

2023/24 ANNUAL TEACHING PLANS: CONSTRUCTION: GRADE 12 (TERM 1)

TERM 1	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	
CAPS TOPICS	INTRODUCTION OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS) (GENERIC)	INTRODUCTION OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS) (GENERIC)	MATERIALS (GENERIC/SPECIFIC)	EQUIPMENT & TOOLS (GENERIC)	EQUIPMENT & TOOLS (SPECIFIC)	GRAPHICS AS MEANS OF COMMUNICATION (GENERIC)	GRAPHICS AS MEANS OF COMMUNICATION (SPECIFIC)	QUANTITIES SPECIFIC	QUANTITIES SPECIFIC	COMPLETION OF ASSIGNMENT/1 ST PHASE OF PAT	School holiday
TOPICS/CONCEPTS, SKILLS AND VALUES	Application of the OHS Act pertaining to general health and safety in the workplace: <ul style="list-style-type: none">• Scaffolding• Handling of material• Floors and stairs with open sides• Builders hoist• Ladders	Application of the OHS Act pertaining to general health and safety in the workplace: <ul style="list-style-type: none">• Scaffolding• Handling of material• Floors and stairs with open sides• Builders hoist• Ladders	Ready mix concrete: <ul style="list-style-type: none">• Definition of high strength concrete (30 MPa)• Advantages• Disadvantages• Methods of pumping concrete to higher levels in a building Testing of concrete: Equipment, purpose used, procedure and outcomes: <ul style="list-style-type: none">• Slump test• Cube test Curing: <ul style="list-style-type: none">• Different materials used for curing• Application of the different materials Metals: Basic properties of ferrous metals such as: <ul style="list-style-type: none">• Cast iron• Steel• Low/medium/high carbon steel• Galvanised sheet metal Basic properties of the following non-ferrous metals: <ul style="list-style-type: none">• Aluminium• Lead• Zinc• Copper• Tin alloys (brass) Glasses (uses of glass in the built environment) Plastics: Basic properties and uses of the following plastics: <ul style="list-style-type: none">• Perspex• PVC (polyvinylchloride)• Polystyrene Silicon cladding: <ul style="list-style-type: none">• Purpose• Materials used• Methods of fixing Introduction to PAT (phase 1 and part 1 of phase 2)	Identification, proper use and care of the following: Specialised tools: <ul style="list-style-type: none">• Dumpy level• Laser level• Multi detector	Safe handling and care of the following construction machinery: <ul style="list-style-type: none">• Portable concrete vibrator• Concrete mixer• Plate compactor• Tamping rammer• Power trowel float	Interpretation of advanced drawings: <ul style="list-style-type: none">• Site plan, floor plan and elevations of multi-storey buildings• Basic drawing symbols relating to the built environment in accordance with the SANS for building drawings	Detailed scale drawings of the following: <ul style="list-style-type: none">• Open eaves• Closed eaves• Alternate plan courses of a one-and-a-half brick pier built in stretcher and English bond• Alternate plan courses of a one-and-a-half brick pier attached to a one brick wall in stretcher and English bond• Horizontal sections through brickwork showing how timber window and door frames are built into walls• Horizontal sections through brickwork showing how steel window and door frames are built into walls	Calculation of the quantity of all materials required for a small building with two rooms: <ul style="list-style-type: none">• Concrete for foundations• Hardcore• Blinding layer• DPC• DPM• Reinforcement for floor• Concrete for floor• Screed	Calculation of the quantity of all materials required for a small building with two rooms: <ul style="list-style-type: none">• Skirting• Walls (deduct for openings)• Doors• Windows• Floor covering• Wall plate• Roof material, including covering		

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REQUISITE PRE-KNOWLEDGE		Learners to visit a site where the following is used: Scaffolding, erecting of scaffolding, dismantling of scaffolding, ladders, hoist & chute	The procedure, preservation and sustainability of the following materials: Painting, curing, electroplating, powder coating	Application and uses Materials in built environment Adhesives Differentiation between types of concrete	Specialised tools and basic machinery that can be used in doors and on site	Specialised tools and basic machinery that can be used on site	Freehand sketches relevant to the super structure of a building Interpretation of drawings Scales	Different brick bonds Plan courses Freehand sketches relevant to the super structure of a building Scales	Calculate materials required for a one-room building with a door and a window, excluding the roof	Calculate materials required for a one-room building with a door and a window, excluding the roof		
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING		Practical work can be done to expose learners to the real-life situation YouTube, videos, etc.		Materials as indicated in the content	Equipment and materials as indicated in the content Machinery, especially special tools Ensure that the dumpy and laser level, as well as the multi detector are practically demonstrated		Videos, YouTube, PowerPoint presentations, data projector, interactive whiteboard, etc. Drawing equipment for learners		Calculators, tape measure, workbook with quantity layout, etc. Site visit can be arranged to explain practical work Basic materials must be shown as sizes are important			
ASSESSMENT	INFORMAL ASSESSMENT: REMEDIATION	Do practicals by erecting a scaffold Correct placement of a ladder against a wall Testing the slump test	Worksheets with the procedure, preservation and sustainability of materials Test on ferrous and non-ferrous metals	Do practicals: Testing of concrete – slump test, cube test.	Worksheets with basic properties of ferrous and non-ferrous metals Taking care of tools and machinery		Test drawings – interpretations only	Do drawings in class informally	Do informal testing by completing work sheets on quantities Prepare worksheets from given examples in the textbook			
	SBA FORMAL ASSESSMENT	Assignment PAT (PHASE 1 AND PART 1 OF PHASE 2) Learners should be taught and be able to understand and apply principles and concepts of each topic and should not be limited to specific specifications in the CAPS										

2023/24 ANNUAL TEACHING PLANS: CONSTRUCTION: GRADE 12 (TERM 2)

TERM 2		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	School holiday
CAPS TOPICS		JOINING (GENERIC)	JOINING (SPECIFIC)	BRICKWORK (SPECIFIC)	EXCAVATIONS (SPECIFIC)	EXCAVATIONS (SPECIFIC)	FOUNDATIONS (SPECIFIC)	CONCRETE FLOORS (SPECIFIC)	MID-YEAR EXAMINATION			
TOPICS/CONCEPTS, SKILLS AND VALUES		Identify and explain the use of • Bolts and nuts • Rawl bolts • Plastic plugs • Rawl plugs	Methods of joining the following items: Joining roof trusses to brickwork Wall plate to wall Concrete base to steel sections	Cavity walls: • Scale drawings of cavity walls showing constructional details Paving: • Ground preparation • Paving methods • Vertical section through paving showing bedding, damp proof membrane (DPM) where applicable and paving bricks • Sketches of basket weave pattern and herring bone pattern Beam filling: • Purpose • Advantages and disadvantages • Construction detail	Safety factors and regulations to be considered: • Before and after excavations are complete • Excavating to obtain a level site • Excavating to obtain foundation trenches • When working in deep trenches • Scale drawings of keeping excavations from collapsing on firm ground, indicating the following: • 152 x 50 mm walling boards • 152 x 38 poling boards • 100 x 100 mm struts	Safety factors and regulations to be considered: • Before and after excavations are complete • Excavating to obtain a level site • Excavating to obtain foundation trenches • When working in deep trenches • Scale drawings of keeping excavations from collapsing on firm ground, indicating the following: • 152 x 50 mm walling boards • 152 x 38 poling boards • 100 x 100 mm struts	Pile foundations: • Reasons for using pile foundations • Advantages of using pile foundations • Description and methods of installing: • Precast concrete piles • Steel tube caisson piles • Driven in-situ piles • Longitudinal and cross-sectional drawings through a pile and ground beam	Rib and block floors: • Preparations of walls to receive ribs • Factors to be considered before, during and after installations • Safety factors to be considered before, during and after installations • Materials used for rib and block floors • Installation procedure • Advantages and disadvantages of using rib and block floors • Sketches through a rib and block floor				
REQUISITE PRE-KNOWLEDGE		Pre-knowledge of joining materials	Methods and identification of joining materials	Bricks and blocks Materials for a cavity wall Different walls and bonds	Excavation of trenches and a level site to work on	Excavation of trenches and a level site to work on	Pile foundations Drawings of different pile foundations	Knowledge of rib and block flooring				
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING		Materials needed in the workshop – bolts, screws, nuts, etc.	Materials needed in the workshop – bolts, screws, nuts, etc. Examples to demonstrate connection to learners	Drawing equipment Equipment and materials needed for setting out Shuttering boards for trenches				Internet, YouTube, smartphones Materials for a rib and block floor, internet, YouTube, smartphones				
ASSESSMENT	INFORMAL ASSESSMENT: REMEDIATION	Joining of different joining fixtures can be done		Informal testing by means of practical lessons Self-experiencing Dry packing of cavity walls and different paving methods		Testing – worksheets, informal test, etc. Scale drawings of keeping excavations from collapsing on firm ground		Worksheets – identification and uses Tests Drawings of a rib and block floor Labelling a sketch - rib and block floor Practical work to enhance learning Dry packing a rib and block floor (5 layers high)				
	SBA FORMAL ASSESSMENT	Mid-year examination Completion of term facets for phase 2 of PAT and assessment of facets Learners should be taught and be able to understand and apply principles and concepts of each topic and should not be limited to specific specifications in the CAPS										

2023/24 ANNUAL TEACHING PLANS: CONSTRUCTION: GRADE 12 (TERM 3)

TERM 3		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	PRELIMINARY EXAMINATIONS	School Holiday
CAPS TOPICS		REINFORCEMENT IN CONCRETE (SPECIFIC)	REINFORCEMENT IN CONCRETE (SPECIFIC)	CONSTRUCTION: ROOFS (SPECIFIC)	FORMWORK (SPECIFIC)	FORMWORK (SPECIFIC)	CONSTRUCTION: BRICKWORK (Specific)	STAIRCASE (SPECIFIC)	CONSTRUCTION: PLASTER AND SCREED (SPECIFIC)				
TOPICS/CONCEPTS, SKILLS AND VALUES		Reinforcement in concrete: <ul style="list-style-type: none">FloorsBeamsColumns	Materials, identification and requirements that materials used for reinforcing must comply with: <ul style="list-style-type: none">Draw sectional views of concrete beams, cantilever beams and columns to indicate reinforcementMinimum concrete coverForm oils and emulsionsDefects that can occur in concrete due to shuttering	Scale drawings of the following types of roof trusses: <ul style="list-style-type: none">SA roof truss with maximum span of 10 metresLean-to roofCouple roofClose couple roofCollar-tie roofKing post roof Spacing of roof trusses according to roof covering used Purpose and advantages of roof underlays Differentiation between purlin and battens	Properties of materials used for formwork Drawing of formwork and methods of erecting and supporting the following: <ul style="list-style-type: none">BeamsBeam with attached floor slabStraight flight of stairs with a landingThe use of wedges in formwork	Properties of materials used for formwork Drawing of formwork and methods of erecting and supporting the following: <ul style="list-style-type: none">Straight flight of stairs with a landingThe use of wedges in formwork	Beam filling: <ul style="list-style-type: none">Constructional detailsPurposeAdvantages Arches: Purpose, constructional details, advantages, disadvantages and support during construction of semi-circular and flat arches, closed and open lagging <ul style="list-style-type: none">Differentiation between rough arches and gauged arches	<ul style="list-style-type: none">Vertical cross-section through a straight flight of concrete staircase with a landing showing balustrade and handrailGeneral principles involved in designing a concrete staircaseDifferent profiles and methods of mounting handrails onto balusters and walls	<ul style="list-style-type: none">Mix proportions of plasterApplication of plasteringPurpose of skimming of plasterAdmixtures to plaster Alternative plaster finishes to walls: <ul style="list-style-type: none">Smooth finishSplatter finishWavy surfaceBagging finish to walls Screed: <ul style="list-style-type: none">Mix proportions of screedPreparation of floors to receive screedApplication of screedsPurpose of screedAdmixtures to screed				
REQUISITE PRE-KNOWLEDGE		Drawing of formwork and methods of erecting and supporting Lintels Materials for reinforcements Pre-knowledge on beams, floors and columns	Materials in built environment Steel concrete Identification, uses, sketches and properties of steel sections and reinforcement	Roof covering. Characteristics of IBR and corrugated iron sheeting Characteristics of concrete roof tiles Roof underlay		Pre-knowledge of materials used for formwork		Pre-knowledge of beam filling and arches	Pre-knowledge of plaster and screed, mix proportions and application				
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING		YouTube, wall charts	YouTube, wall charts	YouTube, wall charts	YouTube, wall charts	YouTube, wall charts	YouTube, wall charts	YouTube, wall charts					
ASSESSMENT	INFORMAL ASSESSMENT: REMEDIATION	The start of the term – question and answers	Worksheets with identification of materials only	Short tests and peer marking	Short tests and peer marking	Short tests and peer marking	Short tests and peer marking	Short tests and peer marking					
	SBA FORMAL ASSESSMENT	PRELIMINARY EXAMINATIONS COMPLETION OF PHASE 2 OF PAT AND PAT ASSESSMENT Learners should be taught and be able to understand and apply principles and concepts of each topic and should not be limited to specific specifications in the CAPS											

2023/24 ANNUAL TEACHING PLANS: CONSTRUCTION: GRADE 12 (TERM 4)

TERM 4		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	School holiday	
CAPS TOPICS		REVISION AND PREPARE FOR EXAMINATION											
TOPICS/CONCEPTS, SKILLS AND VALUES		NSC EXAMINATIONS											
REQUISITE PRE-KNOWLEDGE													
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING													
ASSESSMENT	INFORMAL ASSESSMENT: REMEDIATION												
	SBA (FORMAL)												