

FEDERAL MINISTRY OF EDUCATION

National Technical Certificate (NTC) Curriculum in

WALL/FLOOR TILING AND CLADDING

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THE WORLD BANK

NATIONAL BOARD FOR TECHNICAL EDUCATION

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



NATIONAL TECHNICAL CERTIFICATE

CURRICULUM AND MOUDULE SPECIFICATIONS

IN

WALL/FLOOR TILING AND CLADDING

2025

GENERAL INFORMATION

AIM

To give training and impact 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			YEA	AR I					YEA	AR 2					YEA	R 3			TOTAL HOURS
		Ter	m 1	Terr	m 2	Ter	m 3	Ter	m 1	Terr	m 2	Terr	m3	Ter	m 1	Te	rm 2	Ter	rm 3	
		Т	Р	Т	Р	Т	Р	Т	Р	Т	Р	Т	Р	Т	Р	Т	Р	Т	Р	-
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 SU	JBJECTS																			
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 SU	BJECTS																			
CTC211	Measurements in tiling\cladding							2	4	2	4	2	4							

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	
СТС233	Drawing		-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	
YEAR 3 SU	JBJECTS																			
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: NAT	IONAL TECHNICA	AL CERTIFICATE IN WALL/FLO	OR TILING AND CLADDING	
MODULE: Tiling Funda	mentals		COURSE CODE: CTC111	CONTACT
				HOURS: 30
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 1	
			Practical: Hours: 2	
GOAL: This Module is a	lesigned to equip the	students with the basic knowledge and	l skills of Tiling Fundamentals	
GENERAL OBJECTIVI On completion of this mod	lule, the student shoul	ld be able to:		
2. Understand Health and	safety in tiling			
3. Understand communica	tion skills			

PROG	RAMME: NAT	IONAL TECHNICAL	CERTIFICATE IN W	ALL/FLOOR T	LING AND CLADDIN	G	
MODU	ULE: Tiling funda	mentals			COURSE CODE:		ONTACT OURS: 30
YEAR	: 1	TERM: 1	PRE-REQUISIT	`E:	Theoretical: 1		
					Practical: 2		
GOAI	. : This module is d	lesigned to introduce the	students to tiling fundation	mentals			
Theor	etical Content				Practical Content		
GENE	RAL OBJECTIVI	E 1.0: Understand tiling	g/cladding fundamenta	lls			
	Specific Learning Outcome	5	Teachers Activities	Learning Resources	Specific Learning Outcome	Teachers Activities	Learning Resources
week	1.1 Define tiling		Explain tiling	• Pictures/chart	5 51	Guide leaners on	Textbooks
			Differentiate types of		of tiles	How to use	• Pictures/
	1.2 List types of ti	ling	tiling and cladding	• Tiling Tools		tiling tools	charts
				and equipmen	t		 Drawing set

	 1.3 List the importance of tiling 1.4 Explain the uses of tiling and tools 1.5 Draw tiling tools 1.6 Explain materials and tools for tiling 	List the importance of tiling Explain the uses of tiling tools Sketch and Label tiling tools Explain materials and tools for tiling	Tiling material	Identify tiling and cladding tools (cutting, measuring, fastening, laying tools etc) Identify tiling and materials Sketch and Label tiling tools	Sketch and Label tiling tools select materials and tools for tiling	 Tiling Tools and equipment Tiling materials
	GENERAL OBJECTIVE 2.0: Underst		0			
week 6-10	2.1 Define health and Safety in tiling	Explain health and Safety in tiling and	HelmetGoggles	Identify the different PPEs	Identify the use of PPE	HelmetGoggles
	2.2 List the different PPEs	cladding	Ear muffNose mask	Demonstrate how	Carry out	Ear muffNose mask
	2.3 State the importance of using PPE in tiling	Explain the different PPEs	 Hand gloves Safety boots Knee pads 	to use PPE Demonstrate first aid procedures	activities in a safe and responsible manner	Hand glovesSafety bootsKnee pads
	2.4 Explain potential hazards associated	State the importance	• First Aid box			• First Aid
	with Tiling work	of using PPE in tiling	Accident booksFirst aid	Describe potential hazards associated	Communicate health and safety	boxAccident
	2.5 Discuss actions to take in preventing accidents and injuries	Explain potential hazards associated with Tiling work	recordsSafety signs and symbols	with Tiling work. Demonstrate	issues relevant to tiling work	booksFirst aid records
	2.5 List the steps of maintaining good	C	etc.	actions to take in		Safety signs
	personal hygiene in the work place	Discuss actions to take in preventing		preventing accidents and		and symbols etc.
	2.6 State the importance of complying with health, safety and other relevant	accidents and injuries		injuries		
	regulations/guidelines	List the steps of maintaining good		Demonstrate how to maintain good		
	2.7 Explain the roles of;	personal hygiene in		personal hygiene		

	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: Underst			Γ	1	1
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.	 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	 Posters Sample of letters and memos Communi cation devices like phones, megaphones, etc signs and symbols

		carryout field trip (within the	
		school) to locate	
		the sources of	
		information like	
		notice boards,	
		school filing	
		cabinets etc	

PROGRAMME: NAT	IONAL TECHNICAL CE	RTIFICATE IN WALL/FLOOR T	ILING AND CLADDING	
MODULE: Cladding Fund	lamentals		COURSE CODE: CTC112	CONTACT HOURS:
			50	
YEAR: 1	TERM: 2	PRE: REQUISITE:	Theoretical: Hours: 2	
			Practical: Hours: 3	
GOAL: This Module is a	lesigned to equip the studen	ts with the basic knowledge and skills	s of Cladding Fundamentals	
GENERAL OBJECTIV	ES:			
	lule, the student should be a	ble to:		
1. Prepare different surfac				
2. Select appropriate tiles				
3. Understand Team work	in the work place			

PROG	RAMME: NATIONAL TECHNICAL	CERTIFICATE IN WA	LL/FLOOR T	ILI	ING AND CLADDIN	G	
MODU	LE: Cladding fundamentals				COURSE CODE: (CTC112	CONTACT
	1						HOURS: 50
YEAR:	1 TERM: 2	PRE-REQUISIT	E:		neoretical: 2		
					Practical: 3		
	: This module is designed to introduce the	students to cladding fund	lamentals		1		
Theore	tical Content				Practical Content		
GENEI	RAL OBJECTIVE 1.0: Understand how	to prepare different sur	faces for claddi	ing			
weeks	Specific Learning	Teachers	Learning		Specific Learning	Teachers	Learning
	Outcome	Activities	Resources		Outcome	Activities	Resources
week	1.1 Define surface preparation	Eplain surface	• Samples of		Identify types of	Guide students	to; • Samples of
1-5	1.2 State the importance of Preparing	preparation	tools and		surfaces for	Identify types o	f tools and
	surfaces for cladding		equipment		cladding	surfaces for	equipment
	1.3 List the types of surfaces for	Explain the	for surface			cladding	for surface
	cladding	importance of	preparation		Demonstrate		preparation
	1.4 Outline the procedures in surface	PrepareIng surfaces	for tiling/		procedures in	Demonstrate	for
	preparation	for tiling and cladding	cladding		surface preparation	procedures in	cladding
	1.5 List tools and equipment for surface					surface	
	preparation	List types of surfaces			Use tools and	preparation	

	 1.6 Explain the uses of tools and equipment for surface preparation 1.7 State the steps in; Carrying out maintenance Storage of the tools and equipment 1.8 Explain the importance of house keeping after surface preparation 	for tiling and cladding Explain Procedures in surface preparation List tools and equipment for surface preparation Explain the uses of tools and equipment for surface preparation Discuss the care, maintenance and storage of the tools and equipment Discuss house keeping after surface		equipment to prepare a surface Carry out care, maintenance and storage of the tools and equipment Carry out house keeping after surface preparation	Use tools and equipment to prepare a surface Carry out care, maintenance and storage of the tools and equipment Carry out house keeping after surface preparation	
		preparation				
	GENERAL OBJECTIVE 2.0: Understa	and selection of approp				
week 6-10	 2.1 List the different types of cladding 2.2 Identify the different types of cladding 2.3 List different types of surfaces for tiling/cladding 2.4 Explain the factors to be considered when selecting types of tiles for different 	Discuss the different types of cladding Explain the different types of tiles Describe different types of surfaces for cladding	 Pictures Chart And catalogue Samples of different types of tiles Samples of different adhesives 	Identify the different types of tiles Distinguish the difference between various types of cladding Describe different	Guide students to; identify the different types of cladding to students Distinguish the difference between various	 Pictures Chart And catalogue Samples of different types of tiles
	surfaces	Explain the factors to be considered when		kinds of surfaces for cladding	types of tiles	

week 8-9	GENERAL OBJECTIVE 3.0: Underst 1.1 Define team work 1.2 Explain the concept of team work in the work place 1.3 State the importance of developing	selecting types of cladding for different surfaces and Team work in the w Explain team work Discuss the concept of team work in the work	• Posters • Videos on team work	Work effectively in a team Describe roles	Describe different kinds of surfaces for cladding Guide Students to; Demonstrate team work using	 Posters Pictorials Videos on team
	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	place Explain the importance of developing positive working relationship among colleagues Discuss the importance of takIng responsibilities within the team		within the team	drawings/sketches Role play team work.	work etc
	GENERAL OBJECTIVE 2.0: Underst	Explain the importance of complyIng with rules and regulations of work place	Cladding			
week	2.1 Define health and Safety in cladding	Explain health and	• Helmet	Identify the	Identify the use of	• Helmet
6-10		Safety in cladding	 Goggles 	different PPEs	PPE	 Goggles
	2.2 List the different PPEs		• Ear muff			• Ear muff
		Explain the different	• Nose mask	Demonstrate how	Carry out	• Nose mask
	2.3 State the importance of using PPE in	PPEs	• Hand gloves	to use PPE	activities in a safe	• Hand gloves
	cladding		 Safety boots 	Demonstrate first	and responsible	• Safety boots

 2.4 Explain potential h with cladding work 2.5 Discuss actions to accidents and injuries 2.5 List the steps of ma personal hygiene in the 2.6 State the important with health, safety and regulations/guidelines 2.7 Explain the roles o First Aiders Safety Officers 	take in preventing aintaining good e work place ce of complying other relevant	State the importance of using PPE in cladding Explain potential hazards associated with cladding work Discuss actions to take in preventing accidents and injuries List the steps of maintaining good personal hygiene in the work place State the importance of complying with health, safety and other relevant regulations/guidelines Explain the roles of; First Aiders Safety Officers	 Knee pads First Aid box Accident books First aid records Safety signs and symbols etc. 	aid procedures Describe potential hazards associated with cladding work. Demonstrate actions to take in preventing accidents and injuries Demonstrate how to maintain good personal hygiene working safely	manner Communicate health and safety issues relevant to cladding work	 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 WO	RK		COURSE CODE: CTC113	CONTACT				
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2					
			Practical: Hours: 4					
GOAL: This Module is designed to early the second s	quip the students with	the basic knowledge and skills of Tiling/	Cladding installation					
GENERAL OBJECTIVES:								
On completion of this module, the stude	ent should be able to:							
1. Create layouts for wall tiling								
2. Create layout for floor tiling								
3. Carryout Measurement for both floor	Carryout Measurement for both floor and wall tiling							
	-							

PROC	GRAMME: NATIONAL TECHNIC	AL CERTIFICATE I	N WALL/FLOO	OR TILING AND CLA	DDING	
MOD	ULE: Tiling Installation			COURSE CODE	: CTC113	CONTACT HOURS: 60
YEAR	X: 1 TERM: 3	PRE-REQUISI	TE:	Theoretical: 2		
		Practical: 4				
GOAI	L: This module is designed to introduce	the students to Tiling in	nstallation			
Theor	etical Content			Practical Content	t	
GENE	ERAL OBJECTIVE 1.0: Create layout	s for wall and floor til	ing			
			•		-	
xcd	Specific Learning	Teachers	Learning	Specific	Teachers	Learning
	Outcome	Activities	Resources	Learning	Activities	Resources
				Outcome		
week	1.1 Define layout	Explain layouts with	Graph paper		Guide students	• Graph paper
1-5	1.2 List types of layouts for tiling work	examples	• Charts	types of layouts	to;	• Charts
	1.3 State the importance of layouts in		• Cardboard			 Cardboard paper
	tiling	Explain the different	paper	Create layout for	Draw different	8
	1.4 Draw different types of layouts	types of layouts	• Drawing set	wall tilling	types of layout	
	1.5 Create layout for wall tilling		• Tiles			• Adhesives (Lime)
	1.6 Create layout for floor tilling		• Adhesives	Create layout for	Create layouts	
			(Lime)	floor tilling	for wall	

		Explain the importance of layouts in tiling Sketch some layouts on the board for the students Sketch some patterns for the students			Create layouts for floor	
week 6-10	GENERAL OBJECTIVE 2.0: Learn 2.1 Define adhesives 2.2 List different types of adhesives including acrylic, cementitious, epoxy etc 2.3 State the uses of adhesives 2.4 Explain mix ratio 2.5 Understand mix ratios for different surfaces 2.6 List the steps in mixing adhesives using different mix ratios	Explain adhesives List different types of adhesives including acrylic, cementitious, epoxy etc Explain the uses of adhesives Explain mix ratio Discuss mix ratios for different surfaces Explain the steps in mixing adhesives using different mix ratios	 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	 Samples of Adhesives (cement, lime, etc) Measuring equipment (cup, head-pan etc) Mixing tools PPE
week 8-9	GENERAL OBJECTIVE 3.0: Carry 3.1 Define measurement 3.2 List mearsuring tools	out Measurement for Explain measurement	 Pictures 	rks Calculate area and volume.	Guide students to;	Pictures

 3.3 Use measuring instruments to measure lengths in meters, millimeters etc 3.4 Solve basic calculations for; Area of surfaces Perimeter of surfaces Volume 	Discuss mearsuring tools like analog and digital tapes Demonstrate measuring instruments to measure lengths in meters, millimeters etc Solve basic calculations for; • Area of surfaces • Perimeter of	 Measuring tape/equipment Scientific Calculator 	Demonstrate measurement using measuring tools	Use measuring tools like analog and digital tapes to students to measure lengths in meters, millimeters etc Solve basic calculations for; • Area of surfaces • Perimeter of surfaces • Volume	 Measuring tape/equipment Scientific Calculator
				• Volume	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MODULE: SURFACES FOR TILIN	G		COURSE CODE: CTC 121	CONTACT				
		HOURS: 60						
YEAR: 1 TERM: 1 PRE: REQUISITE: T			Theoretical: Hours: 2	SE CODE: CTC 121 HOURS: 60 HOURS: 2 Hours: 4				
			Practical: Hours: 4					
GOAL: This Module is designed to	equip the students wi	th the basic knowledge and skills of T	Filing/Cladding installation					
GENERAL OBJECTIVES:								
On completion of this module, the stu	ident should be able to	D:						
1 Understand surfaces								
2 understand surface preparation in tiling								
3 understand the importance of surface	es in tiling							

PROG	GRAMME: NAT	FIONAL TECHNICAL	CERTIFICATE IN	WALL/FLOO	R TILING AND CLA	DDING	
MOD	ULE: SURFACES	FOR TILING			COURSE CODE:	CTC121	CONTACT HOURS: 60
				1			
YEAR	:1	TERM: 2	PRE-REQUISI	ГЕ:	Theoretical:2		
					Practical:4		
GOAI	L: This module is	designed to introduce the	students to different	surfaces in tiling	5		
Theor	etical Content				Practical Content		
GENE	RAL OBJECTIV	E 1.0: understand surface	es in tiling				
xcd	Specific Learnin	g To	eachers	Learning	Specific Learning	Teachers	Learning
	Outcome	Α	ctivities	Resources	Outcome	Activities	Resources
week	1.1 Define surfac	e Ez	plain Surface	 Pictures 	Demonstrate s	Guide students	Pictures
1-5	1.2 List the types	of surfaces pr	eparation	Charts	Surface	to;	• Measuring
					preparation		tape/equipment
	1.3 Outline the ad	lvantages and Ex	xplain the types of	Clearing		Carryout surfa	
	Disadvantages	su	rfaces	tools/	Explain the types	preparation	tools\equipment
		•	Concrete	equipment	of surfaces in		
- 8		Cement based		tiling	Demonstrate th	ne	
	1.4 Stages of clea	aning a surface •	underlayment			methods of	
		•	Plywood's		Explain the types	surface cleanin	ıg
		•	Plaster		of surfaces in		

	GENERAL OBJECTIVE 2.0: underst	• Discuss Advantages and disadvantages of surface preparations Explain methods of surface cleaning Discuss steps for surface cleaning and surface preparation	in tiling	tiling Discuss the advantages & disadvantages of surface cleaning Demonstrate the methods of surface cleaning Carry out the stages in surface cleaning		
	 2.1 Define surface preparation in tiling 2.2 List procedures in surface preparation 2.3 State the importance of surface preparation in tiling 2.4 explain the importance of housekeeping after surface preparation 	Explain surface preparations in tiling Explain the procedures in surface preparation Discuss the importance of surface preparation in tiling Explain the importance of housekeeping after surface preparation	• Pictures Charts Clearing tools/ equipment in tiling	Demonstrate surface preparation Carry out procedures in surface preparations Outline the importance of surface preparation Carry out house keeping	Guide students in surface preparation procedures in surface preparations guide students to outline the importance of surface preparation Carry out house keeping	• Pictures Charts Clearing tools/ equipment in tiling
	4 GENERAL OBJECTIVE 3.0: under	•				
week 6-10	3.1 Explain the importance of surfaces in tiling	Discuss the importance of surfaces in tiling	Pictures Charts	Identify various types of tiling materials	Guide students to select appropriate materials	Pictures Charts

3.2 state the materials use in surface	list the materials use	Clearing		Clearing tools/
tiling	in surface tiling	tools/	Carry out steps in	equipment in tiling
3.3 explain the steps in surface tiling	Explain the steps in	equipment in	surface tiling	Marker and marker
	surface tiling	tiling	_	board
		Marker and		
		Marker		
		board		

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MODULE: SURFAC	CES FOR CLADDING	COURSE CODE: CTC 122	CONTACT					
			HOURS: 60					
YEAR: 1	TERM: 1	PRE: REQUISITE:	Theoretical: Hours: 2					
			Practical: Hours: 4					
GOAL: This Modu	le is designed to equip the students with	the basic knowledge and skills of surface	aces for Cladding					
GENERAL OBJEC	TIVES:							
On completion of thi	s module, the student should be able to:							
1.Understand surface	S							
	preparation in cladding							
3 understand the imp	ortance of surfaces in cladding							

PROG	RAMME: NATIO	NAL TECHN	ICAL CERTI	FICATE IN WALL	/FLOOR TILING	AND	CLADDING	
MOD	ULE: SURFACES FO	R CLADDIN	G		COURSE CODE	E:	CONTACT HOU	JRS: 60
					CTC121			
YEAR	:1 TEH	RM: 2	PRE-	Theoretical:2				
				: Practical:4				
GOAL: This module is designed to introduce the students to different surfaces in tiling								
Theor	etical Content				Practical Conten	ıt		
GENE	RAL OBJECTIVE 1.	.0: understan	d surfaces in cl	ladding				
xcd	Specific Learning	Teacl	hers	Learning	Specific	Teac	hers	Learning
	Outcome	Activ		Resources	Learning	Activ		Resources
					Outcome			
week	1.1 Define surfac	e Expla	in Surface	• Pictures	Demonstrate s	Guid	e students to;	Pictures
1-5	cladding	prepa	ration in	Charts	Surface			• Measuring tape/equipment
		claddi	ing		preparation	Carry	out surface	Clearing tools\equipment
	1.2 List the types	of	-	Clearing tools/		prepa	ration	
	surface cladd	ing Expla	in the types	equipment	Explain the			
of surfaces		faces	- *	types of	Demo	onstrate the		
1.3 Outline the		• C	oncrete		surfaces in	meth	ods of surface	
	advantages a	nd • C	ement based		cladding	clean	ing	
	Disadvantages of surf	face • ui	nderlayment		-			

cladding	• Plywood's		Explain the		
-	• Plaster		types of		
1.4 Methods of surface	•		surfaces in		
cleaning	Discuss		cladding		
C	Advantages and				
1.5 Stages of cleaning	disadvantages of		Discuss the		
a surface	surface		advantages &		
	preparations in		disadvantages		
	cladding		of surface		
			cleaning in		
	Explain methods		cladding		
	of surface				
	cleaning in		Demonstrate the		
	cladding		methods of		
			surface cleaning		
	Discuss steps for		in cladding		
	surface cleaning		Carry out the		
	in cladding		stages in surface		
			cleaning in		
			cladding		
 GENERAL OBJECTIVE 2	2.0: understand surfa	ce preparation in clade	ling		
		D			
2.1 Define surface	Explain surface	• Pictures	Demonstrate	Guide students in	• Pictures
preparation in	preparations in	Charts	surface	surface preparation	Charts
cladding	cladding		preparation	1	
2.2 List procedures in	Explain the	Clearing tools/	a i	procedures in surface	Clearing tools/ equipment
surface preparation in	procedures in	equipment in	Carry out	preparations in cladding	in cladding
cladding	surface	cladding	procedures in		
	preparation in		surface	guide students to	
2.3 State the	cladding		preparations	outline the importance	
importance of surface	Discuss the		Outline the	of surface preparation	
preparation in cladding				in cladding	
2.4 overlain the	importance of surface		importance of surface	Communit house	
2.4 explain the				Carry out house	
importance of	preparation in		preparation	keeping in cladding	

NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING

	housekeeping after surface preparation in	cladding		Carry out house		
	cladding	Explain the		keeping		
	<u> </u>	importance of				
		housekeeping				
		after surface				
		preparation in				
		cladding				
	GENERAL OBJECTIVE 3	3.0: understand the in	nportance of surfaces	<u> </u>	•	
week		Discuss the	 Pictures 	Identify various	Guide students to	• Pictures
6-10	3.1 Explain the importance	importance of	Charts	types of tiling	select appropriate	Charts
	of surfaces in cladding	surfaces in tiling		materials	materials	
	3.2 state the materials use	list the materials	Clearing tools/			Clearing tools/ equipment in
	in surface tiling	use in surface	equipment in		Carry out steps in	tiling
	3.3 explain the steps in	tiling	tiling		surface tiling	Marker and marker
	surface tiling	Explain the steps	Marker and			board
		in surface tiling	Marker board			

PROGRAMME: NA	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING						
MODULE: Teamwork in Tilling and Cladding			COURSE CODE: CTC 122	CONTACT			
					HOURS: 60		
YEAR: 1	YEAR: 1 TERM: 1 PRE: REQUISITE: Th			oretical: Hours: 2			
			P	ractical: Hours: 4			
GOAL: This Module	is designed to equip the	e students with the basic knowle	edge and skil	ls of surfaces for Cladding			
GENERAL OBJECTI	VES:						
On completion of this n	nodule, the student sho	uld be able to:					
1.0 Understand Teamv	vork.						
2.0 Understand Conce	2.0 Understand Concept of Teamwork						
3.0 Understand the importance of Developing Positive Working Relationship among Tea			among Tea	m Members			
4.0 Understand the Ru	les and regulations of V	Work place	-				

PROG	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING							
MODU	JLE: Teamwork				COURSE CODE:		CONTACT IOURS: 60	
YEAR	:1	TERM: 2	PRE-REQUISIT	È:	Theoretical:2 Practical:4			
GOAL	: This module is de	esigned to introduce the	students to different surf	faces in tiling				
Theore	etical Content	~			Practical Content			
GENERAL OBJECTIVE 1.0: Understand Teamwork								
xcd	Specific Learning		Teachers	Learning	Specific Learning	Teachers	Learning	
	Outcome		Activities	Resources	Outcome	Activities	Resources	
week 8-9	1.1 Define team w1.2 State examples		Define team work State examples of	 Posters Videos on team work 	C C	Guide Students to Demonstrate team	PictorialsVideos on	
	tilling 1.3 Explain respon members	sibility among team	teamwork in tilling Explain responsibility among team members		Describe roles within the team	work using drawings/sketche Role play team work.	s work etc	

	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: Under	erstand Concept of Teamy	work			1	
	1.6 Explain concept of teamwork	Discuss concept of teamwork	• Posters Videos on team work	Work effectively in a team	Guide Students to; Demonstrate team	•	Posters Pictorials Videos on
	1.7 Discuss Roles and Responsibility in team work	Discuss Roles and Responsibility in team work		Describe roles within the team	work using drawings/sketches Role play team		team work etc
	1.8 Explain Communication in work place	Explain Communication in work place			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					
GI	ENERAL OBJECTIVE 3.0: Understand the	ne importance of Develop	ing Positive Worki	ng Relationship among	g Team Members		
	3.1 Explain benefits of Team work3.2 Explain Team work in complex	Explain benefits of Team work Explain Team work in	• Posters Videos on team work	Work effectively in a team Describe roles	Guide Students to; Demonstrate team work using	•	Posters Pictorials Videos on team
	tilling layout	complex tilling layout Explain team work in		within the team	drawings/sketches Role play team		work etc
	3.3 Explain team work in large scale tilling	large scale tilling			work.		
		Discuss safety					

NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING

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

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

PROG	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING							
MOD	ULE: Tiling Installation			COURSE CODE	: CTC113	CONTACT HOURS: 60		
YEAR	: 1 TERM: 3	PRE-REQUISI	ТЕ:	Theoretical: 2				
	Practical: 4							
GOAI	: This module is designed to introduce	the students to Tiling in	nstallation					
Theor	etical Content			Practical Content	- ,			
4.0 G	ENERAL OBJECTIVE 1.0: Understar	nd Tilling Installation						
xcd	Specific Learning	Teachers	Learning	Specific	Teachers	Learning		
	Outcome	Activities	Resources	Learning	Activities	Resources		
				Outcome				
week	1.1 Define Tilling Installation	Explain Tilling	Graph paper	Draw different	Guide students	Graph paper		
1-5	1.2 List types of layouts for tiling	Installation	Charts	types of layouts	to;	• Charts		
	work	Explain the different	Cardboard			Cardboard paper		
	1.3 State the importance of layouts in	types of layouts for	paper	Create layout for	Draw different	• Drawing set		
	tiling	tilling work	• Drawing set	wall tilling	types of layout	• Tiles		
	1.4 Draw different types of layouts	Explain the	• Tiles			• Adhessives (Lime)		
	Create layout for wall tilling	importance of	• Adhesives	Create layout for	Create layouts			
	1.5 Create layout for floor tilling	layouts in tiling	(Lime)	floor tilling	for wall			

	5.0 GENERAL OBJECTIVE 2.0: U				Create layouts for floor	
week 6-10	2.1 Define Wall Tilling Installation2.2 List types of layouts for wall tiling Installation	Define Wall Tilling Installation List types of layouts for wall tiling Installation	 Samples of Adhesives (cement, lime, etc) Measuring equipment (cup, head-pan 	Identify different types of adhesives including acrylic, cementitious, epoxy etc Describe the uses	Guide students to; Identify different types of adhesives including acrylic,	 Samples of Adhesives (cement, lime, etc) Measuring equipment (cup, head-pan etc) Mixing tools
	2.3 State the importance of layouts in wall tilling	State the importance of layouts in wall tiling	(cdp, head-pain etc)Mixing toolsPPE	of adhesives Apply mix ratio	cementitious, epoxy etc	• PPE
	2.4 Draw different types of layouts in wall tilling2.5 Create layout for wall tilling	Sketch different types of layouts in wall tilling Create layout for wall tilling		Prepare and Mix adhesives using different mix ratios	adhesives using different mix ratios Apply the adhesives to the surface	
	6.0 GENERAL OBJECTIVE 3.0: Un		0			
week 8-9	 3.1 Define Floor Tilling Installation 3.2 List types of layouts for Floor tiling Installation 2.2 State the importance of layouts in 	Define Wall Tilling Installation List types of layouts for wall tiling	 Pictures Measuring tape/equipment Scientific 	Calculate area and volume.	Guide students to;	 Pictures Measuring tape/equipment Scientific Calculator
	3.3 State the importance of layouts in Floor tilling3.4 Draw different types of layouts in Floor tilling	Installation	• Scientific Calculator	Demonstrate measurement using measuring tools	Use measuring tools like analog and digital tapes to students to	• Scientific Calculator

3.5 Create layout for Floor tilling	State the importance	measure lengths	
	of layouts in wall	in meters,	
	tilling	millimeters etc	
	Draw different types		
	of layouts in wall	Solve basic	
	tilling	calculations for;	
	Create layout for	• Area of	
	wall tilling	surfaces	
		• Perimeter	
		of surfaces	
		• Volume	

PROGRAMME: NAT	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 a	lesigned to equip the students	with the basic knowledge and skill	s of fixing tiles				
GENERAL OBJECTIVI	ES:						
On completion of this mod	lule, the student should be abl	e to:					
1. Carryout wall tiling							
2. Carryout wall tiling							
3. Grout, finish and seal	tiled joints and surfaces						
-)	5						

PROG	RAMME: NATI	IONAL TECHNICAL	CERTIFICATE IN WA	ALL/FLOOR TI	LING AND CLADDIN	NG	
MODU	JLE: Wall Tiling				COURSE CODE: 0		CONTACT
		-					HOURS: 60
YEAR: 1 TERM: 3			PRE-REQUISIT	E: 7	Theoretical:2		
					Practical:4		
GOAL	: This module is d	esigned to introduce the	students to wall Tiling I	nstallation			
Theore	etical Content				Practical Content		
GENE	RAL OBJECTIVE	E 1.0: Carryout wall tili	ng				
xcd	Specific Learning	Į.	Teachers	Learning	Specific Learning	Teachers	Learning
	Outcome		Activities	Resources	Outcome	Activities	Resources
week	1.1 State the proce	ess for preparing wall	Explain the process	 Pictorials 	Carryout surface	Guide students to	o; • Measuring,
1-5	tiling surfaces		for preparing wall		preparation for wall		Cutting and
	1.2 Select material	s for the tiling and e.g	tiling surfaces	 Measuring, 	tiling	Demonstrate the	Laying tools
	clean sand, ce	ement, tiles of required	-	Cutting and		process for	
	quality.		Explain the materials	Laying tools	Select materials for	preparing wall	• Materials
	1.3 List tools and e	equipment for tiling	for tiling		the tiling and e.g	tiling surfaces	(Tiles, Sand,
		ing, measuring, cutting		 Materials 	clean sand, cement,		cement,
	and cleaning	e e e		(Tiles, Sand,			water etc)
				cement, wate	· · ·		, í

		Explain equipment and tools required for tiling	etc)	Select equipment and tools required for tiling		
	GENERAL OBJECTIVE 2.0: Carryou				· · · ·	
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	 Pictorials Measuring, Cutting and Laying tools Materials (Tiles, Sand, cement, water etc) 	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	 Measuring, Cutting and Laying tools Materials (Tiles, Sand, cement, water etc)
	GENERAL OBJECTIVE 3.0: Grout, f		s 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 	Explain grouting Explain the importance of grouting Explain the technique for applying grout Demonstrate grouting activities	 Grout materials Grouting tools (Float etc) 	Apply grout to wall and floor tiles	Guide students to; Carryout grouting	 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 a	lesigned to equip the student	ts with the basic knowledge and ski	lls of fixing floor tiles				
GENERAL OBJECTIVI	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:	COURSE CODE: CTC 133 CO			
						HOURS: 60			
YEAR	:1	TERM: 3	PRE-REQUISITE: Th		Theoretical:2	heoretical:2			
					Practical:4				
GOAL	: This module is de	esigned to introduce the	students to wall Tiling In	stallation					
	tical Content				Practical Content				
GENE	RAL OBJECTIVE	1.0: Carryout floor til	ing						
xcd	Specific Learning	5	Teachers	Learning	Specific Learning	Teachers	Learning		
	Outcome		Activities Resources		Outcome	Outcome Activities			
week	1.1 State the proce	ess for preparing floor	Explain the process	 Pictorials 	Carryout surface	Guide students to	o; • Measuring,		
1-5	tiling surfaces		for preparing floor		preparation for		Cutting and		
	1.2 Select materials for the tiling and e.g		tiling surfaces	 Measuring, 	floor tiling	Demonstrate the	Laying tools		
	clean sand, cement, tiles of required			Cutting and		process for			
	quality.		Explain the materials	Laying tools	Select materials for	preparing floor	 Materials 		
	1.3 List tools and equipment for tiling		for floor tiling		the tiling and e.g	tiling surfaces	(Tiles, Sand,		
	work e.g. laying, measuring, cutting and			 Materials 	clean sand, cement,		cement,		
	cleaning of tools		Explain equipment	(Tiles, Sand,	tiles of required		water etc)		
			and tools required for	cement, wate	r quality.				
			floor tiling	etc)					

				Select equipment and tools required for tiling		
	GENERAL OBJECTIVE 2.0: Carryou	t Floor tiling		101 0000		
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	 Pictorials Measuring, Cutting and Laying tools Materials (Tiles, Sand, cement, water etc) 	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	 Measuring, Cutting and Laying tools Materials (Tiles, Sand, cement, water etc)
	GENERAL OBJECTIVE 3.0: Learn te	chniques for repairing	tiled surfaces	I		
week 8-9	1.1 Outline the procedures for repairs and maintenance of tiled surfaces.1.2 List common faults of tiled surfaces1.3 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 tilling/C		COURSE CODE: CTC 211	CONTACT					
-	-				HOURS: 60			
YEAR: 2 TERM: 1 PRE: REQUISITE: T			Th	Theoretical: Hours: 2				
]	Practical: Hours: 4				
GOAL: This Module is designed to	equip the students wi	th the basic knowledge and skills of s	surfaces	for Cladding				
GENERAL OBJECTIVES:								
On completion of this module, the stu	On completion of this module, the student should be to:							
1.0 Understand measurement in Tilling and Cladding								
2.0 Understand measuring tools in Tilling/Cladding								
3.0 Understand the basic calculation in Tilling/Cladding								

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING									
MODULE: Measurement in tilling/Cladding 0					COURSE CODE:	ONTACT OURS: 60			
YEAR: 2 TERM: 1			PRE-REQUISIT			neoretical:2 Practical:4			
GOAL	. : This module is a	lesigned to introduce the	e students to different su	rfaces in tiling					
Theore	etical Content				Practical Content				
4.0 G	4.0 GENERAL OBJECTIVE 1.0: Understand measurement in Tilling and Cladding								
xcd	Specific Learning	g	Teachers	Learning	Specific Learning	Teachers	Learning		
	Outcome		Activities	Resources	Outcome	Activities	Resources		
week	1.1 Define Measu	rement	Define Measurement	Pictures	Calculate area and	Guide students to	• Pictures		
8-9	1.2 Explain Tile r		Explain Tile measurement Discuss area of	 Measuring tape/equipment Scientific Calculator 	Demonstrate measurement using measuring tools	Use measuring tools like analog and digital tapes to students to	 Measuring tape/equip- ment Scientific Calculator 		
			measurement			measure lengths in meters,			
	GENERAL OBJECTIVE 2.0: Understa	C			 millimeters etc Solve basic calculations for; Area of surfaces Perimeter of surfaces Volume 				
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	 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	 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; • Area of surfaces • Perimeter of surfaces • Volume	 Pictures Measuring tape/equipment Scientific Calculator 			
GENE	RAL OBJECTIVE 3.0: Understand the b								
	3.1 Explain basic calculation for area of surfaces	Explain basic calculation for area of surfaces	 Pictures Measuring tape/equip ment 	Calculate area and volume.	Guide students to; Use measuring tools like analog	 Pictures Measuring tape/equipment Scientific 			
	3.2 Explain basic calculation for	Explain basic			and digital tapes	Calculator			

Parameter of surfaces 3.3 Explain basic calculation for Volume of surfaces GENERAL OBJECTIVE 4.0: Understand	calculation for Parameter of surfaces Explain basic calculation for Volume of surfaces the Rules and regulation	Scientific Calculator	Demonstrate measurement using measuring tools	to students to measure lengths in meters, millimeters etc Solve basic calculations for; • Area of surfaces • Perimeter of surfaces • Volume
 4.4 Explain Rules and Regulations in work place 4.5 Explain Manufacturer rules and 	Explain Rules and Regulations in work place Explain			•
regulations 4.6 Adhere to safety protocols	Manufacturer rules and regulations Adhere to safety protocols			

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 e	equip the students with the ba	asic knowledge and skills of surfa	aces for Cladding					
GENERAL OBJECTIVES:								
On completion of this module, the stud	lent should be able to:							
1.0 Understand Adhesive mixture in 7	Filling/Cladding							
2.0 Understand mix ratios of Adhesive	e in Tilling/Cladding							
3.0 Understand procedures for Mixing	g Adhesive in Tilling/Claddin	ng						

PROG	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MODU	MODULE: Mixing Adhesives on Tilling/Cladding					COURSE CODE: (ONTACT OURS: 60	
YEAR	: 2	TERM: 1	PRE-REQUISIT	E: 7	Theoretical:2				
					P	ractical:4			
GOAL	: This module is a	lesigned to introduce the s	students to different su	rfaces in tiling					
Theore	etical Content					Practical Content			
GENE	GENERAL OBJECTIVE 1.0: Understand Adhesive mixture in Tilling/Cladding								
	а •е т •	n		T •		а . е.т.		.	
week	Specific Learning		Feachers	Learning		Specific Learning	Teachers	Learning	
	Outcome	Ā	Activities	Resources		Outcome	Activities	Resources	
week	1.1 Define adhesiv	ves I	Define Adhesives	 Samples of 		Identify different	Guide students to	 Samples of 	
8-9				Adhesives		types of adhesives		Adhesives	
	1.2 List different t	vpes of adhesives I	List different types of	(cement, lime,	,	including acrylic,	Identify different	(cement, lime,	
	including:	a	adhesives including:	etc)		cementitious, epoxy	types of adhesives	etc)	
	• acrylic	•	• acrylic	 Measuring 		etc	including acrylic,	• Measuring	
	 cementitious 	•	cementitious	equipment			cementitious,	equipment	
	 depoxy 		• depoxy	(cup, head-par	n	Describe the uses of	epoxy etc	(cup, head-pan	
	1 2			etc)		adhesives		etc)	

	1.3 State the uses of adhesives	State the uses of adhesives	Mixing toolsPPE	Apply mix ratio Prepare and Mix adhesives using different mix ratios	Prepare and Mix adhesives using different mix ratios Apply the adhesives to the surface	Mixing toolsPPE
	GENERAL OBJECTIVE 2.0: Understa	nd mix ratios of Adhesiv	e in Tilling/Cladding	3	•	
	 2.1 Explain mix ratio 2.2 Understand mix ratios for different surfaces 2.3 List the steps in mixing adhesives using different mix ratios 	Explain mix ratio Understand mix ratios for different surfaces List the steps in mixing adhesives using different mix ratios	 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; Area of surfaces Perimeter of surfaces Volume	 Pictures Measuring tape/equipment Scientific Calculator
GENE	RAL OBJECTIVE 3.0: Understand proc	edures for Mixing Adhes			Cuide students to	Samalas af
	3.1 States the procedures in Mixing Adhesive in Tilling/Cladding	Discuss the procedures in Mixing Adhesive in Tilling/Cladding	• Samples of Adhesives (cement, lime, etc)	Identify different types of adhesives including acrylic, cementitious, epoxy etc	Guide students to; Identify different types of adhesives including acrylic,	• Samples of Adhesives (cement, lime, etc)

3	.2 Explain the importance of	Explain the	• Measuring		cementitious,	• Measuring
	Procedure	importance of	equipment	Describe the uses of	epoxy etc	equipment
		Procedure	(cup, head-pan	adhesives		(cup, head-pan
3	.3 Explain safety precautions in	Explain safety	etc)			etc)
	mixing Adhesive in	precautions in	 Mixing tools 	Apply mix ratio	Prepare and Mix	Mixing tools
	Tilling/Cladding	mixing Adhesive in	• PPE		adhesives using	• PPE
i.	Wear protective gear	Tilling/Cladding			different mix	
ii	. Work in a well ventilated area	i. Wear protective		Prepare and Mix	ratios	
ii	i. Avoid skin contacts	gear		adhesives using		
		ii. Work in a well		different mix ratios	Apply the	
		ventilated area			adhesives to the	
		iii. Avoid skin			surface	
		contacts				

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 student	s with the basic knowledge and skills c	of Estimating for tiling/cladding work	S			
1	odule, the student should be ab ing for tiling and cladding wor s and ladders						

PROC	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MOD	ULE: Estimating for	or tiling and cladding	5			COURSE CODE	: CTC 213	CONTACT	
								HOURS: 60	
YEAR: 2 TERM: 1 PRE-REQUISITE:			The	neoretical:2					
					ŀ	Practical:4			
GOAI	GOAL: This module is designed to introduce the students to Tiling /cladding Installation								
Theor	etical Content					Practical Content			
GENE	ERAL OBJECTIV	E 1.0: Understand Es	stimating for tiling and cla	dding works					
xcd	Specific Learning	5	Teachers	Learning		Specific	Teachers	Learning	
	Outcome		Activities	Resources		Learning	Activities	Resources	
						Outcome			
week	1.1 Define Estima	ting	Explain Estimating	Pictures		Demonstrate	Guide students	Pictures	
1-5	1.2 Use a measuring	ng instrument to				measurement	to;		

	 measure the area of a surface 1.3 Solve basic calculations for; Area of surfaces Perimeter of surfaces Volume 1.4 Prepare a quotation for a tiling job 	Discuss measuring tools like analog and digital tapes Solve basic calculations for; Area of surfaces Perimeter of surfaces Volume Discuss the steps in preparing quotations	 Measuring tape/equipment Scientific Calculator 	using measuring tools Calculate area and volume.	Carryout measurement Solve basic calculations for; Area of surfaces Perimeter of surfaces Volume Prepare a quotation for a tiling job of at least 1.5m by 1.5m	 Measuring tape/equipment Scientific Calculator
week 6-10	 1.1 Define the following scaffolds. a. bracket scaffold b. putlog c. independent d. trestle 2.2 State the uses of each type of scaffold 2.3 State the components of scaffold and its uses. 2.4 Identify the members of scaffolds 2.5 State safety precautions peculiar to erecting scaffolding and ladders. 2.6 Explain the advantages/disadvantages of timber and tubular scaffold. 2.7 Explain various hoisting equipment like; 	 Explain the following scaffolds. bracket scaffold putlog independent trestle Discuss the uses of each type of scaffold Explain the components of scaffold and its uses. Describe the members of scaffolds Explain safety 	 Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Scaffold tubes Couplers Spanners Wrench etc. 	Describe with sketches the following scaffolds. • bracket scaffold • putlog • independent • trestle Identify the members of scaffolds Sketch a gin wheel as it is attached to	Guide students to; Sketch the following scaffolds • bracket scaffold • putlog • independent • trestle Identify the members of scaffolds Sketch a gin	 Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Scaffold tubes Couplers Spanners Wrench etc.

	 a. gin wheel b. scaffold crane c. stationery crane d. mobile cranes 	 precautions peculiar to erecting scaffolding and ladders. Explain the advantages/disadvantages of timber and tubular scaffold. Explain various hoisting equipment like; e. gin wheel f. scaffold crane g. stationery crane h. mobile cranes 		scaffold. Erect a put log scaffold. Erect transom scaffold. Erect timber/bamboo scaffold.	 wheel as it is attached to scaffold. Erect a put log scaffold. Erect transom scaffold. Erect timber/bamboo scaffold. 	
	GENERAL OBJECTIVE 3.0: Disma					
week 8-9	1.1 State the procedure for dismantling scaffolds and ladders 1.2 List the tools and equipment used in dismantling of scaffolds and ladders 1.3 State safety precautions peculiar to dismantling scaffolding and ladders. 1.4 Dismantle scaffolds and ladders safely	 Explains the procedure for dismantling scaffolds and ladders Discuss the tools and equipment used in dismantling of scaffolds and ladders Explain safety precautions peculiar to dismantling scaffolding and ladders. Dismantle scaffolds and ladders safely 	 Real objects like temporary scaffold, gin wheel and chain Pictures, posters of cranes Couplers Other components. Scaffold tubes Couplers Spanners Wrench etc. 	Describe with sketches the following scaffolds. • bracket scaffold • putlog • independent • trestle Identify the members of scaffolds Sketch a gin wheel as it is attached to scaffold.	Guide students to; Dismantle a put log scaffold. Dismantle transom scaffold. Dismantle timber/bamboo scaffold.	 Real objects like temporary scaffold, gin wheel and chain Pictures, posters of cranes Couplers Other components Scaffold tubes Couplers Spanners Wrench etc.

		Dismantle a put log scaffold.	
		Dismantle a transom scaffold.	
		Dismantle timber/bamboo scaffold.	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING							
MODULE: Scaffold and	MODULE: Scaffold and ladders for tiling and cladding			COURSE CODE: CTC 221	CONTACT		
					HOURS: 60		
YEAR: 2	YEAR: 2 TERM: 2 PRE: REQUISITE: T		heoretical: Hours: 2				
				Practical: Hours: 4			
GOAL: This Module is d	lesigned to equip the stud	lents with the basic knowledge and	l skills of	Estimating for tiling/cladding works	5		
GENERAL OBJECTIVI On completion of this mod 1.0 Understand Scaffoldin 2.0 Understand Ladders in 3.0 Understand safety pre	lule, the student should bong in Tiling and Cladding n Tiling and Cladding						

PROG	RAMME: NAT	TIONAL TECHNICAL	CERTIFICATE IN W	VALL/FLOOR 7	TILING AND CLA	DDING	
MOD	ULE: Scaffold and	ladders for tiling and cla	adding		COURSE COD	E: CTC 221	CONTACT
		_	-				HOURS: 60
YEAR: 2 TERM: 2		PRE-REQUISIT	E:	Theoretical:2			
					Practical:4		
GOAI	. : This module is a	designed to introduce the	students to Tiling /clac	lding Installation			
Theor	etical Content				Practical Conte	nt	
4.0 G	ENERAL OBJEC	TIVE 1.0: Understand S	Scaffolding in Tiling and	d Cladding			
				-			
xcd	Specific Learning	g	Teachers	Learning	Specific Learni	ng Teachers	Learning
	Outcome	-	Activities	Resources	Outcome	Activities	Resources
week	1.1 Define Scaff	olding	Discuss Scaffolding	• Pictures	Demonstrate	Guide students	to; • Pictures
1-5				 Measuring 	measurement usi	ng	 Measuring
			List the various types	tape/equipme	nt measuring tools	Carryout	tape/equipment
	1.2 List the varie	ous types of	of scaffolding	• Scientific		measurement	• Scientific
	scaffolding			Calculator	Calculate area ar	ıd	Calculator
			State the uses of each		volume.	Solve basic	
			type of scaffold			calculations fo	r;

	 1.3 State the uses of each type of scaffold 1.4 Explain safety considerations peculiar to erecting Scaffold 1.5 Explain the components of scaffold and its uses 	Explain safety considerations peculiar to erecting Scaffold Explain the components of scaffold and its uses			 Area of surfaces Perimeter of surfaces Volume Prepare a quotation for a tiling job of at least 1.5m by 1.5m 	
week 6-10	GENERAL OBJECTIVE 2.0: Understa 1.1 Explain Ladder 1.2 Explain steps in erecting ladder 1.3 States the various types of ladder: • Step ladders • Extension ladders • Platform ladders • Folding ladders • Step tools	 and Ladders in Tiling an Explain ladder Explain steps in erecting ladder States the various types of ladder: Step ladders Extension ladders Platform ladders Folding ladders Step tools Explain safety considerations in erecting ladders 	 d Cladding Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Couplers Spanners Wrench etc. 	Describe with sketches the following ladders: • Step ladders • Extension ladders • Platform ladders • Folding ladders • Step tools	Guide students to; Sketch the following ladders • Step ladders • Extension ladders • Platform ladders • Folding ladders • Step tools	 Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Couplers Spanners Wrench etc.

	GENERAL OBJECTIVE 3.0: Understan	nd safety precautions in	Scaffolding in Tilir	ng and Cladding		
week		Explain safety	 Real objects 	Describe with	Guide students to;	Real objects
8-9	erecting Scaffolding/ladders	Precautions in	like temporary	sketches the		like temporary
		erecting	scaffold, gin	following	Dismantle	scaffold, gin
		Scaffolding/ladders	wheel and	scaffolds.	timber/bamboo	wheel and
			chain	 bracket scaffold 	scaffold.	chain
	1.2 State safety precautions peculiar to	State safety	 Pictures, 	 putlog 		• Pictures,
	dismantling scaffolding and ladders	precautions peculiar	posters of	 independent 		posters of
		to dismantling	cranes	• trestle		cranes
		scaffolding and	 Couplers 			 Couplers
		ladders	• Other	Dismantle		• Other
			components.	timber/bamboo		components
	1.3 Discuss safety procedure in	Discuss safety	 Scaffold tubes 	scaffold.		Scaffold tubes
	Erecting/dismantling scaffolds and	procedure in	 Couplers 			• Couplers
	ladders safely	Erecting/dismantling	 Spanners 			 Spanners
		scaffolds and ladders	• Wrench etc.			• Wrench
		safely				

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:	The	eoretical: Hours: 2				
			P	Practical: Hours: 4				
GOAL: This Module is a	lesigned to equip the student	s with the basic knowledge and skill	s of I	Estimating for tiling/cladding works				
1.0 Understand Erecting of	lule, the student should be ab of Scaffold and ladders for ti- ng of Scaffold and ladders for	ling and cladding						

PROG	RAN	IME: NAT	IONAL TECHNICAL	CERTIFICA	ATE IN W	VALL/FLOOR 7	ΓIL	LING AND CLADDI	NG		
MODU	ULE:	Erecting and	Dismantling of Scaffold	l and ladders f	d ladders for tiling and cladding		COURSE CODE:		CONTACT		
										HOURS: 60	
YEAR	: 2		TERM: 2	PRE-R	EQUISIT	`E:	Th	Theoretical:2			
]	Practical:4			
GOAL	GOAL: This module is designed to introduce the students to Tiling /cladding Installation										
Theore	etical	Content						Practical Content			
GENE	RAL	OBJECTIVI	E 1.0: Understand Erect	ing of Scaffold	d and ladd	ers for tiling and	cla	udding			
Week	Spe	ecific Learnin	g	Teachers		Learning		Specific Learning	Teachers	Learning	
	Out	tcome	_	Activities		Resources		Outcome	Activities	Resources	
week	1.1	Define Erect	ing of Scaffold and	Define Erecti	ing of	• Pictures		Demonstrate	Guide students	to; • Pictures	
1-5		ladders	-	Scaffold and	ladders	 Measuring 		measurement using		• Measuring	
						tape/equipme	nt	measuring tools	Carryout	tape/equipment	
	1.2	Explain the u	uses of	Explain the u	uses of	• Scientific			measurement	• Scientific	
		Scaffold/lade	ders	Scaffold/ladd	lers	Calculator		Calculate area and		Calculator	
								volume.	Solve basic		
				Explain the					calculations for	;	
				components	of				• Area of		

	 1.3 Explain the components of scaffold/ladders 1.4 Explain steps in erecting ladder GENERAL OBJECTIVE 2.0: Underst 	scaffold and its uses. Explain steps in erecting ladder and Dismantling of Scaf	fold and ladders for	tiling and cladding	surfaces Perimeter of surfaces Volume Prepare a quotation for a tiling job of at least 1.5m by 1.5m	
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	 Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Couplers Spanners Wrench etc. 	 Describe with sketches the following ladders: Step ladders Extension ladders Platform ladders Folding ladders Step tools 	 Guide students to; Sketch the following ladders Step ladders Extension ladders Platform ladders Folding ladders Step tools 	 Real objects like gin wheel and chain Pictures, posters of cranes Couplers Other components. Couplers Spanners Wrench etc.
	GENERAL OBJECTIVE 3.0: Underst	ands Members of Scaffo	olding			I
week 8-9	3.1 Explain members of scaffolds3.2 List members of scaffolds	Explain members of scaffolds Discuss the types of scaffolds members	 Real objects like temporary scaffold, gin wheel and chain Pictures, 	Describe various members of Scaffolding Describe with sketches the	Guide students to; Describe various members of Scaffolding	 Real objects like temporary scaffold, gin wheel and chain Pictures,
	3.3 States the uses of members of Scraffords	Explain the uses of members of	posters of cranes	following scaffolds.		posters of cranes

 3.4 Describe with sketches the following scaffolds: bracket scaffold putlog independent trestle 	Scraffords Describe with sketches the following scaffolds. • bracket scaffold • putlog • independent • trestle	 Couplers Other components. Scaffold tubes Couplers Spanners Wrench etc. 	 bracket scaffold putlog independent trestle 		 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 F	OR TILING		COURSE CODE: CTC 231	CONTACT			
					HOURS: 60			
YEAR: 2	TERM: 3	PRE: REQUISITE:	Tł	eoretical: Hours: 2				
				Practical: Hours: 4				
GOAL: This Module is a	lesigned to equip the	students with the basic knowledge and	skills of	Estimating for tiling/cladding works	3			
GENERAL OBJECTIVI	ES:							
On completion of this mod	lule, the student shou	ld be able to:						
1 Understand grouting and								
2 Understand the techniqu	e for grouting sealing							
3 Understand the important	nce of grouting in tili	ng work						

PROG	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING									
MODU	LE: GROUTING A	AND FINISHING FOR T	TILING		COURSE CODE:	CTC 222	CONTACT			
							HOURS: 60			
YEAR: 2 TERM: 2		PRE-REQUISIT	TE: 7	Theoretical:2	heoretical:2					
					Practical:4					
GOAL	: This module is d	esigned to introduce the	students to Tiling /cladd	ing Installation						
Theore	tical Content				Practical Content					
GENE	RAL OBJECTIVE	2 1.0: Understand Erectin	ng of Scaffold and ladde	rs for tiling and cl	adding					
Week	Specific Learning	5	Teachers	Learning	Specific Learning	Teachers	Learning			
	Outcome		Activities	Resources	Outcome	Activities	Resources			
week				Grout	Demonstrate	Guide Student t	o: • Grout			
1-5				materials	Apply the right	Apply the right	materials			
	1.1 Define gro	outing in tiling	Explain grouting in	Grouting	grout	clean the grout	Grouting			
			tiling	tools (Float			tools (Float			
	1.2 Explain gr	outing	Explain grouting	etc)			etc)			
	Finishing		finishing							
	_									
	1.3 state the dif	fferent stage in	state the different							
	grouting		stage in grouting							

	GENERAL OBJECTIVE 2.0: Understa	nd the techniques for gro	uting sealing in tili	ng		
week 6-10	 2.1 Explain the technique for applying grout 2.2 Explain the stages Preparation Mixing Applying grout Sealing the grout 	Explain the technique for applying grout Explain the stages Preparation Mixing Applying grout Sealing the grout Inspection	Grout materials Grouting tools (Float etc	Explain Preparation Mixing Applying grout Sealing the grout Inspection	Preparation Mixing Applying grout Sealing the grout Inspection	 Grout materials Grouting tools (Float etc)
	Inspection 2.3Outline the different grout adhesives for tiling	Explain the different grout adhesives for tiling		Demonstrate the use of different grout adhesives for tiling	in applying the Adhesive agent in tiling	
	GENERAL OBJECTIVE 3.0: Understa	nd the importance of gro	uting in tiling work			
week 8-9	 3.1 Explain the importance or grouting in tiling 3.2 Explain Tools for grouting Such as: Gout float Grout sponge Grout saw Grout brush 	Discuss the importance or grouting in tiling Explain Tools for grouting Such as: Gout float Grout sponge Grout saw Grout brush	Gout float Grout sponge Grout saw Grout brush	Demonstrate the use of tools in gout tiling	Guide students the use of tools in gout tiling	• Grout materials Grouting tools (Float etc)

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MODULE: Wall Tiling	Π			COURSE CODE: CTC223	CONTACT60			
				HOURS:				
YEAR: 2	TERM: 2	PRE: REQUISITE:	Tł	Theoretical: Hours: 2				
				Practical: Hours: 4				
GOAL: This Module is a	lesigned to equip the	students with the basic knowledge and	l skills of	fixing tiles				
GENERAL OBJECTIVI	ES:							
On completion of this mod	lule, the student shoul	ld be able to:						
7. Carryout wall tiling I								
8. Carryout wall tiling I	8. Carryout wall tiling II							
9. Grout, finish and seal	tiled joints and surface	ces						

PROG	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING									
MODU	JLE:			COURSE CODE: 0	CTC222	CONTACT				
]	HOURS: 60				
YEAR: 2 TERM: 2 PRE-REQUIS		PRE-REQUISIT	'E: 1	Theoretical:2						
				Practical:4						
GOAL	: This module is designed to introduce the	students to wall Tiling In	nstallation							
Theore	etical Content			Practical Content						
GENE	RAL OBJECTIVE 1.0: Carryout wall til	ing I								
xcd	Specific Learning	Teachers	Learning	Specific Learning	Teachers	Learning				
	Outcome	Activities	Resources	Outcome	Activities	Resources				
week	1.4 State the process for preparing wall	Explain the process	• Pictorials	Carryout surface	Guide students to	o; • Measuring,				
1-5	tiling surfaces	for preparing wall		preparation for wall		Cutting and				
	1.5 Select materials for the tiling and e.g	tiling surfaces	• Measuring,	tiling	Demonstrate the	Laying tools				
	clean sand, cement, tiles of required		Cutting and		process for					
	quality.	Explain the materials	Laying tools	Select materials for	preparing wall	 Materials 				
	1.6 List tools and equipment for tiling	for tiling		the tiling and e.g	tiling surfaces	(Tiles, Sand,				
	work e.g. laying, measuring, cutting		 Materials 	clean sand, cement,		cement,				
	and cleaning of tools		(Tiles, Sand,	tiles of required		water etc)				
			cement, water	quality.						

		Explain equipment and tools required for tiling	etc)	Select equipment and tools required for tiling		
	GENERAL OBJECTIVE 2.0: Carryou	0	1	1	1	
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	 Pictorials Measuring, Cutting and Laying tools Materials (Tiles, Sand, cement, water etc) 	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	 Measuring, Cutting and Laying tools Materials (Tiles, Sand, cement, water etc)
	GENERAL OBJECTIVE 3.0: Grout, fi		s 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	 Grout materials Grouting tools (Float etc) 	Apply grout to wall and floor tiles	Guide students to; Carryout grouting	 Grout materials Grouting tools (Float etc)

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MODULE: Cladding Ins	tallation I	COURSE CODE: CTC311	CONTACT					
					HOURS: 60			
YEAR: 3 TERM: 1 PRE: REQUISITE: Th			neoretical: Hours:2					
				Practical: Hours:4				
GOAL: This Module is a	lesigned to equip the stud	ents with the basic knowledge and	l skills of	fixing Cladding				
GENERAL OBJECTIVI	ES:							
On completion of this mod	lule, the student should be	e able to:						
1. Understand types	of cladding materials							
2. Understand types	of cladding adhesives							
3. Understand types	3. Understand types of cladding Tools and equipment							
4. Understand claddi	4. Understand cladding on various structures							

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING									
MODU	JLE: Cladding Ins	stallation I			(NTACT
YEAR	. 2	TERM: 1	PRE-REQUISI	re.	The	oretical:2		но	URS: 60
TERM. 5 TERM. 1		rke-kequisi			ractical:4				
GOAL	GOAL: This module is designed to introduce the students to wall Cladding Installation								
Theoretical Content Practical									
GENE	RAL OBJECTIVE	E 1.0: Understand types	s of cladding materials	-					
xcd	Specific Learning	5	Teachers	Learning		Specific Learning	Teachers		Learning
	Outcome		Activities	Resources	(Outcome	Activities		Resources
week	1.1 Define claddin		Explain cladding	Cladding	Ι	Identify cladding	Guide students	to;	 Cladding
1-5	1.2 List the types of			brochures,	r	materials			brochure,
	1.3 State the impor	rtance of cladding	Explain the types of	catalogue and	d		Identify the typ	es	catalogue
	1.4 List the types of	of cladding materials	cladding	pictures	I	Identify cladding	of cladding		and pictures
		-			t	tools			 Samples of
			Explain the types of	• Samples of			Identify the typ	es	cladding
			cladding materials	cladding			of cladding		material
				material			materials 55		

	GENERAL OBJECTIVE 1.0: Understa	nd types of cladding ad	hesives			
	1.1 List the different materials for adhesives used in cladding1.2 Explain the mix ratio for various surfaces1.3 Explain how to mix adhesive for different cladding materials	Explain different adhesives for cladding Explain mix ratios to students Discuss the mixing of adhesives	• Adhesives (cement, lime, etc)	Carryout mixing of adhesives for cladding	Guide students to; Carryout mixing of adhesives using different ratios	 Adhesives (cement, lime, etc), Shovel, measuring equipment eg cup, headpan, bucket, wheel barrow etc
	GENERAL OBJECTIVE 2.0: Understa	and types of cladding To	ools and equipmen	it		
week 6-10	1.1 List the types of cladding tools and equipment1.2 State the uses of cladding tools and equipment1.3 Draw some cladding tools	Explain cladding tools Explain the uses of cladding tools sketch types of cladding tools	 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	 Cladding brochure, catalogue and pictures Samples of cladding tools
	GENERAL OBJECTIVE 3.0: Understa	nd 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	 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	 Measuring, Cutting, fastening, Laying tools etc Cladding Materials

Explain how to lay clads using appropriate tools	Cut clads to flush with edges, corners, openings etcCarryout laying of clads starting from the bottom to topLay cladding on prepared surfaceand fasten panels with screws
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MODULE: Cladding Ins	tallation II		COURSE CODE: CTC 312	CONTACT				
				HOURS: 60				
YEAR: 3	TERM: 2 PRE: REQUISITE:		Theoretical: Hours: 2					
			Practical: Hours: 4					
GOAL: This Module is a	lesigned to equip the students	with the basic knowledge and skills	s of fixing Cladding					
 Understand cladding fin Clad intricate and irregular 	lule, the student should be abl							

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING										
MODU	JLE: Cladding Installa	ation II				COURSE CODE: C	CTC 312	CON	NTACT	
								HOU	J RS: 60	
YEAR	: 3 TE	CRM: 1	PRE-REQUISIT	E:	The	eoretical:2				
					P	Practical:4				
GOAL	GOAL: This module is designed to introduce the students to wall Cladding Installation									
Theore	Theoretical Content Practical Content									
GENE	RAL OBJECTIVE 1.0:	: Understand clade	ding finishing							
xcd	Specific Learning		Teachers	Learning	5	Specific Learning	Teachers		Learning	
	Outcome		Activities	Resources		Outcome	Activities		Resources	
week	1.1 List the importance of	of Finishing and	Explain the importance	 Sealants 	1	Select the types of	Guide students	to;	 Sealers 	
1-5	sealing of cladding	g work	of Finishing and sealing	 Finishing 	t	finishing and			 Finishing 	
			of cladding	tools	5	sealing materials	Fix finishing		tools	
			-	 Finishing 		-	material eg edg	ge	 Finishing 	
	1.2 List the types of finis	shing and sealing	Explain the types of	materials	1	Select the types of	strip		material	
	materials	_	finishing and sealing		t	finishing and				

	 1.3 List the types of finishing and sealing tools 1.4 Explain Fix finishing/sealing material eg: edge strip, silicon, vinyl, sealant, 1.5 Clean surfaces 	 materials Explain the types of finishing and sealing tools Fix finishing/sealing material eg: edge strip, silicon, vinyl, sealant, 	• Cleaning tools	sealing tools Fix finishing material eg edge strip Apply sealing materials eg sealant	Apply sealing material eg sealant Clean work area after each days' work	• Cleaning tools
	GENERAL OBJECTIVE 1.0: Clad int	tricate and irregular corr	ars and shanes			
week 6-10	 1.1 Define intricate cladding 1.2 Explain how to measure intricate surfaces 1.3 Explain how to cut clad intricate surfaces 1.4 Carryout cladding of irregular shapes 1.5 Use Clads to create a partterns or designs 	Explain intricate tiling Explain measuring of intricate corners, angles, and shapes Explain how to cut intricate shapes on tiles Explain how to clad irregular shapes Explain how to use clads to create patterns or designs.	 Catalogue of tile designs, Tiles, Cutting and measuring tools, Adhesives, water, sand etc. 	Carryout measurement of corners, angles and shapes Cut intricate shapes on tiles. Clad irregular shapes	Guide students to; Measure intricate corners, angles, and shapes Cut clads for intricate shapes Clad irregular shapes Create patterns or designs.	 Catalogue of tile designs, Tiles, Cutting and measuring tools, Adhesives, water, sand etc.

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

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

PROG	PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN WALL/FLOOR TILING AND CLADDING								
MODU	LE: Repair and ma	intenance of Cladded S	Surfaces			COURSE COI	DE: CTC121	CON	NTACT
	-							HO	URS: 60
YEAR:1 TERM: 2		PRE-REQUISIT	E:	The	oretical:2				
					P	ractical:4			
GOAL	: This module is des	signed to introduce the s	tudents to different surface	es in tiling					
Theore	Theoretical Content Practical Content								
GENE	RAL OBJECTIVE	1.0: Understand how t	o Repairing Cladded Sur	faces					
xcd	Specific Learning		Teachers	Learning		Specific	Teachers		Learning
	Outcome		Activities	Resources		Learning	Activities		Resources
						Outcome			
week	1.1 Explain the pro	ocess of repairing a	Explain the process of	Catalogue of	•	Explain the	Explain the ste	eps	 Catalogue of
1-5	cladded surfac	e	repairing a cladded	tile designs,		steps in	in repairing	_	tile designs,
			surface	• Tiles,		repairing	cladded surfac	e	• Tiles,
	1.2 Explain the pro	eventive measures in				cladded			
	cladded surfac	es	Explain the preventive			surface			

 1.3 Explain the various methed of repairing a cladded surface 1,4 Explain the common challenge associated with cladded surface GENERAL OBJECTIVE 2.0: Understand 	measures in cladded surfaces Explain the various method of repairing a cladded surface Explain the common challenge associated with cladded surface d Clad intricate and irre	Cutting and measuring tools, Adhesives, water, sand etc. gular corners and s	Describe the preventive measures in cladded surfaces Demonstrate the various method of repairing a cladded surface Identify challenges Match the original materials Ensure a secured bond	Identity the preventive measures in cladded surfaces Identify challenges Match the original materials Ensure a secured bond	• Cutting and measuring tools, Adhesives, water, sand etc.
 2.1 Define intricate cladding 2.2 Explain how to measure intricate surfaces 2.3 Explain how to cut clad intricate surfaces 	Explain intricate tiling Explain measuring of intricate corners, angles, and shapes	 Catalogue of tile designs, Tiles, Cutting and measuring tools, 	Carryout measurement of corners, angles and shapes	Guide students to; Measure intricate corners, angles, and shapes	 Catalogue of tile designs, Tiles, Cutting and measuring tools,

2.4 Explain cladding of irregular	Explain how to cut	• Adhesives,	Cut intricate	Cut clads for	Adhesives,
shapes	intricate shapes on tiles	water, sand etc.	shapes on	intricate shapes	water, sand etc.
Use Clads to create a partterns or	Englain harry to also		tiles.	Cladimentar	
designs	Explain how to clad irregular shapes		Clad irregular	Clad irregular shapes	
	inegulai shapes		shapes	shapes	
	Explain how to use		•	Create patterns or	
	clads to create patterns			designs.	
	or designs.				
 GENERAL OBJECTIVE Understand	maintenance of cladded	surface			
 1.1 Explain maintenance of cladded	Discuss maintenance	Textbooks	Identify	Guide students to;	Cladding
surface.	of cladded surface.	TEXTOOOKS	common	Oulde students to,	materials
Surface.	Explain cladding	Pictures	cladding	Identify common	inatorials
Discuss problems with cladded surface	problems	11000000	problems	cladding problems	Cladding tools
1	1	Field trips to sites	1	01	6
Explain the appropriate repair solutions.	Explain the appropriate	with cladding	Repair and	Carryout the	
	repair solutions.	_	maintain the	Repair and	
			identified	maintenance of	
			faults.	the identified	
 				surface.	
GENERAL OBJRCTIVE 04: Health and	safety maintenance of C	ladded Surfaces			
1.4 Explain safety Precautions in cladded	Discuss safety	Common tools	Demonstrate	Guide students to;	Common tools
surface	Precautions in cladded	Hammer trowel	how to wear		Hammer
	surface	Putty knife	PPE	On how to wear	trowel
		Chisel	Identify safety	PPE	Putty knife
		Hand saw	Precautions in		Chisel
1.5 State safety precautions peculiar to	State safety		cladded		Hand saw
cladded surface	precautions peculiar to		surface		•
	cladded surface				
			State safety		
1.6 Discuss safety consideration in	Discuss safety		precautions		
cladded surface safely	consideration in		peculiar to		

cladded surface safely	cladded surface
	Discuss safety consideration in cladded surface

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

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			
	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.		
YEAR 1, TERM 2			
CTC112:	Identify types of surfaces for tiling and cladding.		
Tiling/Cladding Fundamentals II	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.		
YEAR 1, TERM 3			

CTC113:	Draw different types of layouts			
Tiling/cladding Installation	Create layout for wall tilling Create layout for floor tilling Identify different types of adhesives including acrylic, cementitious, epoxy etc. Describe the uses of adhesives			
6 6				
	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:	Demonstrate measurement using measuring tools			
Estimating for Tiling and Cladding	Calculate area and volume.			
	Describe with sketches the following scaffolds.			
	• 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:	Carryout surface preparation for wall tiling.			
Tiling installation	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			
СТС223:	Carryout surface preparation for floor tiling.		
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 Cut tiles for skirting and fix appropriately Identify common tiling problems eg cracks, chips, loose tiles		
	Repair and maintain the identified fault.		
YEAR 3, TERM 1			
CTC311:	Identify cladding materials		
Cladding Installation I	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.		
YEAR 3, TERM 2			
СТС322:	Select the types of finishing and sealing materials.		
Cladding Installation II	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.		

LIST OF PARTICIPANTS

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