiling			COURSE CODE: CTC 132	CONTACT60 HOURS:
YEAR:	TERM: 3	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of fixing tiles				
GENERAL OBJECTIVES:				
On completion of this module, the student should be able to:				
1. Carryout wall tiling				
2. Carryout wall tiling				
3. Grout, finish and seal tiled joints and surfaces				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Wall Tiling				COURSE CODE: CTC 132		CONTACT HOURS: 60
YEAR: 1		TERM: 3	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to wall Tiling Installation						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Carryout wall tiling						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 State the process for preparing wall tiling surfaces 1.2 Select materials for the tiling and e.g clean sand, cement, tiles of required quality. 1.3 List tools and equipment for tiling work e.g. laying, measuring, cutting and cleaning of tools	Explain the process for preparing wall tiling surfaces Explain the materials for tiling	<ul style="list-style-type: none">• Pictorials• Measuring, Cutting and Laying tools• Materials (Tiles, Sand, cement, water	Carryout surface preparation for wall tiling Select materials for the tiling and e.g clean sand, cement, tiles of required quality.	Guide students to; Demonstrate the process for preparing wall tiling surfaces	<ul style="list-style-type: none">• Measuring, Cutting and Laying tools• Materials (Tiles, Sand, cement, water etc)

		Explain equipment and tools required for tiling	etc)	Select equipment and tools required for tiling		
	GENERAL OBJECTIVE 2.0: Carryout wall tiling					
week 6-10	1.1 Outline the tools for laying wall tiles 1.2 Outline the materials for laying wall tiles 1.3 Lay tiles on prepared surface 1.4 Cut tiles to flush with edges, corners, openings etc	Explain the tools for wall tiling Explain the materials for wall tiling Explain how to lay tiles Explain how to cut tiles using appropriate tool Explain how to cut skirting tiles using appropriate tool	<ul style="list-style-type: none"> • Pictorials • Measuring, Cutting and Laying tools <p>Materials (Tiles, Sand, cement, water etc)</p>	Lay tiles on prepared surface Cut tiles to flush with edges, corners, openings etc	<p>use materials for tiling works</p> <p>Use equipment and tools required for tiling</p> <p>Carryout laying of tiles</p> <p>Demonstrate how to cut tiles using appropriate tool</p>	<ul style="list-style-type: none"> • Measuring, Cutting and Laying tools • Materials (Tiles, Sand, cement, water etc)
	GENERAL OBJECTIVE 3.0: Grout, finish and seal tiled joints and surfaces					
week 8-9	1.1 Define grouting 1.2 Explain the importance of grouting 1.3 Explain the technique for applying grout 1.4 Mix and apply grout to wall and floor tiles	<p>Explain grouting</p> <p>Explain the importance of grouting</p> <p>Explain the technique for applying grout Demonstrate grouting activities</p>	<ul style="list-style-type: none"> • Grout materials • Grouting tools (Float etc) 	Apply grout to wall and floor tiles	Guide students to; Carryout grouting	<ul style="list-style-type: none"> • Grout materials • Grouting tools (Float etc)

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Floor Tiling			COURSE CODE: CTC 133	CONTACT HOURS:
YEAR: 1	TERM: 3	PRE: REQUISITE:	Theoretical: Hours: 24 Practical: Hours: 36	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of fixing floor tiles				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 4. Carryout floor tiling 5. Carryout floor tiling 6. Learn techniques for repairing tiled surfaces				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: : Floor Tiling				COURSE CODE: CTC 133		CONTACT HOURS: 60
YEAR: 1		TERM: 3	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to wall Tiling Installation						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Carryout floor tiling						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 State the process for preparing floor tiling surfaces 1.2 Select materials for the tiling and e.g clean sand, cement, tiles of required quality. 1.3 List tools and equipment for tiling work e.g. laying, measuring, cutting and cleaning of tools	Explain the process for preparing floor tiling surfaces Explain the materials for floor tiling Explain equipment and tools required for floor tiling	<ul style="list-style-type: none">• Pictorials• Measuring, Cutting and Laying tools• Materials (Tiles, Sand, cement, water etc)	Carryout surface preparation for floor tiling Select materials for the tiling and e.g clean sand, cement, tiles of required quality.	Guide students to; Demonstrate the process for preparing floor tiling surfaces	<ul style="list-style-type: none">• Measuring, Cutting and Laying tools• Materials (Tiles, Sand, cement, water etc)

				Select equipment and tools required for tiling		
	GENERAL OBJECTIVE 2.0: Carryout Floor tiling					
week 6-10	1.5 Lay floor tiles on prepared surface 1.6 Cut tiles to flush with edges, corners, openings etc 1.7 Cut tiles for skirting and fix appropriately	Explain how to lay tiles Explain how to cut tiles using appropriate tool Explain how to cut skirting tiles using appropriate tool	<ul style="list-style-type: none"> • Pictorials • Measuring, Cutting and Laying tools <p>Materials (Tiles, Sand, cement, water etc)</p>	Lay tiles on prepared surface Cut tiles to flush with edges, corners, openings etc Cut tiles for skirting and fix appropriately	use materials for tiling works Use equipment and tools required for tiling Carryout laying of tiles Demonstrate how to cut tiles using appropriate tool	<ul style="list-style-type: none"> • Measuring, Cutting and Laying tools • Materials (Tiles, Sand, cement, water etc)
	GENERAL OBJECTIVE 3.0: Learn techniques for repairing tiled surfaces					
week 8-9	1.1 Outline the procedures for repairs and maintenance of tiled surfaces. 1.2 List common faults of tiled surfaces 1.3 State the appropriate repair solutions.	Discuss the procedures for repairs and maintenance of tiled surfaces. Discuss common tiling problems (cracks, chips, loose tiles) Explain the appropriate repair solutions.	Textbooks Pictures Feild trips to tiling sites	Identify common tiling problems eg cracks, chips, loose tiles Repair and maintain the identified fault.	Guide students to; Identify common tiling problems eg cracks, chips, loose tiles for the students Carryout the Repair and maintenance of the identified surface.	Tiling materials Tiling tools

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Measurement in tiling/Cladding			COURSE CODE: CTC 211	CONTACT HOURS: 60
YEAR: 2	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of surfaces for Cladding				
GENERAL OBJECTIVES:				
On completion of this module, the student should be to:				
1.0 Understand measurement in Tiling and Cladding				
2.0 Understand measuring tools in Tiling/Cladding				
3.0 Understand the basic calculation in Tiling/Cladding				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Measurement in tiling/Cladding				COURSE CODE: CTC 211		CONTACT HOURS: 60
YEAR: 2		TERM: 1	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to different surfaces in tiling						
Theoretical Content				Practical Content		
4.0 GENERAL OBJECTIVE 1.0: Understand measurement in Tiling and Cladding						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 8-9	1.1 Define Measurement 1.2 Explain Tile measurement 1.3 Discuss area of measurement	Define Measurement Explain Tile measurement Discuss area of measurement	<ul style="list-style-type: none">• Pictures• Measuring tape/equipment• Scientific Calculator	Calculate area and volume. Demonstrate measurement using measuring tools	Guide students to; Use measuring tools like analog and digital tapes to students to measure lengths in meters,	<ul style="list-style-type: none">• Pictures• Measuring tape/equip-ment• Scientific Calculator

					millimeters etc	
					Solve basic calculations for; <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume 	
	GENERAL OBJECTIVE 2.0: Understand measuring tools in Tiling/Cladding					
	2.1 List tools for measuring Tiles/Cladding 2.2 State the uses of tools in measuring Tiles/Cladding 2.3 Importance of tools measuring Tiles/Cladding	List tools for measuring Tiles/Cladding State the uses of tools in measuring Tiles/Cladding Importance of tools measuring Tiles/Cladding	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment • Scientific Calculator 	Calculate area and volume. Demonstrate measurement using measuring tools	Guide students to; Use measuring tools like analog and digital tapes to students to measure lengths in meters, millimeters etc Solve basic calculations for; <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume 	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment • Scientific Calculator
	GENERAL OBJECTIVE 3.0: Understand the basic calculation in Tiling/Cladding					
	3.1 Explain basic calculation for area of surfaces 3.2 Explain basic calculation for	Explain basic calculation for area of surfaces Explain basic	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment 	Calculate area and volume.	Guide students to; Use measuring tools like analog and digital tapes	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment • Scientific Calculator

	Parameter of surfaces 3.3 Explain basic calculation for Volume of surfaces	calculation for Parameter of surfaces Explain basic calculation for Volume of surfaces	<ul style="list-style-type: none"> Scientific Calculator 	Demonstrate measurement using measuring tools	to students to measure lengths in meters, millimeters etc Solve basic calculations for; <ul style="list-style-type: none"> Area of surfaces Perimeter of surfaces Volume 	
GENERAL OBJECTIVE 4.0: Understand the Rules and regulations of Work place						
	4.4 Explain Rules and Regulations in work place 4.5 Explain Manufacturer rules and regulations 4.6 Adhere to safety protocols	Explain Rules and Regulations in work place Explain Manufacturer rules and regulations Adhere to safety protocols				<ul style="list-style-type: none">

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Mixing Adhesives on Tilling/Cladding			COURSE CODE: CTC 212	CONTACT HOURS: 60
YEAR: 2	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of surfaces for Cladding				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1.0 Understand Adhesive mixture in Tilling/Cladding 2.0 Understand mix ratios of Adhesive in Tilling/Cladding 3.0 Understand procedures for Mixing Adhesive in Tilling/Cladding				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Mixing Adhesives on Tiling/Cladding				COURSE CODE: CTC 212		CONTACT HOURS: 60
YEAR: 2		TERM: 1	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to different surfaces in tiling						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand Adhesive mixture in Tiling/Cladding						
week	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 8-9	1.1 Define adhesives 1.2 List different types of adhesives including: <ul style="list-style-type: none">● acrylic● cementitious● depoxy	Define Adhesives List different types of adhesives including: <ul style="list-style-type: none">● acrylic● cementitious● depoxy	<ul style="list-style-type: none">● Samples of Adhesives (cement, lime, etc)● Measuring equipment (cup, head-pan etc)	Identify different types of adhesives including acrylic, cementitious, epoxy etc Describe the uses of adhesives	Guide students to; Identify different types of adhesives including acrylic, cementitious, epoxy etc	<ul style="list-style-type: none">● Samples of Adhesives (cement, lime, etc)● Measuring equipment (cup, head-pan etc)

	1.3 State the uses of adhesives	State the uses of adhesives	<ul style="list-style-type: none"> • Mixing tools • PPE 	<p>Apply mix ratio</p> <p>Prepare and Mix adhesives using different mix ratios</p>	<p>Prepare and Mix adhesives using different mix ratios</p> <p>Apply the adhesives to the surface</p>	<ul style="list-style-type: none"> • Mixing tools • PPE
	GENERAL OBJECTIVE 2.0: Understand mix ratios of Adhesive in Tilling/Cladding					
	<p>2.1 Explain mix ratio</p> <p>2.2 Understand mix ratios for different surfaces</p> <p>2.3 List the steps in mixing adhesives using different mix ratios</p>	<p>Explain mix ratio</p> <p>Understand mix ratios for different surfaces</p> <p>List the steps in mixing adhesives using different mix ratios</p>	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment • Scientific Calculator 	<p>Calculate area and volume.</p> <p>Demonstrate measurement using measuring tools</p>	<p>Guide students to;</p> <p>Use measuring tools like analog and digital tapes to students to measure lengths in meters, millimeters etc</p> <p>Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume 	<ul style="list-style-type: none"> • Pictures • Measuring tape/equipment • Scientific Calculator
	GENERAL OBJECTIVE 3.0: Understand procedures for Mixing Adhesive in Tilling/Cladding					
	3.1 States the procedures in Mixing Adhesive in Tilling/Cladding	Discuss the procedures in Mixing Adhesive in Tilling/Cladding	<ul style="list-style-type: none"> • Samples of Adhesives (cement, lime, etc) 	Identify different types of adhesives including acrylic, cementitious, epoxy etc	<p>Guide students to;</p> <p>Identify different types of adhesives including acrylic,</p>	<ul style="list-style-type: none"> • Samples of Adhesives (cement, lime, etc)

	<p>3.2 Explain the importance of Procedure</p> <p>3.3 Explain safety precautions in mixing Adhesive in Tilling/Cladding</p> <p>i. Wear protective gear</p> <p>ii. Work in a well ventilated area</p> <p>iii. Avoid skin contacts</p>	<p>Explain the importance of Procedure</p> <p>Explain safety precautions in mixing Adhesive in Tilling/Cladding</p> <p>i. Wear protective gear</p> <p>ii. Work in a well ventilated area</p> <p>iii. Avoid skin contacts</p>	<ul style="list-style-type: none"> • Measuring equipment (cup, head-pan etc) • Mixing tools • PPE 	<p>Describe the uses of adhesives</p> <p>Apply mix ratio</p> <p>Prepare and Mix adhesives using different mix ratios</p>	<p>cementitious, epoxy etc</p> <p>Prepare and Mix adhesives using different mix ratios</p> <p>Apply the adhesives to the surface</p>	<ul style="list-style-type: none"> • Measuring equipment (cup, head-pan etc) • Mixing tools • PPE
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING			
MODULE: Estimating for tiling and cladding		COURSE CODE: CTC 213	CONTACT HOURS: 60
YEAR: 2	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Estimating for tiling/cladding works			
GENERAL OBJECTIVES: On completion of this module, the student should be able to: <ol style="list-style-type: none"> 1. Understand Estimating for tiling and cladding works 2. Erecting of scaffolds and ladders 3. Dismantling of scaffolds and ladders 			

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Estimating for tiling and cladding				COURSE CODE: CTC 213		CONTACT HOURS: 60
YEAR: 2		TERM: 1	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to Tiling /cladding Installation						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand Estimating for tiling and cladding works						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define Estimating 1.2 Use a measuring instrument to	Explain Estimating	• Pictures	Demonstrate measurement	Guide students to;	• Pictures

	<p>measure the area of a surface</p> <p>1.3 Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume <p>1.4 Prepare a quotation for a tiling job</p>	<p>Discuss measuring tools like analog and digital tapes</p> <p>Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces • Volume <p>Discuss the steps in preparing quotations</p>	<ul style="list-style-type: none"> • Measuring tape/equipment • Scientific Calculator 	<p>using measuring tools</p> <p>Calculate area and volume.</p>	<p>Carryout measurement</p> <p>Solve basic calculations for;</p> <ul style="list-style-type: none"> • Area of surfaces • Perimeter of surfaces <p>Volume</p> <p>Prepare a quotation for a tiling job of at least 1.5m by 1.5m</p>	<ul style="list-style-type: none"> • Measuring tape/equipment • Scientific Calculator
GENERAL OBJECTIVE 2.0: Erecting of scaffolds and ladders						
week 6-10	<p>1.1 Define the following scaffolds.</p> <ol style="list-style-type: none"> a. bracket scaffold b. putlog c. independent d. trestle <p>2.2 State the uses of each type of scaffold</p> <p>2.3 State the components of scaffold and its uses.</p> <p>2.4 Identify the members of scaffolds</p> <p>2.5 State safety precautions peculiar to erecting scaffolding and ladders.</p> <p>2.6 Explain the advantages/disadvantages of timber and tubular scaffold.</p> <p>2.7 Explain various hoisting equipment like;</p>	<p>Explain the following scaffolds.</p> <ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle <p>Discuss the uses of each type of scaffold</p> <p>Explain the components of scaffold and its uses.</p> <p>Describe the members of scaffolds</p> <p>Explain safety</p>	<ul style="list-style-type: none"> • Real objects like gin wheel and chain • Pictures, posters of cranes • Couplers • Other components. • Scaffold tubes • Couplers • Spanners • Wrench etc. 	<p>Describe with sketches the following scaffolds.</p> <ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle <p>Identify the members of scaffolds</p> <p>Sketch a gin wheel as it is attached to</p>	<p>Guide students to;</p> <p>Sketch the following scaffolds</p> <ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle <p>Identify the members of scaffolds</p> <p>Sketch a gin</p>	<ul style="list-style-type: none"> • Real objects like gin wheel and chain • Pictures, posters of cranes • Couplers • Other components. • Scaffold tubes • Couplers • Spanners • Wrench etc.

	<p>a. gin wheel b. scaffold crane c. stationery crane d. mobile cranes</p>	<p>precautions peculiar to erecting scaffolding and ladders.</p> <p>Explain the advantages/disadvantages of timber and tubular scaffold.</p> <p>Explain various hoisting equipment like; e. gin wheel f. scaffold crane g. stationery crane h. mobile cranes</p>		<p>scaffold.</p> <p>Erect a put log scaffold.</p> <p>Erect transom scaffold.</p> <p>Erect timber/bamboo scaffold.</p>	<p>wheel as it is attached to scaffold.</p> <p>Erect a put log scaffold.</p> <p>Erect transom scaffold.</p> <p>Erect timber/bamboo scaffold.</p>	
GENERAL OBJECTIVE 3.0: Dismantling of scaffolds and ladders						
week 8-9	<p>1.1 State the procedure for dismantling scaffolds and ladders</p> <p>1.2 List the tools and equipment used in dismantling of scaffolds and ladders</p> <p>1.3 State safety precautions peculiar to dismantling scaffolding and ladders.</p> <p>1.4 Dismantle scaffolds and ladders safely</p>	<p>Explains the procedure for dismantling scaffolds and ladders</p> <p>Discuss the tools and equipment used in dismantling of scaffolds and ladders</p> <p>Explain safety precautions peculiar to dismantling scaffolding and ladders.</p> <p>Dismantle scaffolds and ladders safely</p>	<ul style="list-style-type: none"> • Real objects like temporary scaffold, gin wheel and chain • Pictures, posters of cranes • Couplers • Other components. • Scaffold tubes • Couplers • Spanners • Wrench etc. 	<p>Describe with sketches the following scaffolds.</p> <ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle <p>Identify the members of scaffolds</p> <p>Sketch a gin wheel as it is attached to scaffold.</p>	<p>Guide students to;</p> <p>Dismantle a put log scaffold.</p> <p>Dismantle transom scaffold.</p> <p>Dismantle timber/bamboo scaffold.</p>	<ul style="list-style-type: none"> • Real objects like temporary scaffold, gin wheel and chain • Pictures, posters of cranes • Couplers • Other components • Scaffold tubes • Couplers • Spanners • Wrench etc.

NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING

				<p>Dismantle a put log scaffold.</p> <p>Dismantle a transom scaffold.</p> <p>Dismantle timber/bamboo scaffold.</p>		
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Scaffold and ladders for tiling and cladding			COURSE CODE: CTC 221	CONTACT HOURS: 60
YEAR: 2	TERM: 2	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Estimating for tiling/cladding works				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1.0 Understand Scaffolding in Tiling and Cladding 2.0 Understand Ladders in Tiling and Cladding 3.0 Understand safety precautions in Scaffolding/Ladders in Tiling and Cladding				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Scaffold and ladders for tiling and cladding				COURSE CODE: CTC 221		CONTACT HOURS: 60
YEAR: 2		TERM: 2	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to Tiling /cladding Installation						
Theoretical Content				Practical Content		
4.0 GENERAL OBJECTIVE 1.0: Understand Scaffolding in Tiling and Cladding						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define Scaffolding 1.2 List the various types of scaffolding	Discuss Scaffolding List the various types of scaffolding State the uses of each type of scaffold	<ul style="list-style-type: none">• Pictures• Measuring tape/equipment• Scientific Calculator	Demonstrate measurement using measuring tools Calculate area and volume.	Guide students to; Carryout measurement Solve basic calculations for;	<ul style="list-style-type: none">• Pictures• Measuring tape/equipment• Scientific Calculator

	<p>1.3 State the uses of each type of scaffold</p> <p>1.4 Explain safety considerations peculiar to erecting Scaffold</p> <p>1.5 Explain the components of scaffold and its uses</p>	<p>Explain safety considerations peculiar to erecting Scaffold</p> <p>Explain the components of scaffold and its uses</p>			<ul style="list-style-type: none"> Area of surfaces Perimeter of surfaces <p>Volume</p> <p>Prepare a quotation for a tiling job of at least 1.5m by 1.5m</p>	
GENERAL OBJECTIVE 2.0: Understand Ladders in Tiling and Cladding						
week 6-10	<p>1.1 Explain Ladder</p> <p>1.2 Explain steps in erecting ladder</p> <p>1.3 States the various types of ladder:</p> <ul style="list-style-type: none"> Step ladders Extension ladders Platform ladders Folding ladders Step tools <p>1.4 Explain the components of scaffold and its uses</p>	<p>Explain ladder</p> <p>Explain steps in erecting ladder</p> <p>States the various types of ladder:</p> <ul style="list-style-type: none"> Step ladders Extension ladders Platform ladders Folding ladders Step tools <p>Explain safety considerations in erecting ladders</p>	<ul style="list-style-type: none"> Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Couplers Spanners Wrench etc. 	<p>Describe with sketches the following ladders:</p> <ul style="list-style-type: none"> Step ladders Extension ladders Platform ladders Folding ladders Step tools 	<p>Guide students to;</p> <p>Sketch the following ladders</p> <ul style="list-style-type: none"> Step ladders Extension ladders Platform ladders Folding ladders Step tools <p>.</p>	<ul style="list-style-type: none"> Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Couplers Spanners Wrench etc.

	GENERAL OBJECTIVE 3.0: Understand safety precautions in Scaffolding in Tiling and Cladding					
week 8-9	1.1 Explain safety Precautions in erecting Scaffolding/ladders	Explain safety Precautions in erecting Scaffolding/ladders	<ul style="list-style-type: none"> • Real objects like temporary scaffold, gin wheel and chain 	Describe with sketches the following scaffolds. <ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle 	Guide students to; Dismantle timber/bamboo scaffold.	<ul style="list-style-type: none"> • Real objects like temporary scaffold, gin wheel and chain
	1.2 State safety precautions peculiar to dismantling scaffolding and ladders	State safety precautions peculiar to dismantling scaffolding and ladders	<ul style="list-style-type: none"> • Pictures, posters of cranes • Couplers • Other components. 	Dismantle timber/bamboo scaffold.		<ul style="list-style-type: none"> • Pictures, posters of cranes • Couplers • Other components
	1.3 Discuss safety procedure in Erecting/dismantling scaffolds and ladders safely	Discuss safety procedure in Erecting/dismantling scaffolds and ladders safely	<ul style="list-style-type: none"> • Scaffold tubes • Couplers • Spanners • Wrench etc. 			<ul style="list-style-type: none"> • Scaffold tubes • Couplers • Spanners • Wrench

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Erecting and Dismantling of Scaffold and ladders for tiling and cladding			COURSE CODE: CTC 222	CONTACT HOURS: 60
YEAR: 2	TERM: 2	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Estimating for tiling/cladding works				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1.0 Understand Erecting of Scaffold and ladders for tiling and cladding 2.0 Understand Dismantling of Scaffold and ladders for tiling and cladding 3.0 Understands Members of Scaffolding				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING							
MODULE: Erecting and Dismantling of Scaffold and ladders for tiling and cladding				COURSE CODE: CTC 222		CONTACT HOURS: 60	
YEAR: 2		TERM: 2	PRE-REQUISITE:	Theoretical:2 Practical:4			
GOAL: This module is designed to introduce the students to Tiling /cladding Installation							
Theoretical Content				Practical Content			
GENERAL OBJECTIVE 1.0: Understand Erecting of Scaffold and ladders for tiling and cladding							
Week	Specific Learning Outcome		Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1	Define Erecting of Scaffold and ladders	Define Erecting of Scaffold and ladders	<ul style="list-style-type: none">• Pictures• Measuring tape/equipment• Scientific Calculator	Demonstrate measurement using measuring tools	Guide students to;	<ul style="list-style-type: none">• Pictures• Measuring tape/equipmen• Scientific Calculator
	1.2	Explain the uses of Scaffold/ladders	Explain the uses of Scaffold/ladders		Calculate area and volume.	Carryout measurement	
			Explain the components of		Solve basic calculations for; <ul style="list-style-type: none">• Area of		

	1.3 Explain the components of scaffold/ladders 1.4 Explain steps in erecting ladder	scaffold and its uses. Explain steps in erecting ladder			surfaces • Perimeter of surfaces Volume Prepare a quotation for a tiling job of at least 1.5m by 1.5m	
GENERAL OBJECTIVE 2.0: Understand Dismantling of Scaffold and ladders for tiling and cladding						
week 6-10	2.1 Explain Dismantling of Scaffold and ladders 2.2 Explain steps in dismantling Scaffold and ladders 2.3 States the tools use in dismantling Scaffold and ladders	Explain Dismantling of Scaffold and ladders Explain steps in dismantling Scaffold and ladders States the tools use in dismantling Scaffold and ladders	<ul style="list-style-type: none"> • Real objects like gin wheel and chain • Pictures, posters of cranes • Couplers • Other components. • Couplers • Spanners • Wrench etc. 	Describe with sketches the following ladders: <ul style="list-style-type: none"> • Step ladders • Extension ladders • Platform ladders • Folding ladders • Step tools 	Guide students to; Sketch the following ladders <ul style="list-style-type: none"> • Step ladders • Extension ladders • Platform ladders • Folding ladders • Step tools 	<ul style="list-style-type: none"> • Real objects like gin wheel and chain • Pictures, posters of cranes • Couplers • Other components. • Couplers • Spanners • Wrench etc.
GENERAL OBJECTIVE 3.0: Understands Members of Scaffolding						
week 8-9	3.1 Explain members of scaffolds 3.2 List members of scaffolds 3.3 States the uses of members of Scaffolds	Explain members of scaffolds Discuss the types of scaffolds members Explain the uses of members of	<ul style="list-style-type: none"> • Real objects like temporary scaffold, gin wheel and chain • Pictures, posters of cranes 	Describe various members of Scaffolding Describe with sketches the following scaffolds.	Guide students to; Describe various members of Scaffolding	<ul style="list-style-type: none"> • Real objects like temporary scaffold, gin wheel and chain • Pictures, posters of cranes

	<p>3.4 Describe with sketches the following scaffolds:</p> <ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle 	<p>Scraffords</p> <p>Describe with sketches the following scaffolds.</p> <ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle 	<ul style="list-style-type: none"> • Couplers • Other components. • Scaffold tubes • Couplers • Spanners • Wrench etc. 	<ul style="list-style-type: none"> • bracket scaffold • putlog • independent • trestle 		<ul style="list-style-type: none"> • Couplers • Other components • Scaffold tubes • Couplers • Spanners • Wrench
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: GROUTING AND FINISHING FOR TILING			COURSE CODE: CTC 231	CONTACT HOURS: 60
YEAR: 2	TERM: 3	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of Estimating for tiling/cladding works				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1 Understand grouting and finishing for tilling 2 Understand the technique for grouting sealing 3 Understand the importance of grouting in tiling work				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: GROUTING AND FINISHING FOR TILING				COURSE CODE: CTC 222	CONTACT HOURS: 60	
YEAR: 2		TERM: 2	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to Tiling /cladding Installation						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand Erecting of Scaffold and ladders for tiling and cladding						
Week	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define grouting in tiling 1.2 Explain grouting Finishing 1.3 state the different stage in grouting	Explain grouting in tiling Explain grouting finishing state the different stage in grouting	<ul style="list-style-type: none">Grout materialsGrouting tools (Float etc)	Demonstrate Apply the right grout	Guide Student to: Apply the right clean the grout	<ul style="list-style-type: none">Grout materialsGrouting tools (Float etc)

	GENERAL OBJECTIVE 2.0: Understand the techniques for grouting sealing in tiling					
week 6-10	<p>2.1 Explain the technique for applying grout</p> <p>2.2 Explain the stages Preparation Mixing Applying grout Sealing the grout Inspection</p> <p>2.3 Outline the different grout adhesives for tiling</p>	<p>Explain the technique for applying grout Explain the stages Preparation Mixing Applying grout Sealing the grout Inspection</p> <p>Explain the different grout adhesives for tiling</p>	<ul style="list-style-type: none"> Grout materials Grouting tools (Float etc) 	<p>Explain Preparation Mixing Applying grout Sealing the grout Inspection</p> <p>Demonstrate the use of different grout adhesives for tiling</p>	<p>Preparation Mixing Applying grout Sealing the grout Inspection</p> <p>in applying the Adhesive agent in tiling</p>	<ul style="list-style-type: none"> Grout materials Grouting tools (Float etc)
	GENERAL OBJECTIVE 3.0: Understand the importance of grouting in tiling work					
week 8-9	<p>3.1 Explain the importance of grouting in tiling</p> <p>3.2 Explain Tools for grouting Such as: Gout float Grout sponge Grout saw Grout brush</p>	<p>Discuss the importance of grouting in tiling</p> <p>Explain Tools for grouting Such as: Gout float Grout sponge Grout saw Grout brush</p>	<p>Gout float Grout sponge Grout saw Grout brush</p>	<p>Demonstrate the use of tools in gout tiling</p>	<p>Guide students the use of tools in gout tiling</p>	<ul style="list-style-type: none"> Grout materials Grouting tools (Float etc)

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING					
MODULE: Wall Tiling II				COURSE CODE: CTC223	CONTACT60 HOURS:
YEAR: 2	TERM: 2	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4		
GOAL: This Module is designed to equip the students with the basic knowledge and skills of fixing tiles					
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 7. Carryout wall tiling I 8. Carryout wall tiling II 9. Grout, finish and seal tiled joints and surfaces					

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE:				COURSE CODE: CTC222		CONTACT HOURS: 60
YEAR: 2		TERM: 2	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to wall Tiling Installation						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Carryout wall tiling I						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.4 State the process for preparing wall tiling surfaces 1.5 Select materials for the tiling and e.g clean sand, cement, tiles of required quality. 1.6 List tools and equipment for tiling work e.g. laying, measuring, cutting and cleaning of tools	Explain the process for preparing wall tiling surfaces Explain the materials for tiling	<ul style="list-style-type: none">• Pictorials• Measuring, Cutting and Laying tools• Materials (Tiles, Sand, cement, water	Carryout surface preparation for wall tiling Select materials for the tiling and e.g clean sand, cement, tiles of required quality.	Guide students to; Demonstrate the process for preparing wall tiling surfaces	<ul style="list-style-type: none">• Measuring, Cutting and Laying tools• Materials (Tiles, Sand, cement, water etc)

		Explain equipment and tools required for tiling	etc)	Select equipment and tools required for tiling		
	GENERAL OBJECTIVE 2.0: Carryout wall tiling II					
week 6-10	1.8 Outline the tools for laying wall tiles 1.9 Outline the materials for laying wall tiles 1.10 Lay tiles on prepared surface 1.11 Cut tiles to flush with edges, corners, openings etc	Explain the tools for wall tiling Explain the materials for wall tiling Explain how to lay tiles Explain how to cut tiles using appropriate tool Explain how to cut skirting tiles using appropriate tool	<ul style="list-style-type: none"> • Pictorials • Measuring, Cutting and Laying tools <p>Materials (Tiles, Sand, cement, water etc)</p>	Lay tiles on prepared surface Cut tiles to flush with edges, corners, openings etc	use materials for tiling works Use equipment and tools required for tiling Carryout laying of tiles Demonstrate how to cut tiles using appropriate tool	<ul style="list-style-type: none"> • Measuring, Cutting and Laying tools • Materials (Tiles, Sand, cement, water etc)
	GENERAL OBJECTIVE 3.0: Grout, finish and seal tiled joints and surfaces					
week 8-9	1.5 Define grouting 1.6 Explain the importance of grouting 1.7 Explain the technique for applying grout 1.8 Mix and apply grout to wall and floor tiles	Explain grouting Explain the importance of grouting Explain the technique for applying grout Demonstrate grouting activities	<ul style="list-style-type: none"> • Grout materials • Grouting tools (Float etc) 	Apply grout to wall and floor tiles	Guide students to; Carryout grouting	<ul style="list-style-type: none"> • Grout materials • Grouting tools (Float etc)

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING					
MODULE: Cladding Installation I				COURSE CODE: CTC311	CONTACT HOURS: 60
YEAR: 3	TERM: 1	PRE: REQUISITE:	Theoretical: Hours:2 Practical: Hours:4		
GOAL: This Module is designed to equip the students with the basic knowledge and skills of fixing Cladding					
GENERAL OBJECTIVES: On completion of this module, the student should be able to: <div><div>1. Understand types of cladding materials</div><div>2. Understand types of cladding adhesives</div><div>3. Understand types of cladding Tools and equipment</div><div>4. Understand cladding on various structures</div></div>					

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING							
MODULE: Cladding Installation I				COURSE CODE: CTC311		CONTACT HOURS: 60	
YEAR: 3		TERM: 1	PRE-REQUISITE:	Theoretical:2 Practical:4			
GOAL: This module is designed to introduce the students to wall Cladding Installation							
Theoretical Content				Practical Content			
GENERAL OBJECTIVE 1.0: Understand types of cladding materials							
xcd	Specific Learning Outcome		Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Define cladding 1.2 List the types of cladding 1.3 State the importance of cladding 1.4 List the types of cladding materials		Explain cladding Explain the types of cladding Explain the types of cladding materials	● Cladding brochures, catalogue and pictures ● Samples of cladding material	Identify cladding materials Identify cladding tools	Guide students to; Identify the types of cladding Identify the types of cladding materials 55	● Cladding brochure, catalogue and pictures ● Samples of cladding material

	GENERAL OBJECTIVE 1.0: Understand types of cladding adhesives					
	1.1 List the different materials for adhesives used in cladding 1.2 Explain the mix ratio for various surfaces 1.3 Explain how to mix adhesive for different cladding materials	Explain different adhesives for cladding Explain mix ratios to students Discuss the mixing of adhesives	<ul style="list-style-type: none"> Adhesives (cement, lime, etc) 	Carryout mixing of adhesives for cladding	Guide students to; Carryout mixing of adhesives using different ratios	<ul style="list-style-type: none"> Adhesives (cement, lime, etc), Shovel, measuring equipment eg cup, headpan, bucket, wheel barrow etc
	GENERAL OBJECTIVE 2.0: Understand types of cladding Tools and equipment					
week 6-10	1.1 List the types of cladding tools and equipment 1.2 State the uses of cladding tools and equipment 1.3 Draw some cladding tools	Explain cladding tools Explain the uses of cladding tools sketch types of cladding tools	<ul style="list-style-type: none"> Cladding brochures, catalogue and pictures Samples of cladding tools 	Identify cladding tools Use cladding tools and equipment	Guide students to; Identify the types of tools and equipment Use cladding tools an equipment	<ul style="list-style-type: none"> Cladding brochure, catalogue and pictures Samples of cladding tools
	GENERAL OBJECTIVE 3.0: Understand cladding on various structures I					
week 8-9	1.1 Explain the process for preparing wall cladding surfaces 1.2 Carry out selection of tools and equipment for cladding work e.g. laying, measuring, cutting, fastening, cleaning of tools etc 1.3 Cut clads or panels to flush with edges, corners, openings etc 1.4 Lay cladding on prepared surface starting from the bottom to top.	Discuss the process for preparing wall surfaces for cladding. Explains the tools and equipment required for cladding Explains how to measure and cut lay clads	<ul style="list-style-type: none"> Measuring, Cutting, fastening, Laying tools etc Cladding Materials 	Carryout surface preparation for wall cladding Select materials for the cladding. Select equipment and tools required for cladding	Guide Students to; Carryout preparation for cladding of surfaces Cutting clads using appropriate tools	<ul style="list-style-type: none"> Measuring, Cutting, fastening, Laying tools etc Cladding Materials

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		Explain how to lay clads using appropriate tools		<p>Cut clads to flush with edges, corners, openings etc</p> <p>Lay cladding on prepared surface</p>	<p>Carryout laying of clads starting from the bottom to top and fasten panels with screws ensuring boards are aligned.</p>	
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Cladding Installation II			COURSE CODE: CTC 312	CONTACT HOURS: 60
YEAR: 3	TERM: 2	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of fixing Cladding				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1. Understand cladding finishing 2. Clad intricate and irregular corners and shapes 3. Understand techniques for repairing cladded surfaces				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Cladding Installation II				COURSE CODE: CTC 312	CONTACT HOURS: 60	
YEAR: 3		TERM: 1	PRE-REQUISITE:	Theoretical:2 Practical:4		
GOAL: This module is designed to introduce the students to wall Cladding Installation						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand cladding finishing						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 List the importance of Finishing and sealing of cladding work	Explain the importance of Finishing and sealing of cladding	<ul style="list-style-type: none">• Sealants• Finishing tools• Finishing materials	Select the types of finishing and sealing materials	Guide students to;	<ul style="list-style-type: none">• Sealers• Finishing tools• Finishing material
	1.2 List the types of finishing and sealing materials	Explain the types of finishing and sealing		Select the types of finishing and	Fix finishing material eg edge strip	

	<p>1.3 List the types of finishing and sealing tools</p> <p>1.4 Explain Fix finishing/sealing material eg:</p> <ul style="list-style-type: none"> • edge strip, • silicon, • vinyl, • sealant, <p>1.5 Clean surfaces</p>	<p>materials</p> <p>Explain the types of finishing and sealing tools</p> <p>Fix finishing/sealing material eg:</p> <ul style="list-style-type: none"> • edge strip, • silicon, • vinyl, • sealant, <p>Clean surfaces</p>	<ul style="list-style-type: none"> • Cleaning tools 	<p>sealing tools</p> <p>Fix finishing material eg edge strip</p> <p>Apply sealing materials eg sealant</p>	<p>Apply sealing material eg sealant</p> <p>Clean work area after each days' work</p>	<ul style="list-style-type: none"> • Cleaning tools
	GENERAL OBJECTIVE 1.0: Clad intricate and irregular corners and shapes					
week 6-10	<p>1.1 Define intricate cladding</p> <p>1.2 Explain how to measure intricate surfaces</p> <p>1.3 Explain how to cut clad intricate surfaces</p> <p>1.4 Carryout cladding of irregular shapes</p> <p>1.5 Use Clads to create a partterns or designs</p>	<p>Explain intricate tiling</p> <p>Explain measuring of intricate corners, angles, and shapes</p> <p>Explain how to cut intricate shapes on tiles</p> <p>Explain how to clad irregular shapes</p> <p>Explain how to use clads to create patterns or designs.</p>	<ul style="list-style-type: none"> • Catalogue of tile designs, • Tiles, • Cutting and measuring tools, • Adhesives, water, sand etc. 	<p>Carryout measurement of corners, angles and shapes</p> <p>Cut intricate shapes on tiles.</p> <p>Clad irregular shapes</p>	<p>Guide students to;</p> <p>Measure intricate corners, angles, and shapes</p> <p>Cut clads for intricate shapes</p> <p>Clad irregular shapes</p> <p>Create patterns or designs.</p>	<ul style="list-style-type: none"> • Catalogue of tile designs, • Tiles, • Cutting and measuring tools, Adhesives, water, sand etc.

	GENERAL OBJECTIVE 3.0: Understand techniques for repairing cladded surfaces					
week 8-9	<p>1.1 Outline the procedures for repairs and maintenance of cladded surfaces.</p> <p>1.2 List common faults of cladded surfaces</p> <p>1.3 State the appropriate repair solutions.</p>	<p>Discuss the procedures for repairs and maintenance of cladded surfaces.</p> <p>Discuss common cladding problems</p> <p>Explain the appropriate repair solutions.</p>	<p>Textbooks</p> <p>Pictures</p> <p>Field trips to sites with cladding</p>	<p>Identify common cladding problems</p> <p>Repair and maintain the identified faults.</p>	<p>Guide students to;</p> <p>Identify common cladding problems</p> <p>Carry out the Repair and maintenance of the identified surface.</p>	<p>Cladding materials</p> <p>Cladding tools</p>

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING				
MODULE: Repair and maintenance of Cladded Surfaces			COURSE CODE: CTC 313	CONTACT HOURS: 60
YEAR: 3	TERM: 2	PRE: REQUISITE:	Theoretical: Hours: 2 Practical: Hours: 4	
GOAL: This Module is designed to equip the students with the basic knowledge and skills of surfaces for Cladding				
GENERAL OBJECTIVES: On completion of this module, the student should be able to: 1.0 Understand how to Repairing Cladded Surfaces 2.0 Understand Clad intricate and irregular corners and shapes 3.0 Understand maintenance of cladded surface 4.0 health and safety maintenance of Cladded Surfaces				

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Repair and maintenance of Cladded Surfaces				COURSE CODE: CTC121		CONTACT HOURS: 60
YEAR:1		TERM: 2	PRE-REQUISITE:	Theoretical:2		
				Practical:4		
GOAL: This module is designed to introduce the students to different surfaces in tiling						
Theoretical Content				Practical Content		
GENERAL OBJECTIVE 1.0: Understand how to Repairing Cladded Surfaces						
xcd	Specific Learning Outcome	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week 1-5	1.1 Explain the process of repairing a cladded surface	Explain the process of repairing a cladded surface	● Catalogue of tile designs, ● Tiles,	Explain the steps in repairing cladded surface	Explain the steps in repairing cladded surface	● Catalogue of tile designs, ● Tiles,
	1.2 Explain the preventive measures in cladded surfaces	Explain the preventive				

	<p>1.3 Explain the various method of repairing a cladded surface</p> <p>1,4 Explain the common challenge associated with cladded surface</p>	<p>measures in cladded surfaces</p> <p>Explain the various method of repairing a cladded surface</p> <p>Explain the common challenge associated with cladded surface</p>	<ul style="list-style-type: none"> ● Cutting and measuring tools, Adhesives, water, sand etc. 	<p>Describe the preventive measures in cladded surfaces</p> <p>Demonstrate the various method of repairing a cladded surface</p> <p>Identify challenges Match the original materials Ensure a secured bond</p>	<p>Identity the preventive measures in cladded surfaces</p> <p>Identify challenges Match the original materials Ensure a secured bond</p>	<ul style="list-style-type: none"> ● Cutting and measuring tools, Adhesives, water, sand etc.
	GENERAL OBJECTIVE 2.0: Understand Clad intricate and irregular corners and shapes					
	<p>2.1 Define intricate cladding</p> <p>2.2 Explain how to measure intricate surfaces</p> <p>2.3 Explain how to cut clad intricate surfaces</p>	<p>Explain intricate tiling</p> <p>Explain measuring of intricate corners, angles, and shapes</p>	<ul style="list-style-type: none"> ● Catalogue of tile designs, ● Tiles, ● Cutting and measuring tools, 	<p>Carryout measurement of corners, angles and shapes</p>	<p>Guide students to;</p> <p>Measure intricate corners, angles, and shapes</p>	<ul style="list-style-type: none"> ● Catalogue of tile designs, ● Tiles, ● Cutting and measuring tools,

	2.4 Explain cladding of irregular shapes Use Clads to create a patterns or designs	Explain how to cut intricate shapes on tiles Explain how to clad irregular shapes Explain how to use clads to create patterns or designs.	● Adhesives, water, sand etc.	Cut intricate shapes on tiles. Clad irregular shapes	Cut clads for intricate shapes Clad irregular shapes Create patterns or designs.	Adhesives, water, sand etc.
	GENERAL OBJECTIVE Understand maintenance of cladded surface					
	1.1 Explain maintenance of cladded surface. Discuss problems with cladded surface Explain the appropriate repair solutions.	Discuss maintenance of cladded surface. Explain cladding problems Explain the appropriate repair solutions.	Textbooks Pictures Field trips to sites with cladding	Identify common cladding problems Repair and maintain the identified faults.	Guide students to; Identify common cladding problems Carryout the Repair and maintenance of the identified surface.	Cladding materials Cladding tools
	GENERAL OBJRCTIVE 04: Health and safety maintenance of Cladded Surfaces					
	1.4 Explain safety Precautions in cladded surface 1.5 State safety precautions peculiar to cladded surface 1.6 Discuss safety consideration in cladded surface safely	Discuss safety Precautions in cladded surface State safety precautions peculiar to cladded surface Discuss safety consideration in	Common tools Hammer trowel Putty knife Chisel Hand saw	Demonstrate how to wear PPE Identify safety Precautions in cladded surface State safety precautions peculiar to	Guide students to; On how to wear PPE	Common tools Hammer trowel Putty knife Chisel Hand saw •

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		cladded surface safely		cladded surface Discuss safety consideration in cladded surface		
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LIST OF EQUIPMENTS FLOOR/WALL TILING & CLADDING

S/N	EQUIPMENT	QUANTITY
1.	Textbooks.	Assorted
2.	Pictures/charts	Assorted
3.	Drawing set.	Assorted
4.	Tiling Tools and equipment.	Assorted
5.	Tiling materials.	Assorted
6.	Helmet.	40
7.	Goggles.	40
8.	Ear muff.	40
9.	Nose mask.	40
10.	Hand gloves.	40
11.	Safety boots.	40
12.	Knee pads.	40
13.	First Aid box.	2
14.	Accident books.	2
15.	First aid records.	2
16.	Safety signs and symbols.	Assorted
17.	Posters.	Assorted
18.	Sample of letters and memos.	Assorted
19.	Communication devices like phones, megaphones, etc.	Assorted
20.	Signs and symbols.	Assorted
21.	Samples of tools and equipment for surface preparation for tiling and cladding.	Assorted
22.	Catalogue.	Assorted
23.	Samples of different types of tiles.	Assorted
24.	Samples of different adhesives.	Assorted
25.	Pictorials.	Assorted
26.	Videos on team work etc.	Assorted
27.	Pictures	Assorted
28.	Measuring tape/equipment	20
29.	Scientific Calculator	20
30.	Real objects like gin wheel and chain	20
31.	Pictures, posters of cranes	Assorted

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32	Scaffold tubes	Assorted
33	Real objects like gin wheel and chain	Assorted
34	Pictures, posters of cranes	Assorted
35	Scaffold tubes	20
36	Couplers	20
37	Spanners	20
38	Wrench	20
39	Real objects like temporary scaffold, gin wheel and chain	20
40	Pictures, posters of cranes	Assorted
41	Measuring, Cutting and Laying tools	Assorted
42	Materials (Tiles, Sand, cement, water etc	Assorted
43	Grouting tools (Float etc)	Assorted
44	Measuring, Cutting and Laying tools	Assorted
45	Materials (Tiles, Sand, cement, water etc)	Assorted
46	Samples of cladding material	Assorted
47	Adhesives (cement, lime, etc),	Assorted
48	Shovel, measuring equipment eg cup, headpan, bucket, wheelbarrow etc	20
49	Cladding brochure, catalogue and pictures	20
50	Samples of cladding tools	20
51	Measuring, Cutting, fastening, Laying tools etc	20
52	Cladding Materials	20
53	Sealers Finishing tools	20
54	Finishing material	20
55	Cleaning tools	20
56	Catalogue of tile designs,	Assorted
57	Tiles	Assorted
58	Cutting and measuring tools,	20
59	Adhesives, water, sand etc	Assorted
60	Cladding materials	Assorted
61	Cladding tools	Assorted

YEAR 1, TERM 1	
	<p>CTC111: Tiling/Cladding Fundamentals I Identify the types of tiles Identify tiling and cladding tools (cutting, measuring, fastening, laying tools etc). Identify tiling and cladding materials. Sketch and Label tiling and cladding tools. Identify the different PPEs. Demonstrate how to use PPE. Demonstrate first aid procedures. Describe potential hazards associated with Tiling work. Demonstrate actions to take in preventing accidents and injuries. Demonstrate how to maintain good personal hygiene working safely. Define communication. List the types of communication in the work place. Discuss the importance of communication. Discuss the sources of information in the work place. Explain how to report findings in accordance to procedure in a work environment.</p>
YEAR 1, TERM 2	
<p>CTC112: Tiling/Cladding Fundamentals II</p>	<p>Identify types of surfaces for tiling and cladding. Demonstrate procedures in surface preparation. Use tools and equipment to prepare a surface. Carry out care, maintenance and storage of the tools and equipment. Carry out housekeeping after surface preparation. Identify the different types of tiles. Distinguish the difference between various types of tiles. Describe different kinds of surfaces for tiling. Differentiate between types of adhesives used for different types of tiles. Work effectively in a team. Describe roles within the team.</p>
YEAR 1, TERM 3	

CTC113: Tiling/cladding Installation	Draw different types of layouts Create layout for wall tiling Create layout for floor tiling Identify different types of adhesives including acrylic, cementitious, epoxy etc. Describe the uses of adhesives Apply mix ratio Prepare and Mix adhesives using different mix ratios Calculate area and volume. Demonstrate measurement using measuring tools
YEAR 2, TERM 1	
CTC211: Estimating for Tiling and Cladding	Demonstrate measurement using measuring tools Calculate area and volume. Describe with sketches the following scaffolds. <ul style="list-style-type: none"> ● bracket scaffold ● putlog ● independent ● trestle Identify the members of scaffolds Sketch a gin wheel as it is attached to scaffold. Erect a put log scaffold. Erect transom scaffold. Erect timber/bamboo scaffold. Dismantle a put log scaffold.
YEAR 2, TERM 2	
CTC222: Tiling installation	Carryout surface preparation for wall tiling. Select materials for the tiling and e.g clean sand, cement, tiles of required quality. Select equipment and tools required for tiling. Lay tiles on prepared surface. Cut tiles to flush with edges, corners, openings etc. Apply grout to wall and floor tiles.

YEAR 2, TERM 3	
CTC223: Wall tiling	<p>Carryout surface preparation for floor tiling. Select materials for the tiling and e.g clean sand, cement, tiles of required quality. Select equipment and tools required for tiling. Lay tiles on prepared surface Cut tiles to flush with edges, corners, openings etc Cut tiles for skirting and fix appropriately Identify common tiling problems eg cracks, chips, loose tiles Repair and maintain the identified fault.</p>
YEAR 3, TERM 1	
CTC311: Cladding Installation I	<p>Identify cladding materials Identify cladding tools Carryout mixing of adhesives for cladding Identify cladding tools Use cladding tools and equipment Carryout surface preparation for wall cladding Select materials for the cladding. Select equipment and tools required for cladding Cut clads to flush with edges, corners, openings etc. Lay cladding on prepared surface.</p>
YEAR 3, TERM 2	
CTC322: Cladding Installation II	<p>Select the types of finishing and sealing materials. Select the types of finishing and sealing tools. Fix finishing material e.g. edge strip. Apply sealing materials e.g. sealant. Carryout measurement of corners, angles and shapes. Cut intricate shapes on tiles. Clad irregular shapes. Identify common cladding problems. Repair and maintain the identified faults.</p>

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