

## GENERAL BUILDING CONSTRUCTION III

### Introduction

This module unit involves construction of buildings and related building works form foundations, walls, roofs, finishes and demolitions works. It is designed to equip the trainee with knowledge, skills and attitudes necessary to enable the trainee to work in a workshop or in a construction site.

The trainee should have basic knowledge in technical/building drawing and skills in use of tools and equipment used in building trades as well as building materials.

### General Objectives

By the end of the module unit, the trainee should be able to:

- appreciate the need of observing safety rules at the place of work
- demonstrate ability to use tools and equipment safely and correctly
- appreciate the need of matching colours of the interior furnishings
- understand the purpose of fixing or applying finishes to a building or construction project

### Module Unit Summary and Time Allocation – (77 Hours)

Code	Sub Module Units	Content	Total Hours
33.3.01	Framed Construction	<ul style="list-style-type: none"><li>Types of Framed Construction</li><li>Situation requiring framed construction</li><li>Materials</li><li>Fire Protection</li><li>Claddings</li><li>Facings</li><li>Curtain Walling</li><li>Infill Panels</li><li>Construction Method</li></ul>	19
33.3.02	Stairs	<ul style="list-style-type: none"><li>Terminologies</li><li>Types of Stairs</li><li>Materials</li><li>Kenya Building Code Requirements</li></ul>	10

		<ul style="list-style-type: none"> <li>• Classification of stairs</li> <li>• Construction Method</li> </ul>	
33.3.03	Temporary Works	<ul style="list-style-type: none"> <li>• Formwork</li> <li>• Scaffolding</li> <li>• Underpinning</li> <li>• Shoring</li> <li>• Demolition</li> </ul>	16
33.3.04	Finishes	<ul style="list-style-type: none"> <li>• Wall Finishes</li> <li>• Plastering</li> <li>• Pointing and Jointing</li> <li>• Facing Units</li> <li>• Painting and Decorations</li> <li>• Floor Finishes</li> <li>• Second Fixings</li> <li>• Fixtures and Fittings</li> <li>• Ceilings</li> <li>• Granolithic</li> <li>• Terrazzo</li> <li>• Floor Tiles</li> <li>• Timber Floor</li> </ul>	16
33.3.05	Doors, Windows and Accessories (Second Fixing)	<ul style="list-style-type: none"> <li>• Windows and Glazing</li> <li>• Fixtures and Fittings</li> <li>• Ceilings</li> <li>• Interior Design</li> </ul>	16
<b>Total</b>			<b>77</b>

33.3.01

## FRAMED CONSTRUCTION

### Theory

33.3.01T0

#### *Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- state types of framed construction
- state situations that would require a given type of framed construction
- describe the construction material for framed structures
- provide fire protection to framed structures
- describe materials used for cladding
- identify materials used in framed construction as facings
- describe the curtain walling
- discuss materials used for infill panels
- discuss construction methods

33.3.01C

#### *Competence*

The trainee should have the ability to:

- construct a given type of framed structure
- select suitable materials

iii) fix/hung claddings, facings and curtain walls

iv) lay infill panels

v) explain the procedure of construction for framed structures

33.3.01T1

#### *Content*

Types of framed construction

- timber
- concrete
- steel
- portal frames

33.3.01T2

Situations

- warehouse/godowns
- factories
- multistory building
- dwellings

33.3.01T3

Materials

- timber
- concrete
- steel

33.3.01T4

Fire protection

- minimum cover
- fire proofing

33.3.01T5

Claddings

- precast concrete
- bricks
- stones/marble
- timber

33.3.01T6

Facings

- curtain walls
- infill panels
- bricks
- stones

33.3.01T7

timber

- Curtain wall
- Aluminium/steel framing
- glass

trainee should be able to:

- define stair terminology
- state types of stairs
- identify materials used for constructing stairs
- state building code requirements for stairs
- classify categories of stairs
- outline procedures of constructing a given type of stair

- 33.3.01T8 aluminum/steel Infill panels
  - bricks
  - stones
- 33.3.01T9 Construction methods

**Practice**

- 33.3.01P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
  - select suitable methods for framed construction
  - select the materials for claddings, facings, curtain walls and infill panels

33.3.01P1

- Content*
- Terminology
    - stair flight
    - rise
    - nosing
    - going pitch
    - landing
    - headroom
    - steps

33.3.01P1

- Content*
- Procedure
    - setting out
    - laying foundations
    - putting up the framework

33.3.01P2

- Types of stairs*
- straight flight
  - dog leg
  - spiral
  - quarter turn

33.3.01P2

- selective materials for Construction
- methods
  - procedures
  - pre-fabricated structures

33.3.01P3

- Materials*
- timber
  - steel
  - concrete

33.3.02

**STAIRS**

33.3.01P4

- Building code requirement*
- types
  - functionality
  - access
  - dimensions
  - safety

**Theory**

33.3.02T0

- Specific Objectives*  
By the end of the sub-module unit, the

33.3.01P5

classification of stairs

- public
- private

33.3.01P6

constructing stairs

**Practice**

33.3.02P0

*Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- select materials for a given type of stair
- select relevant staircase for a given situation
- construct a given staircase

33.3.02C

*Competence*

The trainee should have the ability to:

- construct a given type of a stair
- construct a given type of a stair
- establish main features
- set going, rise, pivotal going, total rise, head room, landing
- establish and set main features of a staircase

*Content*

33.3.02P1

- Procedures*
- setting out
  - construction

33.3.02P2

- Construction*
- formwork
  - layout

33.3.03

**TEMPORARY WORKS**

33.3.03.1

**FORMWORK**

*Theory*

33.3.03.1T0

*Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- outline the general requirements for formwork
- select suitable materials for formwork
- describe suitable methods for erecting and striking formwork
- observe load distribution

*Content*

33.3.03.1T1

Formwork materials

- timber
- metal
- plastic
- concrete

33.3.03.1T2

Methods of erecting formworks

33.3.03.1T3

Methods of striking

- releasing agents
- fastening systems
- support systems
- live and dead load distribution
- load distribution

33.3.03T4

## Practice

- 33.3.03.1P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- design formwork for a given operation
  - erect formwork for a given operation
  - strike down formwork

- 33.3.03.1C **Competence**  
The trainee should have the ability to:
- select materials for making formwork
  - sketch, draw and label
  - construct the required formwork
  - erect the formwork

	<i>Content</i>
33.3.03.1P1	Materials <ul style="list-style-type: none"><li>- timber</li><li>- metal</li><li>- plastic</li></ul>
33.3.03.1P2	Fastening devices <ul style="list-style-type: none"><li>- metal yoke</li><li>- wooden yokes</li><li>- wedges and belts when erecting</li></ul>
33.3.03.1P3	Support systems <ul style="list-style-type: none"><li>- metal props</li><li>- wooden props</li><li>- joists and head tail</li><li>- bracing</li></ul>

- 33.3.03.1P4 Order of striking down
- 33.3.03.1P5 Sketch and label formwork

## 33.3.03.2 SCAFFOLDING

### Theory

- 33.3.03.2T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- describe a scaffold
  - describe different types of scaffolds
  - describe technical words for parts of a scaffold
  - explain safety precautions to be observed with scaffolding
  - explain the procedure of erecting scaffolds

### Content

- 33.3.03.2T1 Definition
- 33.3.03.2T2 Types of scaffolds
  - putlog
  - independent
  - gantry
- 33.3.03.2T3 Technical words for scaffolds
- 33.3.03.2T4 Materials for scaffoldings
- 33.3.03.2T5 Safety precautions for
  - putlog scaffolds
  - independent scaffolds

## Practice

- 33.3.03.2P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- sketch a given type of scaffolding
  - identify the types of materials used in scaffolding
  - erect different types of scaffolds

- 33.3.03.2C *Competence*  
The trainee should have the ability to:
- select scaffolding materials
  - observe safety precautions
  - erect a given scaffold
  - design a scaffold

### Content

- 33.3.03.2T1 Sketching
- independent scaffold
  - gantry
  - putlog scaffolds
- 33.3.03.2T2 Regulations and Recommendations For scaffolding
- 33.3.03.2T3 Erecting scaffolding

## 33.3.03.3 UNDERPINNING

### Theory

- 33.3.03.3T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- explain the functional requirements of underpinning.
  - identify materials used in underpinning
  - describe two types of underpinning

- 33.3.03.3C *Competence*  
The trainee should have the ability to:
- drive the piles underneath the building
  - cast the concrete underneath the building

### Content

- 33.3.03.3T1 functional requirements of underpinning
- 33.3.03.3T2 materials
- 33.3.03.3T3 Two types of underpinning
- underpinning to wall and foundation

## Practice

33.3.03.3P0 *Specific Objective*  
By the end of the sub-module unit, the trainee should be able to construct a given type of underpinning

## Content

33.3.03.3P1 construction underpinning  
- depth  
- batching

## 33.3.03 SHORING

### Theory

33.3.03.4T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- explain the term shoring
- describe technical terms for parts of a shore
- identify the materials used in shoring
- describe the three systems of shoring
- describing types of supports
- discuss background preparation

## Content

33.3.03.4T1 Definition  
33.3.03.4T2 Technical terms for Parts of a shore  
33.3.03.4T3 Materials used in

shoring  
- timber  
- steel

- aluminum

33.3.03.4T4 Three systems of shoring

- raking shores  
- flying shores  
- dead shores

33.3.03.4T5 Type of support

33.3.03.4T6 Background preparation

- struts  
- shore  
- rake  
- joints

### Practice

33.3.03.4P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- fabricate a given type of shore
- apply regulations and recommendations on safety when erecting and dismantling shores

33.3.03.4C *Competence*  
The trainee should have the ability to:

- sketch/draw and label shores
- construct the required type of shore
- select materials for making shores



## Content

- 33.3.03.4P1 fabrication shoring  
- erecting shores  
- dismantling shores

- 33.3.03.4P2 safety requirements

## 33.3.03 DEMOLITION

### Theory

- 33.3.03.5T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- identify the components of a building to be demolished
- explain the demolition procedure
- survey a building or structure to be demolished
- observe safety during demolition
- describe the methods of demolition
- observe the environmental requirement of waste disposal

- 33.3.03.5C *Competence*  
The trainee should have the ability to:
- carry out a detailed survey and examination of a building or structure to be demolished

- safely demolish a structure

### Content

33.3.03.5T1

Components for demolition

- fittings and pipes
- windows
- doors
- frames
- drains
- electricity cables

33.3.03.5P2

demolition procedure

- load bearing
- members of wall using struts, props and suitable shoring

33.3.03.5P2

Statutory notices

33.3.03.5P2

safety during demolition

33.3.03.5P2

Mechanical demolition methods

33.3.03.5P2

Conservation of environment during waste disposal

### Practice

- 33.3.03.5P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- carry out a survey for a building to be demolished
- safely demolish elements of a building

- c) observe the environmental requirements of waste disposal
- d) apply environmental consideration

*Content*

- 33.3.03.5P1 Survey
- 33.3.03.5P2 Safety
- 33.3.03.5P3 Demolition of elements
- 33.3.03.5P4 Environmental requirements

**33.3.04 FINISHES**

**33.3.04.1 WALL FINISHES**

**Theory**

33.3.04.1T0 *Specific Objectives*  
By the end of the sub-module unit the trainee should be able to:

- a) select tools and equipment used for laying tiles
- b) identify and select materials for laying tiles
- c) name and identify various types of tiles for a particular purpose.
- d) explain methods of preparing backgrounds to receive tiles
- e) prepare backgrounds to receive tiles

- f) outline the procedure of fixing tiles
- g) discuss techniques of fixing tiles to a given background
- h) state reasons for clean tiles, tools and equipment after completion of tiling
- i) clean tiles, tools and equipment and work areas

33.3.04.1C *Competence*

The trainee should have the ability to:

- i) assemble tools and equipment for fixing tile
- ii) select materials for fixing a type of tile
- iii) fix various type of tiles

*Content*

- 33.3.04.1T1 Tools and equipment
- 33.3.04.1T2 Materials
- 33.3.04.1T3 Types of tiles
- 33.3.04.1T4 Method preparing Background to receive
- 33.3.04.1T5 Methods of fixing Tiles
- 33.3.04.1T6 fixing tiles to a beak ground
- 33.3.04.1T7 cleaning tiles
- 33.3.04.1T8 cleaning tiles and tools

**Practice**

33.3.04.1P0 *Specific Objectives*  
i. By the end of the sub-module unit, the

trainee should be able to:

- (i) assemble tools and equipment for laying tiles
- (ii) select suitable materials for fixing tiles
- (iii) prepare background to receive tiles accurately fix tiles to a given background

*Content*

- 33.04.1P1 Tools and equipments
- 33.04.1P2 Materials for fixing tiles
- 33.04.1P3 Background preparation
- 33.04.1P4 Fixing tiles

33.04.2 **PLASTERING**

**Theory**

- 33.04.2T0 *Specific Objectives*  
By the end of the sub-module unit the trainee should be able to:
  - a) identify and assemble the tools and equipment used in plastering
  - b) identify and select the materials for plastering
  - c) explain the methods of preparing a given background for plastering

- d) outline the procedure of applying plaster on a given background
- e) prepare materials for plastering
- g) apply plaster on a given background

33.3.04.2C *Competence*  
The trainee should have the ability to:

- i) assemble tools and equipment for plastering
- ii) select materials for plastering
- iii) prepare materials for plastering
- iv) prepare background for plastering
- v) apply plaster on a given background

*Content*

- 33.3.04.2T1 Tools and equipment For plastering
- 33.3.04.2T2 Materials for Plastering
- 33.3.04.2T3 preparation of background
- 33.3.04.2T4 applying plaster
- 33.3.04.2T5 materials preparation
- 33.3.04.2T6 plastering a background

**Practice**

- 33.3.04.2P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) assemble tools and equipment for plastering
- b) select suitable materials for plastering
- c) prepare background for plastering
- d) apply plaster on a given background

*Content*

- 33.3.04.2P1 Tools and equipment
- 33.3.04.2P2 Materials
- 33.3.04.2P3 Background preparation
- 33.3.04.2P4 Applying plaster

**33.3.04.3 POINTING AND JOINTING**

**Theory**

33.3.04.3T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) identify and assemble the tools and equipment used in pointing and jointing
- b) identify and select the materials for pointing and jointing
- c) select the appropriate joint for a given purpose

33.3.04.3C *Competence*  
The trainee should have the ability to:

- i) assemble tools and equipment for pointing and jointing
- ii) select materials for pointing and jointing
- iii) prepare materials for pointing and jointing
- iv) prepare background for
- v) pointing and jointing
- vi) point or joint a given background

*Content*

- 33.3.04.3T1 Tools and equipment for pointing and jointing materials for pointing and jointing
- 33.3.04.3T2 materials for pointing and jointing
- 33.3.04.3T3 joint selection
- 33.3.04.3T4 Procedure of pointing And jointing

**Practice**

33.3.04.3P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) assemble tools and equipment for pointing and jointing
- b) prepare suitable materials for pointing and jointing
- c) prepare background before pointing
- d) point a given background

*Content*

- 33.3.04.3P1

Tools and equipment

33.3.04.5T0 *Specific Objectives*

By the end of the sub-module unit the trainee should be able to:

- a) identify tools and materials used in painting
- b) outline procedure of mixing paint
- c) prepare surface for painting
- d) follow the correct procedure while painting
- e) protect the finished paintwork
- f) discuss care and maintain painting tools and equipment
- g) observe safety precautions when painting
- h) identify painting defects and suggest remedies

33.3.04.5C *Competence*

The trainee should have the ability to:

- i) identify and select tools and materials used for painting
- ii) mix paint appropriately
- iii) prepare a surface for painting
- iv) follow the correct procedure while painting
- v) protect the painted surface

- vi) use and care for the tools and equipment used for painting
- vii) identify painting defects and rectify them

*Content*

- 33.3.04.5T1 Tools and materials Used in painting
- 33.3.04.5T2 Procedure of mixing paint
- 33.3.04.5T3 Preparation of surface
- 33.3.04.5T4 Procedure of painting
- 33.3.04.5T5 Protection of the Painted surface
- 33.3.04.5T6 Use and care of tools And equipment used For painting
- 33.3.04.5T7 Safety while painting
- 33.3.04.5T8 Paint defects and their remedies

**Practice**

33.3.04.5P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) prepare and apply paint on a given background
- b) identify paint defects and rectify them

*Content*

- 33.3.04.5P1 preparing paint and applications
- 33.3.04.5P4 paints defects and remedy

33.3.04.3P2	Materials	<i>Content</i>	
33.3.04.3P3	Background preparation	33.3.04.4T1	Tools and equipment for facing materials for facing
33.3.04.3P4	Pointing a given background	33.3.04.4T2	materials for facing
		33.3.04.4T3	Methods of background preparation for facing
33.3.04.4	<b>FACING UNITS</b>	33.3.04.4T4	Procedure of facing a background
	<b>Theory</b>		<b>Practice</b>
33.3.04.4T0	<i>Specific Objectives</i> By the end of the sub-module unit, the trainee should be able to:	33.3.04.4P0	<i>Specific Objectives</i> By the end of the sub-module unit, the trainee should be able to:
	a) identify and assemble the tools and equipment used in facing walls		a) assemble tools and equipment for pointing and jointing
	b) identify and select the materials for wall facing		b) prepare suitable materials for pointing and jointing
	c) explain the methods of preparing a given background for facing		c) prepare background before pointing
	d) outline the procedure of facing on a given background		d) point a given background
33.3.04.4C	<i>Competence</i> The trainee should have the ability to:		<i>Content</i>
	i) assemble tools and equipment for facing	33.3.04.4P1	Tools and equipment
	ii) select materials for facing	33.3.04.4P2	Materials
	iii) prepare materials for facing	33.3.04.4P3	Preparation of background
	iv) prepare background for facing	33.3.04.4P4	Fixing facing
	v) fix facing on a given background		
		33.3.04.5	<b>PAINTING AND DECORATIONS</b>
			<b>Theory</b>

## 33.04.6 FLOOR FINISHES

### 33.04.6.1 INTRODUCTION TO FLOOR FINISHES

#### Theory

33.06T0

#### *Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- state the factors to consider when choosing a particular floor finish
- identify and select materials for a particular floor finish
- choose a floor finish for a given situation

33.06C

#### *Competence*

The trainee should have the ability to:

- identify materials for floor finishes
- choose a floor finish for a given purpose

#### *Content*

33.06T1

Factors to consider while choosing a floor finish

33.06T2

Materials for floor finishes

33.06T3

Types of floor finishes

#### Practice

33.06P0

#### *Specific Objective*

By the end of the sub-module unit, the trainee should be able to identify suitable

materials for floor finishes

#### *Content*

33.06.1P1

Materials

33.06.1P2

Floor finishing

33.07

### SAND SCREED

#### Theory

33.07T0

#### *Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- state reasons for choosing sand screed as a floor finish
- identify and select materials for preparing motor to be used for screeding
- identify and select tools and equipment used for laying sand screed
- explain methods of preparing backgrounds to receive sand screed
- prepare backgrounds to receive sand screed
- discuss preparation of mortar to use for screeding
- outline the procedure of applying sand screed

33.3.04C

**Competence**

The trainee should have the ability to:

- i) select tools and materials for sand screed
- ii) prepare background for applying sand screed
- iii) prepare mortar for sand screeding
- iv) apply sand screed to a given background appropriately

**Content**

- 33.3.07T1 Reasons for using sand screed as a floor finish
- 33.3.07T2 Materials for mortar for sand screeding
- 33.3.07T3 Tools and equipment for laying sand screed
- 33.3.07T4 Methods of background preparation
- 33.3.07T5 Preparation of background
- 33.3.07T6 Preparation of mortar for sand screeding
- 33.3.07T7 Procedure for applying sand screed finish

**Practice**

33.3.07P0

**Specific Objectives**  
By the end of the sub-module unit, the trainee should be able to:

- a) select suitable tools for screeding
- b) prepare background for applying screed

- c) apply sand screed to a given background

**Content**

- 33.3.07P1 Tools and equipment
- 33.3.07TP2 Preparation of background
- 33.3.07TP3 Applying screed

**33.3.08 GRANOLITHIC CONCRETE Theory**

33.3.06.3T0 **Specific Objectives**  
By the end of the sub-module unit, the trainee should be able to:

- a) state factors that lead to choosing granolithic concrete floor finish
- b) select materials for granolithic concrete floor finish
- c) select tools and equipment used for laying a granolithic concrete floor
- d) prepare a background for laying granolithic concrete
- e) lay granolithic concrete to a given background

33.3.04C

**Competence**  
The trainee should have the ability to:

- i) select materials for granolithic floor finish
- ii) select tools and equipment



- iii) prepare background for application of granolithic finish
- iv) lay granolithic to a given background

- d) lay granolithic floor finish to a given background

**Content**

- 33.3.08T1 Factors to consider while choosing granolithic as a floor finish
- 33.3.08T2 Materials for granolithic concrete to include
  - cement
  - sand
  - granite
- 33.3.08T3 Tools and equipment
- 33.3.08T4 Background preparation for laying granolithic concrete
- 33.3.08T5 Procedure for laying Granolithic concrete

**Practice**

- 33.3.08P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
  - a) select suitable materials for granolithic floor finish
  - b) select suitable tools and equipment for laying granolithic floor finish
  - c) prepare background for laying granolithic finish

- 33.3.08P1 *Content*
- 33.3.08P2 Materials
- 33.3.06P3 Tools and equipment
- Preparation of Background floor Finish
- 33.3.06P4 laying granolithic floor finish

**33.3.09**

**TERRAZZO**

**Theory**

33.3.09T0

*Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- a) select tools and equipment used for laying terrazzo
- b) select materials for terrazzo
- c) mix materials for terrazzo finish
- d) outline the procedure of laying terrazzo
- e) lay terrazzo on a given area of floor
- f) grind the surface to get a smooth surface which can be cleaned easily

33.3.04C

*Competence*

The trainee should have the ability to:

- i) select tools and equipment for laying terrazzo

- ii) select materials for terrazzo
- iii) lay terrazzo
- iv) grind terrazzo

*Content*

- 33.3.08T1 Tools and equipment used for laying terrazzo
- 33.3.08T2 Materials for terrazzo
- 33.3.08T3 Procedure for laying terrazzo
- 33.3.08T4 Mixing materials for Tarazzo finish
- 33.3.08T5 Procedure of grinding The surface
- 33.3.08T6 Laying of terrazzo on a Given area for a floor

**Practice**

- 33.3.09P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
  - a) select suitable tools and equipment for laying terrazzo
  - b) select suitable materials for laying terrazzo
  - c) lay terrazzo

*Content*

- 33.3.09P1 Tools selection
- 33.3.09P2 Materials selection
- 33.3.09P3 Laying terrazzo

**33.3.04.5 FLOOR TILES**

**Theory**

- 33.3.04.5T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
  - a) select tools and equipment used for laying floor tiles
  - b) select materials for laying floor tiles
  - c) select tiles for a given purpose
  - d) identify tiles for a given purpose
  - e) outline the procedure of laying floor tiles

**33.3.04C**

*Competence*

- The trainee should have the ability to:
- i) select tiles for a given purpose
  - ii) prepare materials for laying tiles
  - iii) lay tiles to a given floor surface

*Content*

- 33.3.04.5T1 Tools and equipment for laying floor tiles
- 33.3.04.5T2 Materials for laying floor tiles
- 33.3.04.5T3 Types of floor tiles
- 33.3.04.5T4 Selection of floor tiles
- 33.3.04.5T5 Procedure of laying floor tiles

## Practice

- 33.3.04.5P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- select suitable tiles for a given site
  - prepare materials for laying tiles
  - lay tiles to a given floor surface

### Content

- 33.3.04.5P1 Tiles  
33.3.04.5P2 Preparation of background  
33.3.04.5P3 Laying tiles

## 33.3.04.6 TIMBER FLOOR FINISHES

### Theory

- 33.3.04.6T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- state factors that warrant the use of timber as a floor finish
  - identify types of timber floor finishes
  - select materials for laying timber floor finishes
  - outline the procedure of laying timber floor finishes

- 33.3.04C *Competence*  
The trainee should have the ability to:
- select an appropriate timber finish for a particular purpose
  - use tools and equipment correctly while laying timber floor finish
  - lay timber floor finishes correctly

### Content

- 33.3.04.6T1 Factor leading to choice of timber for a floor finish  
33.3.04.6T2 Types of timber floor finish  
33.3.04.6T3 Laying materials for timber floor finishes  
33.3.04.6T4 Procedure of laying timber floor finish  
33.3.04.6T5 Laying timber floor finish

### Practice

- 33.3.04.6P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- select appropriate timber finish for a particular purpose
  - lay timber floor finish correctly

### Content

- 33.3.08P1 Materials  
33.3.08P2 Tools and equipment  
33.3.08P3 Lay timber

33.3.05 DOORS, WINDOWS AND ACCESSORIES (SECOND FIXINGS)

33.3.05.1 DOORS

Theory

- 33.3.05.1T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- a) state the functional requirements of doors
  - b) identify different types of doors
  - c) describe the construction of timber doors
  - d) identify door furniture
  - e) prepare door schedules
  - f) describe the procedure fixing a door
  - g) discuss installation of install a door onto a door frame

33.3.05C *Competence*  
The trainee should have the ability to:

- i) prepare door schedules
- ii) construct timber doors
- iii) install door to door frame

*Content*

- 33.3.05.1T1 Functional requirements of doors
- 33.3.05.1T2 Types door
- 33.3.05.1T3 Door furniture
- 33.3.05.1T4 Door schedules
- 33.3.05.1T5 Construction of match boarded, flush and panel doors
- 33.3.05.1T6 procedure of fixing a door
- 33.3.05.1T7 Installation of doors

Practice

- 33.3.05.1P0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:
- a) prepare door schedules
  - b) construct timber doors
  - c) Install door to door frame

*Content*

- 33.3.05.1P1 Door schedule
- 33.3.05.1P1 Timber doors
- 33.3.05.1P1 Fixing doors

33.3.05.2 WINDOWS AND GLAZING

Theory

- 33.3.05.2T0 *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) state the functional requirements of windows
- b) identify different types of windows
- c) describe the construction of wood casement windows
- d) describe the construction of steel casement windows
- e) identify window furniture
- f) prepare window schedules
- g) describe the procedure fixing windows
- h) explain installation of windows
- i) discuss glazing of windows

33.3.05C

**Competence**

The trainee should have the ability to:

- i) prepare window schedules
- ii) construct timber window
- iii) install window-to-window frame
- iv) glaze windows

**Content**

- 33.3.05.2T1 Functional requirements of windows
- 33.3.05.2T2 Types windows
- 33.3.05.2T3 Window furniture
- 33.3.05.2T4 Description of the construction of wood casement windows

- 33.3.05.2T5 Description of construction of steel casement windows
  - 33.3.05.2T6 Window schedules
  - 33.3.05.2T7 Construction of windows
  - 33.3.05.2T8 Installation of windows
  - 33.3.05.2T9 Glazing
- Practice**

- 33.3.05.2P0 Specific Objectives**  
By the end of the sub-module unit, the trainee should be able to:
- a) prepare window schedules
  - b) construct windows
  - c) install windows
  - d) fix glazing

**Content**

- 33.3.05.2P1 Window schedule
- 33.3.05.2P2 Timber window
- 33.3.05.2P3 Fixing window
- 33.3.05.2P4 Fixing glazing

**33.3.05.3 FIXTURES AND FITTINGS**

**33.3.05.3.1 WARDROBES**

**Theory**

- 33.3.05.3.1T0 Specific Objectives**  
By the end of the sub-module unit, the trainee should be able to:
- a) identify different types of wardrobe
  - b) identify and select materials for

- wardrobe construction
- c) outline construction procedures of wardrobe construction
- d) design a wardrobe
- e) explain preparations cutting list for constructing a type of wardrobe
- f) describe construction of in-built wardrobe

**33.3.05C**

**Competence**

The trainee should have the ability to:

- i) design different types of wardrobes
- ii) select appropriate material for wardrobe construction
- iii) prepare cutting list
- iv) construct wardrobes

**Content**

- 33.3.05.3.1T1 Types of wardrobes
- 33.3.05.3.1T2 Materials used for wardrobe construction
- 33.3.05.3.1T3 Procedures of wardrobe construction
- 33.3.05.3.1T4 Wardrobe designs
- 33.3.05.3.1T5 Cutting list preparation
- 33.3.05.3.1T6 inbuilt wardropes

**Practice**

**33.3.05.3.1P0** *Specific Objectives*  
By the end of the sub-module unit, the

- trainee should be able to:
- a) design different types of wardrobes
  - b) select suitable materials for constructing wardrobes
  - c) prepare cutting lists
  - d) construct wardrobes

**Content**

- 33.3.05.3.1P1 Design of wardropes
- 33.3.05.3.1P2 Materials selection
- 33.3.05.3.1P3 Cutting lists preparation
- 33.3.05.3.1P4 Construction

**33.3.05.3.2 KITCHEN FITMENTS**

**Theory**

**33.3.05.3.2T0** *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) identify different types of kitchen fittings
- b) select materials used for the construction of kitchen fitments
- c) design kitchen fitments
- d) prepare cutting list for a kitchen cabinet
- e) describe procedure of construction of kitchen cabinets
- f) construct kitchen cabinets

**33.3.05C**

**Competence**

The trainee should have the ability to:

- i) design different types of kitchen fittings
- ii) select appropriate material for kitchen fittings construction
- iii) prepare cutting list
- iv) construct kitchen fittings

### 33.3.05.3.3 FIXTURES

#### Theory

**33.3.05.3.3T0** *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) identify different type of fixings
- b) select materials used in making fixings
- c) describe methods of installing fixings
- d) describe tion of design various fixings
- e) discuss installation of l fixings

#### 33.3.05C

#### *Competence*

The trainee should have the ability to:

- i) identify types of fixings
- ii) select appropriate material
- iii) to install fixing

#### *Content*

- 33.3.05.3.3T1 Types of fixings
- 33.3.05.3.3T2 materials selection
- 33.3.05.3.3T3 installing fixing
- 33.3.05.3.3T4 design of fixings
- 33.3.05.3.3T5 installation of fixings

#### Practice

**33.3.05.3.3P0** *Specific Objectives*  
By the end of the sub-module unit, the

#### *Content*

- 33.3.05.3.2T1 Types of kitchen fittings
- 33.3.05.3.2T2 Materials for construction of kitchen fittings
- 33.3.05.3.2T3 Design/working drawing preparations
- 33.3.05.3.2T4 Cutting list preparation
- 33.3.05.3.2T5 procedure of kitchen cabinet construction
- 33.3.05.3.2T6 Construction procedure

#### Practice

**33.3.05.3.2P0** *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) design various kitchen fittings and fixtures
- b) select suitable material for kitchen fittings
- c) prepare cutting list

#### *Content*

- 33.3.05.3.2P1 Design
- 33.3.05.3.2P2 Materials
- 33.3.05.3.2P3 Cutting list  
Constructions

trainee should be able to:

- a) identify types of fixtures
- b) design of fixtures
- c) select suitable materials for fixtures
- d) to install fixtures

#### *Content*

- 33.3.05.3.3P1 fixtures
- 33.3.05.3.3P2 design
- 33.3.05.3.3P3 Materials selection
- 33.3.05.3.3P4 Fixing of fixtures

### **33.3.05.4 CEILINGS**

#### **Theory**

**33.3.05.4T0** *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) state reasons for using ceilings on buildings
- b) state the functional requirements of ceilings
- c) identify various types of ceilings
- d) explain selection materials used for making ceilings
- e) outline the procedure of constructing different types of ceilings
- f) discuss construct various types of ceilings

#### *Competence*

The trainee should have the ability to:

- i) select materials for ceiling construction
- ii) choose a ceiling for a given building or room
- iii) construct a ceiling

#### *Content*

- 33.3.05.4T1 Reasons for using ceilings
- 33.3.05.4T2 Functional requirements of ceilings
- 33.3.05.4T3 Types of ceilings
- 33.3.05.4T4 Materials used for making ceilings
- 33.3.05.4T5 Procedure of constructing ceilings
- 33.3.05.4T6 Construction of ceilings

#### **Practice**

**33.3.05.4P0** *Specific Objectives*  
By the end of the sub-module unit, the trainee should be able to:

- a) select suitable methods for ceilings
- b) construct a ceiling

#### *Content*

- 33.3.05.4P1 Materials
- 33.3.05.4P2 Ceiling



**Theory**

33.3.05.5T0

*Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- outline the clients requirements
- explain selection of an appropriate materials for a given requirement
- explain selection of the appropriate shape for a given requirement
- discuss the appropriate colour for a given requirement
- explain selection of the appropriate surface texture for a given requirement
- explain the design the interior of a given work design
- assemble and construct the interior according to the design

33.3.05C

*Competence*

The trainee should have the ability to:

- design according to the clients requirements
- select appropriate materials for interiors

- match colours, shapes and surface texture
- utilize space proportionally

*Content*

- 33.3.05.5T1 Clients requirements in terms of;
- shape
  - colour
  - materials
- 33.3.05.5T2 Surface texture
- 33.3.05.5T3 Design of interiors
- 33.3.05.5T4 Arrangement/construction of given design
- 33.3.05.5T5 surface texture
- 33.3.05.5T6 designing interior works
- 33.3.05.5T7 assembly of interior design

**Practice**

- 33.3.05.5P0 *Specific Objectives*
- By the end of the sub-module unit, the trainee should be able to:
- design the interior of a given space
  - select suitable materials for interior design
  - use colour schemes to match the surrounding

*Content*

- 33.3.05.5P1 Design interior works
- 33.3.05.5P2 Materials selection
- 33.3.05.5P3 Colour scheme selection

*Suggested  
Teaching/Learning  
Methods*

- Discussions
- Taking notes
- Demonstrations
- Making designs

*Suggested  
Teaching/Learning  
Resources*

- Textbooks
- Manufactures  
manuals
- Charts
- Models

- Journal  
- Realia  
*Suggested Assessment  
Methods*

- Oral tests
- Written tests
- Practical tests
- Project work

**Tools and Equipment**

- Hammer
- Measuring tape
- Hand drilling  
machine
- Nails