

2023/24 ANNUAL TEACHING PLANS: CONSTRUCTION: GRADE 10 (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)	INTRODUCTION OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS)	INTRODUCTION OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS)	MATERIALS: (GENERIC)	MATERIALS: (GENERIC)	MATERIALS: (GENERIC)	MATERIALS: (SPECIFIC)	EQUIPMENT AND TOOLS (GENERIC)	EQUIPMENT AND TOOLS (SPECIFIC)	COMPLETION OF ASSIGNMENT/1ST PHASE OF PAT	
TOPICS /CONCEPTS, SKILLS AND VALUES	<p>Introduction and orientation to the subject and the three specialisation areas in Civil Technology. Requirements of the OHS Act pertaining to: Personal safety:</p> <ul style="list-style-type: none"> • Clothing • Head protection • Eye and ear protection • Footwear <p>General safety:</p> <ul style="list-style-type: none"> • Hand tools • Power tools • Excavations • Safe site planning and organisation • Safe site working methods • Fire prevention and protection • Types of fires • Fire extinguishers for specific types of fires • Fire triangle (oxygen, heat and fuel) • Main causes of fire 	<p>Safety and health aspects associated with storage of materials:</p> <ul style="list-style-type: none"> • On site • In workshops • Hazardous materials in the workplace e.g., solids, liquids, gasses and radioactive material • HIV/Aids awareness 	<p>Awareness of substance abuse:</p> <ul style="list-style-type: none"> • Drugs • Alcohol <p>Introduction to PAT (Phase 1 and part 1 of Phase 2)</p>	<p>Basic properties of materials of:</p> <ul style="list-style-type: none"> • Concrete • Screed • Mortar • Coarse aggregates • Fine aggregates • Cement • Lime • Water 	<p>Timber hardwood, softwood and board products:</p> <ul style="list-style-type: none"> • Saligna, Meranti, SA pine, shutter board, • Plywood • Block board • Tempered and standard Masonite (hardboard) 	<p>Bricks and blocks:</p> <ul style="list-style-type: none"> • Clay and cement <p>Metal:</p> <ul style="list-style-type: none"> • Ferrous metals: • Grey cast iron, ductile cast iron, wrought iron, malleable iron, low carbon steel, stainless steel <p>Non-ferrous metals:</p> <ul style="list-style-type: none"> • Aluminium, bronze, copper, lead, tin, zinc <p>Adhesives:</p> <ul style="list-style-type: none"> • PVC adhesives, silicone, mastic sealants <p>Synthetic materials:</p> <ul style="list-style-type: none"> • Thermoplastics, thermosetting plastics, polythene, polypropylene and polyvinyl chloride 	<p>Manufacturing process of bricks:</p> <p>Clay bricks: face, semi-face, stock</p> <p>Cement bricks</p> <p>Differentiation between cellular and keyed bricks having holes over a solid brick</p>	<p>Identification and proper use of the following:</p> <p>Basic site equipment:</p> <ul style="list-style-type: none"> • Round shovel • Square shovel • Spade • Pick • Wheelbarrow • Metal pegs <p>Bricklaying tools:</p> <ul style="list-style-type: none"> • Brick trowel • Line block/corner block • Gauge rod • Tingle • Pipe level <p>Setting out tools:</p> <ul style="list-style-type: none"> • Line and pins • Steel square • Steel tape measure • Folding rule (1 metre in length) • Wooden or metal pegs • Straight edge • Spirit level <p>Jointing tools:</p> <ul style="list-style-type: none"> • Long jointer • Short jointer • Pointing trowel • Mastic trowel <p>Woodworking tools:</p> <ul style="list-style-type: none"> • Wooden mallet • Try square • Marking gauge • Tenon saw • Mortise chisel • Files <p>Plumbing tools:</p> <ul style="list-style-type: none"> • Pipe vice • Hack saw • Pipe cutters (copper tube) • Reamers • Pipe wrenches (Stillson wrench) • Gas torch • Plumb bob • Adjustable spanner or shifting spanner 	<p>Identification of the following:</p> <p>Setting out tool:</p> <ul style="list-style-type: none"> • Dumpy level <p>Brick cutting tools:</p> <ul style="list-style-type: none"> • Comb hammer • Club hammer • Cold chisel • Bolster • Sledgehammer <p>Plastering tools:</p> <ul style="list-style-type: none"> • Wooden/plastic float • Plastering trowel • Hand hawk • Straight edge • Block brush • Corner trowels (internal and external) • Nose trowels 	<p>COMPLETION OF FIRST PHASE OF PAT</p> <p>COMPLETION OF ASSIGNMENT</p>	<i>School holiday</i>

TERM 1	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
REQUISITE PRE-KNOWLEDGE	Personal safety, general safety, safety and health aspects associated with storage of materials, HIV/Aids and awareness of substance abuse	Personal safety, general safety, safety and health aspects associated with storage of materials, HIV/Aids and awareness of substance abuse		Basic knowledge on materials: Concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Basic knowledge on materials: Concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Basic knowledge on materials: Concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Basic knowledge on materials: Concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Knowledge on basic site equipment: Bricklaying tools Setting out tools Woodworking tools	Knowledge on basic site equipment: Bricklaying tools Setting out tools Woodworking tools	
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING	Practical work can be done to expose learners to the real-life situation. YouTube, videos, etc. Learners can do simulations of First Aid as explained in the textbook			Materials as indicated in the content	Materials as indicated in the content Wall charts, videos on materials, etc.		Videos, YouTube, PowerPoint presentations, data projector, interactive whiteboard, etc. Materials as indicated in the content	Equipment and tools as indicated in the content topic. Site visit can be arranged to explain practical work Basic materials must be shown as sizes are important Workshop can be visited to explain the parts of the machines		
ASSESSMENT	INFORMAL ASSESSMENT: REMEDIATION	Test learners on content Do practical to link content to real-life situations	Small informal test Worksheet with practical situations		Do practical work to show the different materials	Worksheets with materials on it Informal test materials as indicated in the topic	Worksheets with materials on it Informal test materials as indicated in the topic	Do informal testing by completing worksheet Prepare worksheets from given examples in the textbook Do drawings in class informally Explain content within a practical lesson in the workshop SBA - Informal test to be written - Total = 50		
	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 10 (TERM 2)

TERM 2		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10		
CAPS TOPICS		Graphics as means of communication (GENERIC)	Graphics as means of communication (GENERIC)	Graphics as means of communication (GENERIC)	Graphics as means of communication (SPECIFIC)	Graphics as means of communication (SPECIFIC)	Graphics as means of communication (SPECIFIC)	QUANTITIES (GENERIC)	Controlled tests				School holiday
TOPICS/CONCEPTS, SKILLS AND VALUES		Introduction to graphics as a means of communication: <ul style="list-style-type: none"> Application of SANS 0143 building regulations in all drawings Types of lines, dimensioning and labelling (Code of Practice - SANS) Basic freehand sketching (related to building industry) 	Make basic drawings by applying various scales: <ul style="list-style-type: none"> Orthographic projection Isometric views applicable to construction Instruments and instrument drawings Floor plan only of a two-room rectangular building Introduction to computer-aided drawings 	Freehand sketching and scale drawings Scale drawing of wall build in stretcher bond	Freehand sketching and scale drawings of the following: <ul style="list-style-type: none"> Full brick Quarter bat Half bat Bevelled bat Queen closer 	Freehand sketching and scale drawings of the following: <ul style="list-style-type: none"> King closer Soldier course Sailor course Header course Brick on edge Stretcher course 	Scale drawings of a wall built in stretcher bond showing: <ul style="list-style-type: none"> The alternate plan courses Front elevation with raking back and toothing End elevation Block bonding Vertical cross-section through sub-structure of a building 	Calculate the following: <ul style="list-style-type: none"> Volume of concrete for a straight trench Square metre of materials such as tiles and brick walls Length of skirting and quarter round moulding 					
REQUISITE PRE-KNOWLEDGE		Pre-knowledge of Grade 9 technology drawings Knowledge of Technology Mini PAT should be established by the teacher	Learner's prior knowledge of communication in Technology	Learner's prior knowledge of communication in Technology	Learner's prior knowledge of communication in Technology	Learner's prior knowledge of communication in Technology	Learner's prior knowledge of communication in Technology	Learner's prior knowledge of communication in Technology	Basic mathematical skills				
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING			Drawing equipment	Drawing equipment	Drawing equipment	Drawing equipment	Drawing equipment	Drawing equipment	Calculator PowerPoint presentations				
INFORMAL ASSESSMENT: REMEDIATION		Equipment and tools as indicated in the content topic. Site visit can be arranged to explain practical work Basic materials must be shown as sizes are important Workshop can be visited to explain the parts of the machines	Make use of materials and test learner's ability to draw or sketch a basic floorplan Complete drawings on worksheets Visit a computer lab and expose learners to hardware	Make use of materials and test learner's ability to draw or sketch a basic floorplan Complete drawings on worksheets Visit a computer lab and expose learners to hardware	Make use of materials and test learner's ability to draw or sketch a basic floorplan Complete drawings on worksheets Visit a computer lab and expose learners to hardware	Make use of materials and test learner's ability to draw or sketch a basic floorplan Complete drawings on worksheets Visit a computer lab and expose learners to hardware	Make use of materials and test learner's ability to draw or sketch a basic floorplan Complete drawings on worksheets Visit a computer lab and expose learners to hardware	Make use of materials and test learner's ability to draw or sketch a basic floorplan Complete drawings on worksheets Visit a computer lab and expose learners to hardware	Worksheets Class and homework activities Informal class tests				
ASSESSMENT													
SBA FORMAL ASSESSMENT													Controlled test 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 10 (TERM 3)

TERM 3	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	School holiday
CAPS TOPICS	QUANTITIES (GENERIC)	QUANTITIES (GENERIC)	QUANTITIES (GENERIC)	JOINING (GENERIC)	JOINING (GENERIC)	JOINING (SPECIFIC)	JOINING (SPECIFIC)	FOUNDATIONS	FOUNDATIONS	COMPLETION OF ASSIGNMENT/PAT	
TOPICS/CONCEPTS, SKILLS AND VALUES	Introduction to SI units Calculation of the following: • Area of foundation • Volume of sand • Volume of cement • Volume of stones • Volume of water • Quantities for a small building up to floor level	Introduction to SI units Calculation of the following: • Area of foundation • Volume of sand • Volume of cement • Volume of stones • Volume of water • Quantities for a small building up to floor level	Introduction to SI units Calculation of the following: • Area of foundation • Volume of sand • Volume of cement • Volume of stones • Volume of water • Quantities for a small building up to floor level	Identify and explain the uses of: Screws: • Countersunk head, round head, raised head, jetting screw, drywall screw, self-cutting bolt, head screw, drill tip bolt head screw, coach screw	Advantages of using screws over nails: Nails: • Round wire, masonry, clout nail, steel cut nail, oval nail, panel pin, clout nail • Brad nails • Advantages of using nails over screws	Methods of joining the following items: • Steel to concrete • Wood to concrete • Existing concrete to fresh concrete	Methods of joining the following items: • Steel to concrete • Wood to concrete • Existing concrete to fresh concrete	Foundations: • Purpose and functions • Types of soil and soil conditions • Strip and step foundations • Excavations in different types of soil	Five principal reasons to compact soil: • Increases load-bearing capacity • Prevents soil settlement and frost damage • Provides stability • Reduces soil contraction, swelling and water seepage • Reduces settling of the soil	COMPLETION OF CONTROLLED TEST/PAT	
REQUISITE PRE-KNOWLEDGE	Introductory concepts: Quantities on volume of concrete for a straight trench	Square metre of materials for tiles and brick walls, length of skirting etc.	Introductory concepts: Calculation of area of foundation, volume of sand, stone cement and water etc.	Basic joining content (will be used to join other materials in Grade 11 and 12) Screws and nails	Advantages of using screws over nails Nails	Introductory concepts: Methods of joining: Steel to concrete, wood to concrete and existing concrete to fresh concrete	Introductory concepts: Methods of joining: Steel to concrete, wood to concrete and existing concrete to fresh concrete	Important content on foundations: Purpose, types, strip and step foundations, Compaction of soil	Important content on foundations: Purpose, types, strip and step foundations, Compaction of soil		
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING	YouTube, wall charts, calculators, quantities workbook	YouTube, wall charts, calculators, quantities workbook	YouTube, wall charts, calculators, quantities workbook	YouTube, wall charts, calculators, quantities workbook	Materials for e.g., nails and screws	Sketches work Scale drawings – how to interpret drawings Knowledge on glues	Sketches work Scale drawings – how to interpret drawings Knowledge on glues	Sketches work Scale drawings – how to interpret drawings	Bricks Plastering Mortar Sketches of beam filling		
ASSESSMENT	INFORMAL ASSESSMENT: REMEDIATION				Informal tests and peer marking Open book tests	Short tests and peer marking Practical work as set out in the textbook	Short tests and peer marking Practical work as set out in the textbook				
	SBA FORMAL ASSESSMENT	Controlled test PAT (Part 2 of phase 2 to be in progress) 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 10 (TERM 4)

TERM 4		WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	
CAPS TOPICS		CONCRETE AND BRICKWORK (SPECIFIC)	CONCRETE AND BRICKWORK (SPECIFIC)	CONCRETE AND BRICKWORK (SPECIFIC)	FORMWORK (SPECIFIC)	FORMWORK (SPECIFIC)	FORMWORK (SPECIFIC)	CONSOLIDATION, FINAL EXAM AND ASSESSMENT OF PAT				
TOPICS/CONCEPTS, SKILLS AND VALUES		Definition of concrete: <ul style="list-style-type: none"> • Site preparation of placing concrete • Mix proportions for low, medium and high strength concrete • Types and purpose of admixtures to concrete • Purpose of slump test • Equipment used for slump test 	Levelling and compacting of concrete: <ul style="list-style-type: none"> • Placing, curing, curing temperatures and testing • Classification of concrete • Advantages of concrete • Factors leading to defects in concrete, structural defects in concrete • Alternate plan courses, front and elevation of a one-brick and half-brick wall built in stretcher bond • Front elevation of a stretcher bond wall showing raking back, toothing and block bonding 	Reinforcement for brickwork: <ul style="list-style-type: none"> • Purpose • Properties • Location Reinforcement for concrete: <ul style="list-style-type: none"> • Identification • Reason • Qualities • Properties Methods of tying reinforcement spacers used with reinforcements: <ul style="list-style-type: none"> • Purpose • Types 	<ul style="list-style-type: none"> • Definition of formwork • Definition of striking of formwork • Factors to be observed when striking of formwork 	<ul style="list-style-type: none"> • Purpose of formwork • Treatment of formwork before and after casting of concrete 	<ul style="list-style-type: none"> • Materials used for formwork for square column and circular columns (wood and steel) • Label drawings of square and circular columns 					
REQUISITE PRE-KNOWLEDGE		Important content on concrete: Definition, site preparation, mix proportions etc. <ul style="list-style-type: none"> • Procedure for conducting slump test • Outcomes of slump test 	Spacers used with reinforcements: Important content on concrete: Definition, site preparation, mix proportions etc.		Definition of formwork: <ul style="list-style-type: none"> • Definition of striking of formwork • Factors to be observed when striking of formwork 	Purpose of formwork: <ul style="list-style-type: none"> • Treatment of formwork before and after casting of concrete 	Materials used for formwork for square and circular columns, wood and steel Label drawings of square and circular columns					
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING		Pre-knowledge of concrete and material	Curing devices, reinforcement and bricks for bonds		Formwork practical	Form oils and curing	Square and round Columns shapes/models					
ASSESSMENT	INFORMAL ASSESSMENT: REMEDIATION	Worksheets Class and homework activities Informal class tests	Worksheets Class and homework activities Informal class tests	Worksheets Class and homework activities Informal class tests	Worksheets Class and homework activities Informal class tests	Practical activity on installation of a gutter and down pipe Worksheets	Class and homework activities Informal class tests					
	SBA (FORMAL)	Final examination Assessment of the PAT 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										

School holiday