basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

Annexure A

Fundamental Content and Skills

Revised Annual Teaching Plans

(ATPs)

Further Education and Training

(FET)

5 July 2020

Contents

1. PURPOSE

The purpose of this document is to guide teachers as implementers of the (Revised Annual ATPs) on specific fundamental content/topics/concepts that should be covered per subject, per phase and grade in the context of the revised school calendar during the COVID-19 pandemic:

Grade 10-12	FET Curriculum Fundamentals
Grade 12	• No changes • May have to look at the academic year and when the NSC exams will be written • **Life Orientation** to place greater emphasis on self-directed learning, health and safety. • Maximise access and utilisation of other support initiatives - TV/ Radio
Grade 10-11	• Grade 11 as far as practicable, not to rotate. • Comply with Amended ATP • May have to reduce the time / format of the final exams • **Life Orientation** to place greater emphasis on self-directed learning / learning at home, health and safety. • Focus on integrating theory and practical work for practical subjects during contact sessions • Maximise access and utilisation of other support initiatives - TV/ Radio
Implications	• **The pressure on teachers and learners is lessened, and more focus will be on 'deeper Learning.'** • Focus on the critical content and then provide clear directions on what is to be done at home • Focus on formative assessment • Learning at home • SBA and summative assessment to be amended to focus on content and skills covered

This booklet contains core content and skills for the following subjects for each grade in the Further Education and Training (FET) band:

I. AGRICULTURE AND NATURE CONSERVATION

Agricultural Sciences Grade 10-11,
Agricultural Management Practices Grade 10-11,
Agricultural Technology Grade 10-11,

II. ARTS SUBJECTS:

Dance Studies Grade 10-11,
Design Grade 10-11,
Dramatic Arts Grade 10-11,
Music Grade 10-11,
Visual Arts

III. **BUSINESS, COMMERCE AND MANAGEMENT:**

Accounting Grade 10-11,
Business Studies Grade 10-11,
Economics Grade 10-11

IV. COMMUNICATION STUDIES AND LANGUAGE

Home Languages Grade 10-11,
First Additional Languages Grade 10-11,
Second Additional Languages Grade 10-11

V. ENGINEERING AND TECHNOLOGY

Civil Technology Grade 10-11;
Electrical Technology Grade 10-11;
Mechanical Technology Grade 10-11;
Engineering Graphics and Design Grade 10-11,
Technical Mathematics Grade 10-11,
Technical Sciences Grade 10-11

VI. HUMAN AND SOCIAL STUDIES

Life Orientation Grade 10-11
Religion Studies Grade 10-11;
Geography Grade 10-11;
History Grade 10-11;

VII. PHYSICAL, MATHEMATICAL, COMPUTER AND LIFE SCIENCES COMPUTER

Computer Applications Technology Grade 10-11;
Information Technology Grade 10-11;
Life Sciences Grade 10-11;
Mathematical Literacy Grade 10-11;
Mathematics Grade 10-11;
Physical Sciences Grade 10-11;

VIII. SERVICES:

Consumer Studies Grade 10-11;
Hospitality Studies Grade 10-11;
Tourism Grade 10-11.

2. AGRICULTURE AND NATURE CONSERVATION

2.1 Agricultural Sciences Grade 10-11

Fundamentals to be Prioritised	Agricultural Sciences Grade 10-11: Proposed Topics/Concepts per Priority
Agro- Ecology	Pasture Science Farming systems
Soil Sciences	Soil Morphology – including texture, structure, characteristics linked to plant production Soil chemistry- linked to plant production.
Natural Resources **Production Resources**	Primary resources needed for production. Safe use of resources Production factors: Land, Labour, Management and Capital
Plant Production	The production process- requirements Plant nutrition Plant reproduction Pest and Disease control Biotechnology in Plant production Increasing production
Animal Production	Animal Nutrition Animal reproduction Animal protection & diseases Agricultural genetics & Biotechnology
Agricultural Economics	Agricultural management Agricultural marketing Principles of Agri- business

2.2 Agricultural Management Practices Grade 10-11

Fundamentals to be Prioritised	Agricultural Management Practices Grade 10-11: Proposed Topics/Concepts per Priority
Operational Crop and Animal Production Skills **Develop and Enhance Creative Agribusiness Management Entrepreneurial Skills**	• Animal and crop production • Farm management skills • Harvesting and quality control • Processing and value adding, packing and distribution
Acceptable Animal Treatment Practices **Environmental Conservation Whilst Farming**	• Resource utilisation and development • Agricultural economics and marketing • Farm planning and recording • Agritourism

2.3 Agricultural Technology Grade 10-11

Fundamentals to be Prioritised	Agricultural Technology Grade 10-11: Proposed Topics/Concepts per Priority
Tools and Materials	• ***Equipment*:** animal handling facilities: identification, application, parts and maintenance: cattle kraals, weigh bridge, dip facilities, crush pen, neck clamp, immobilizer, dehorning equipment, hot branding equipment, syringes
Safety	• **Basic general safety regulations:** safe handling and safety regulations applicable to all workshop equipment farm equipment as well as skills and construction processes must be dealt with through the content during the year.
Construction Processes	• **Welding:** *arc welding*: working, application, parts, safety, advantages and disadvantages: oil bath arc welder, inverter welder.

3. ARTS SUBJECTS:

3.1 Dance Studies Grade 10-11

Fundamentals to be Prioritised	Dance Studies Grade 10-11: Proposed Topics/Concepts per Priority
There are no Fundamentals Prioritised	• No changes, comply with Amended ATPs; • Emphasis on self-contained Dance -Practice Learning Spaces; • Focus on integrating theory and practical work; • Maximise access and utilisation of other support initiatives - Television, Radio, Print Media (e.g. newspapers), and other digital spaces (e.g. social media); and • SBA to be according to amended focus on content covered
Teaching and Learning is Spatial and Vertical, not Linear.	• ***Dance*** *Studies* Curriculum designed in concepts that are cyclic. • Approach is holistic and repetitive • e.g. Topic covered in Term 1 is repeated in Term 2 or 3 or 4; • Repetition is the topos of the Arts for maximum understanding and introduction to the next related concept; and • 'Compartmentalised' approach in the Arts give rise to content gaps that may not be closed in the next grade.

3.2 Design Grade 10-11

Fundamentals to be Prioritised	Design Grade 10-11: Proposed Topics/Concepts per Priority
There are no Fundamentals Prioritised	• No changes, comply with Amended ATPs; • Emphasis on self-contained Design -Practice Learning Spaces; • Focus on integrating theory and practical work; • Maximise access and utilisation of other support initiatives - Television, Radio, Print Media (e.g. newspapers), and other digital spaces (e.g. social media); and • SBA to be according to amended focus on content covered
Teaching and Learning is Spatial and Vertical, not Linear.	• ***Design*** Curriculum crafted in concepts that are cyclic; • Approach is holistic and repetitive • e.g. Topic covered in Term 1 is repeated in Term 2 or 3 or 4; • Repetition is the topos of the Arts for maximum understanding and introduction to the next related product and/or concept; and • Compartmentalised' approach in the Arts give rise to content gaps that may not be closed in the next grade.

3.3 Dramatic Arts Grade 10-11

Fundamentals to be Prioritised	Dramatic Arts Grade 10-11: Proposed Topics/Concepts per Priority
There are no Fundamentals Prioritised	• No changes, comply with Amended ATPs; • Emphasis on self-contained Drama -Practice Learning Spaces; • Focus on integrating theory and practical work; • Maximise access and utilisation of other support initiatives - Television, Radio, Print Media (e.g. newspapers), and other digital spaces (e.g. social media); and • SBA to be according to amended focus on content covered.
Teaching and Learning is Spatial and Vertical, not Linear.	• ***Dramatic Arts*** Curriculum designed in 'Movements' that are cyclic; • Approach is holistic and repetitive • e.g. Topic covered in Term 1 is repeated in Term 2 or 3 or 4; • Repetition is the topos of the Arts for maximum understanding and introduction to the next related Movement and/or concept; and • Compartmentalised' approach in the Arts give rise to content gaps that may not be closed in the next grade.

3.4 Music Grade 10-11

Fundamentals to be Prioritised	Music Grade 10-11: Proposed Topics/Concepts per Priority
There are no Fundamentals Prioritised	• Reduced number of choice artists in JAZZ - Comply with Amended ATPs; • Emphasis on self-contained Music -Practice Learning Spaces; • Focus on integrating theory and practical work; • Maximise access and utilisation of other support initiatives - Television, Radio, Print Media (e.g. newspapers), and other digital spaces (e.g. social media); and • SBA to be according to amended focus on content covered.
Teaching and Learning is Spatial and Vertical, not Linear.	• ***Music*** Curriculum Streams designed in concepts that are cyclic; • Approach is holistic and repetitive • e.g. Topic covered in Term 1 is repeated in Term 2 or 3 or 4; • Repetition is the topos of the Arts for maximum understanding and introduction to the next related concept; and • 'Compartmentalised' approach in the Arts give rise to content gaps that may not be closed in the next grade.

3.5 Visual Arts Grade 10-11

Fundamentals to be Prioritised	Visual Arts Grade 10-11: Proposed Topics/Concepts per Priority
There are no Fundamentals Prioritised	• No changes, comply with Amended ATPs; • Emphasis on self-contained Arts -Practice Learning Spaces; • Focus on integrating theory and practical work; • Maximise access and utilisation of other support initiatives - Television, Radio, Print Media (e.g. newspapers), and other digital spaces (e.g. social media); and • SBA to be according to amended focus on content covered
Teaching and Learning is Spatial and Vertical, not Linear.	• ***Visual Arts*** Curriculum designed in concepts that are cyclic; • Approach is holistic and repetitive • e.g. Topic covered in Term 1 is repeated in Term 2 or 3 or 4; • Repetition is the topos of the Arts for maximum understanding and introduction to the next related product and/or concept; and • 'Compartmentalised' Approach in the Arts give rise to content gaps that may not be closed in the next grade.

4. BUSINESS, COMMERCE AND MANAGEMENT:

4.1 Accounting Grade 10-11

Fundamentals to be Prioritised	Accounting Grade 10: Proposed Topics/Concepts per Priority
Bookkeeping: Combined Credit and Cash Transactions	• Record cash and credit transactions • Post to General, Creditors & Debtors ledgers • Prepare Trial Balance • Reconcile Debtors' and Creditors' Control accounts with Debtors'' / Creditors' lists • Analyse effect of transactions on the accounting equation
Year-end Adjustments and Final Accounts	• Adjustments: Trading stock deficit/surplus, Consumable stores on hand, Depreciation, Bad debts, Bad debts recovered, Correction of errors/omissions, Accrued expenses, Prepaid expenses, Income received in advance, Accrued income, Interest on mortgage loan • Pre and Post Adjustment Trial Balance • Final Accounts: Trading account and Profit & Loss account • Post-closing Trial Balance
Financial Statements	• Income Statement (Statement of Comprehensive Income) • Balance Sheet (Statement of Financial Position) • Notes to Financial Statements
Analysis and Interpretation of Financial Statements	• Profitability: Gross profit on sales; Gross profit on cost of sales, Net profit on sales, Operating expenses on sales, Operating profit on sales • Liquidity: Current ratio; Acid test ratio • Solvency: Solvency ratio • Return: Net profit on average owners' equity
Cost Accounting	• Basic cost concepts and Basic calculations
Fundamentals to be Prioritised	**Accounting Grade 11: Proposed Topics/Concepts per Priority**
Financial Statements	• Income Statement (Statement of Comprehensive Income) • Balance Sheet (Statement of Financial Position) • Notes to Financial Statements
Analysis and Interpretation of Financial Statements	• Profitability: Gross profit on sales; Gross profit on cost of sales, Net profit on sales, Operating expenses on sales, Operating profit on sales • Liquidity: Current ratio; Acid test ratio; Stock turnover rate; Stock holding period; Average debtors' collection period; Average creditors' payment period • Solvency: Solvency ratio • Return: on each partners' equity; on average partners' equity
Budgeting	• Cash budget of sole trader • Projected Income statement
Cost Accounting	• Calculations: Variable costs (Direct Material costs, Direct labour cost, Selling & Distribution cost) Fixed costs (Factory overhead costs; Administration costs), Total cost of production, Unit cost, Contribution per unit, Break-even point • Recording stock and cost items in Ledger accounts
Inventory Systems	• Definitions of stock systems • Advantages and disadvantages of stock systems • Calculations: cost of sales and Gross profit

4.2 Business Studies Grade 10-11

Fundamentals to be Prioritised	Business Studies Grade 10: Proposed Topics/Concepts per Priority
Relationship and Team Performance	• Factors that can influence team relationships, understanding business objectives, interpersonal relationships in a workplace; personal beliefs and values and how they influence relationships • Criteria for successful and collaborative team performance in a business context; Working in a team to accomplish business objectives.
Presentation of Business Information	• Accurate and concise verbal and non-verbal presentation; Presentation of business reports • Verbal presentations with support materials; Definition of the different audio-visual aids • Design and layout of a presentation using different visual aids
Business Opportunity and Related Factors	• Development of a research instrument; Identification of possible business opportunities • Generating new ideas; Research instruments and data collection ; Protocol of conducting research; Definition of business opportunities and SWOT; Application of SWOT analysis to assess business opportunities
Business Plan	• Analysis of environmental factors; Components of the Business Plan; Cover page and index (include name of business); Executive summary • Description of the business: The long-term objectives, mission and vision of the business • The structure of the business (ownership); The product/service; Legal requirements; SWOT analysis; Marketing plan; Market research; Marketing mix, the 7 Ps, Competition
Fundamentals to be Prioritised	**Business Studies Grade 11: Proposed Topics/Concepts per Priority**
Professionalism and Ethics	• The theories and principles of professionalism and ethics • Application of the principles and skills of professional, responsible, ethical and effective business practice • The concept of ethics and different perspectives on ethics, as well as ethical business ventures
Creative Thinking and Problem Solving, Concepts: Stress, Crisis and Change Management	• Application of creative thinking to address business problems and to improve business practice (recap) • Creative thinking to address business problems and to improve business practice • Creative solutions to business problems; assess these against the reality of the business environment • The concepts relating to stress, crisis and change management
Introduction to Human Resources Function	• Human resources activities; Procedures related to recruitment; Procedure related to selection and interviewing; Procedures of induction and placements. • Labour Relations Act [LRA]; Basic Conditions of Employment Act [BCEA]; Employment Equity Act (EEA); Compensation for Occupational Injuries and Diseases; Act (COIDA); Legalities of employment contracts; Employee benefits: pension, medical, other
Marketing Function	• Marketing activities; Marketing: locating the consumer standardisation and grading, storage, transport, financing, risk- bearing, and buying & selling • Product policy; Distribution policy; Communication policy; Pricing policy

4.3 Economics Grade 10-11

Fundamentals to be Prioritised	Economics Grade 10: Proposed Topics/Concepts per Priority
Dynamics of Markets	• Value; prices; utility; perfect and imperfect markets; ceteris paribus; global markets (effects of electronics); supply and demand; price forming, functions of markets
Production Possibility Curve / Frontier	• Phenomenon; choice; scarcity; production possibilities curve determined by internal and external factors; consequences on inefficiencies; maximum satisfaction by using indifference curve on consumption and production
Public Sector Intervention	• Indirect taxes; subsidies; welfare; maximum and minimum price / ceiling and floor prices; production; minimum wages
Economic Issues of the Day: Unemployment	• Nature of unemployment: numbers; unemployment rate; South African unemployment phenomenon; Causes of unemployment; consequences of unemployment; • Approaches to solve unemployment: growth of production; public works programmes; Economically marginalised groups
Population and Labour Force	• Population size: population growth; natural growth rate; demographic cycle; projected population growth rate; migration; • Labour force: age distribution; numbers; unemployment; geographic distribution
Labour Relations	• Labour force in a South African context: demand and supply for labour; Interaction of demand and supply; • Labour Relations Act • Labour rights and conventions: BCEA; LRA; COIDA; • Collective bargaining process • Labour courts: Powers
Economic Redress	• Redress and reconstruction: factors of production; Democratisation of economic procedures: labour legislation; public hearing; NEDLAC; Self-regulating bodies • Macro-economic adaptations: economic performance; employment; income inequality; poverty; stability
Growth and Development	• Early economic development and emergence of trade • Evolution of markets • Governments and the regulation of markets • Industrial development
FUNDAMENTALS TO BE PRIORITISED	**ECONOMICS GRADE 11: PROPOSED TOPICS/CONCEPTS PER PRIORITY**
Dynamics of Markets	• Relationships between markets • Effects of costs and revenue • Price elasticity
Economic Growth	• Wealth creation and patterns of distribution • Wealth creation & patterns of distribution • Distribution • Redistribution methods • Economic growth: meaning and calculation; importance; methods; constraints; SA' s recent growth experience • Standard of living
Economic Development	• Methods of development • Common characteristics of developing countries • Developing strategies • South Africa's endeavours • Indigenous knowledge systems
Globalisation	• Meaning, Causes, Consequences, North / South Divide
Money and Banking	• Money; Monetary systems; Functions of money; Value of money; Money associated instruments • Banking; Credit creation process; Interest rates; Micro lending; Central banking; monetary policy; bank failures

5. COMMUNICATION STUDIES AND LANGUAGE

5.1 Home Languages Grade 10-11

Fundamentals to be Prioritised	Home Languages Grade 10-11: Proposed Content per Priority	
Language Skills: Listening and Speaking	**Listening process:** Pre-listening, during listening, post-listening **Different kinds of listening:** • Listening for specific information • Listening for critical analysis & evaluation • Listening for appreciation and interaction Listening comprehension **The Speaking Process:** Planning, researching, organising, practicing, presenting	**Features and conventions of oral communication texts**: Prepared speech (1 x) Unprepared speech Unprepared reading aloud Debate, panel/forum/group discussions, informal discussion/ conversation Dialogue Interview Report, review (Grade 11) Directions and instructions Introducing a speaker Vote of thanks
Language Skills: Reading and Viewing	**Reading process:** Pre-reading Reading Post-reading **Interpretation of visual texts (range of graphic and visual texts)** **Vocabulary development and language use** **Sentence structures and the organisation of texts**	**Literature study:** **Features of literary texts:** Poetry (5 of 10 prescribed poems & 1 unseen poem) – compulsory **OR** Novel/drama **African Home Languages:** **Features of literary texts:** Poetry (5 of 10 prescribed poems & 1 unseen poem) – compulsory OR drama OR novel/folklore Folklore: 4 of 8 folktales, 2 of 4 praise poems
Language Skills: Writing and Presenting	**Process Writing:** Planning, drafting, revising, editing, proof-reading and presenting **Language structures and conventions during the writing process** **Text types: format and features of texts produced:** **Essays:** **Grade 11** Argumentative, Discursive, Reflective, Literary essay **Grade 10** • Narrative • Argumentative • Descriptive • Literary essay	**Transactional Texts:** • Friendly/formal letters (request/ complaint/application/business) • Formal and informal letters to the press • Formal or informal report • Review (Grade 11) • Newspaper/magazine article • Obituary • Speech • Dialogue • Interview • Email

Language Structures and Conventions (Integrated into all Language Skills) See CAPS for all Home Languages.	**Register, style and voice** **Word choice** **Sentence construction** **Paragraph writing** **Punctuation and spelling** **Parts of words** • Roots • Prefixes • Suffixes Nouns Pronouns Verbs and Modalities Adjectives Adverbs Question forms	Prepositions and locatives Clauses and sentences Conjunctions and transition words Interjectives / Idiophones Exclamations Punctuation Spelling **Critical Language Awareness** • Facts and opinions • Direct and implied meaning • Denotation and connotation • Socio-political and cultural background of texts and author • The effect of selections and omissions on meanings • Relationships between language and power • Emotive and manipulative language

5.2 First Additional Languages Grade 10-12

Fundamentals to be Prioritised	First Additional Languages Grade 10-12: Proposed Content per Priority
Listening and Speaking	**Listening for specific information:** • (Informative, evaluative, appreciative and interactive) • Listening comprehension • Listening for critical analysis and evaluation • Listening for appreciation and interaction **The Speaking Process** • *Planning* • *Researching* • *Organising* • *Practicing* • *Presenting* **Oral Communication Texts** • Unprepared speech • Conversation
Reading and Viewing	**Reading process:** • *Pre-reading* • *Reading* • *Post-reading* **Interpretation of visual texts (range of graphic and visual texts)** **Vocabulary development and language use** **Sentence structures and the organisation of texts** **Literature study:** Features of literary texts **Grade 12:** Choice of two genres: Poetry (10 prescribed poems) **Grade 11**: Choice of ONE genre: Poetry (8 poems from prescribed anthology)/ drama/ novel/ short stories (6 short stories from prescribed anthology) **Grade 10:** Choice of One genre: Poetry (6 poems from prescribed anthology), drama, novel, short stories (6 short stories from prescribed anthology)

Writing and Presenting	**Process Writing:** Planning, drafting, editing, proof-reading and presenting Text types: format and features: Essays: **Grade 12:** Narrative**,** Argumentative**,** Descriptive**,** Discursive**,** Reflective **Grade 11:** Narrative**,** Descriptive, Discursive**,** Reflective **Grade 10:** Narrative**,** Descriptive **Transactional Texts:** • Friendly/formal letters (request/complaint/application/business) (All grades) • Formal letter to the press (All grades) • Formal or informal report (Gr 11 and 12) • Review (Grades 11 – 12) • Newspaper/magazine article (Grade 12) • Obituary (Grade 12) • Curriculum Vitae and covering letter (Grade 12) • Agenda and Minutes of a Meeting (Grade 11 and 12) • Speech (Grade 12) • Dialogue (All grades) • Interview (Gr 11-12) • Email (All grades) Covering letter and CV (Grade 12)
Language Structures and Conventions (Integrated into all Language Skills)	**Register, style and voice, Word choice, Sentence construction, Paragraph writing, Punctuation and Spelling** **Parts of words (Roots, Prefixes, Suffixes)** • Nouns, Determiners, Pronouns, Adjectives, Adverbs, Prepositions, Verbs, Verb Tenses Concord, Modals, Conditional sentences, Passive voice, Reported Speech, Punctuation and Spelling **Critical Language Awareness** • Emotive and manipulative language, Bias, prejudice and stereotyping Assumptions and their impact, Facts and opinions Implied meaning and inference, Denotation and connotation Purpose of including or excluding information, Writer/producer's point of view

5.3 Second Additional Languages Grade 10-11

Fundamentals to be Prioritised	Second Additional Languages Grade 10-11: Proposed Content per Priority
Listening and Speaking	**Listening for specific information:** (Informative, evaluative, appreciative and interactive) Listening comprehension Listening for critical analysis and evaluation Listening for appreciation and interaction **The Speaking Process** *Planning*, *Researching*, *Organising*, *Practicing*, *Presenting* **Oral Communication Texts** The features and conventions Prepared speech (1 x) Conversation (1 x) Prepared Reading Aloud (1x) Listening Comprehension (1x)
Reading and Viewing	**Reading process:** *Pre-reading*, *Reading*, *Post-reading* **Interpretation of visual texts (range of graphic and visual texts)** **Vocabulary development and language use** **Sentence structures and the organisation of texts** **Literature study:** **Features of literary texts** **Grade 10-11:** Poetry (2 of 5 prescribed poems) OR 2 of 5 Short Stories OR novel/drama
Writing and Presenting	**Process Writing: Planning, drafting, editing, proof-reading and presenting** **Text types: format and features:** **Essays:** **Grade 11:** Narrative, Descriptive **Grade 10:** Narrative, Descriptive **Longer Transactional Texts: All Grades** Friendly letter/formal letter (request/application/complaint/sympathy/ congratulations/thanks) Short report/review/speech/dialogue **Shorter Transactional Texts: All Grades** Advertisement/invitation card/flyer/poster Diary entries/postcard Instructions/Directions

Language Structures and Conventions (Integrated into All Language Skills)	**Register, style and voice** **Word choice** **Sentence construction** **Paragraph writing** **Punctuation and spelling** **Parts of words** • Roots • Prefixes • Suffixes **Critical Language Awareness** • Facts and opinions • Direct and implied meaning • Denotation and connotation • Socio-political and cultural background of texts and author • The effect of selections and omissions on meanings • Relationships between language and power • Emotive and manipulative language

6. ENGINEERING AND TECHNOLOGY

6.1 Civil Technology Grade 10-11

Fundamentals to be Prioritised	Civil Technology: Civil Services Grade 10: Proposed Topics/Concepts per Priority
Occupational Health and Safety (Specific) **Materials (Specific)** **Tools and Measuring Instruments (Specific)** **Graphics as Means of Communication (Specific)** **Joining (Specific)**	• Occupational Health and Safety Responsibilities, Workshop Rules & Procedures Safety risks associated with excavations. Safe manual handling of heavy loads • Knowledge of the different classes of copper and high-density polythene pipes • Identification and proper use of the following: • Cutting tools, Marking off tools and Heating tools. Pattern development: Parallel line method, Basic geometrical constructions relevant to pattern development, Square shapes (square pipe), Round shapes (cylindrical pipe) • Joining of pipes and various methods of joining • ,Galvanized pipes, High- and low-pressure polythene pipes .Advantages and disadvantages of each type.Soft solder:Knowledge of the process and apparatus, Types of solder, Properties of solder, Soldering irons, Tinning a soldering iron, Flux (types and purpose).Concrete
Construction Associated with Civil Services (Specific) **Storm water (Specific)** **Hot water supply (Specific)** **Roof work (Specific)** **Sanitary fitments (Specific)**	• (types and purpose). Concrete • Mixing and mix proportions of concrete plaster and mortar (low, medium and high strength) Setting out square angles:3-4-5 method. Brickwork. Drawings of front views, sectional views and consecutive layers. • Corners (L shaped) of half brick wall and one brick wall in stretcher bond four courses high. Storm water: The safe disposal of storm water in the following ways: Roof gutters to water tanks, surface channels, hard surfaces, manholes, onto road kerbs, methods of channelling storm water to catchments areas. Responsibilities of municipalities with regard to storm water disposal. Regulations governing storm water disposal. Introduction to hot water supplyCold water supply to hot water systems • Heat transfer in hot water installations: Radiation, Conduction and Convection.Gutters (galvanised sheet metal gutters only): Knowledge of the purpose, • identification, fall, material and methods of fixing and supporting rectangular gutters • Sanitary fitments: Identification of sanitary fitments along with their symbols

Fundamentals to be Prioritised	Civil Technology: Civil Services Grade 11: Proposed Topics/Concepts per Priority
Occupational Health and Safety Introducing the OHS Act, (Specific) Materials (Specific) **Equipment & Tools (Specific) Graphics as Means of Communication (Specific)**	• Application of the OHS Act pertaining to: Personal safety. • General safety: Hand and Power tools, Small plant equipment Construction methods in the workplace. Safety and health aspects associated with storage of materials. • On site n workshops Hazardous materials in the workplace. HIV/Aids: preventative measures. Awareness of substance abuse: Drugs and AlcoholHealth risks associated with Infections and exposure to raw sewerage • General safety rules and applications and uses of Solder and Ceramics.Identification, proper use and care of Cutting tools: Cold chisels, Tin snips (Bent, straight & universal), Files (flat, round, square, triangular and half round) Pipe threaded (stocks and dies). • Holding tools: Pliers Bench vice. Fastening tools: Spanners (ring, open ended and combination), Pop rivet apparatus, Snapper or riveting tool Groover or seaming tool. Sheet metal work machines: Guillotine, Sheet bending machine, Pan and box bending machine, Rolling machine. Parallel line method - Explain the use of the fixing agents: • Sheet metal: Drawing and explanation of stages of obtaining: Grooved seamed joint, Overlap • joints Pop rivet joints, Solder joints. Calculating sheet metal allowance for joints taking into account preparation and where used
Graphics as Means of Communication (Specific) Quantities:(Specific) Joining (Specific) **Construction Associated with Civil Services (Specific) Cold Water Supply (Specific)**	• Mark out and cut sheet metal. Concrete: Methods and purpose of curing of concrete, Simple floor slabs slab for manhole, Placing of concrete, Compacting of concrete, Levelling of concrete • Brickwork: Drawings of: Front views, Sectional views, Consecutive layers as seen from above, T-junction of half brick wall and one brick wall in stretcher bond four courses high • Installation and types of pipes used for cold water supply: Uses, advantages, disadvantages, depths of water mains and service pipes • Copper, Galvanized, Steel, Non-metallic pipes. Joints and fittings for: Copper pipes Galvanized pipes Non-metallic pipes (high density polyethylene pipes) • Valves. Water meter, Stop cock, Full way valve, Pillar tap, Bib kickball valve, on-return valve Laying pipes, Procedure and line diagrams showing all details of the installation of cold water pipes underground. Explain the correct layout and installation of water supply to buildings as prescribed in the Code of Practice SABS 10252 Part 1. (Installation of water supply to buildings) • Abbreviations and symbols used in cold water systems
Hot Water Supply (Specific) Roof Work (Specific) Storm Water (Specific) Drainage (Sewerage) Above and Below ground (Specific) Sanitary Fitments (Specific)	• Abbreviations, explanations precautions and symbols in hot water systemsworking principles, installation, regulations, advantages and • disadvantages of: High pressure geyserDrawings (Development) of corners, outlets and stop ends for rectangular gutters. The methods of disposing large quantities of water from a dwelling to the municipal storm water system. Regulations governing drainage, abbreviations and symbols used in drainage systems • Terms and definitions of: Waste water, Waste water pipe, Waste fixture, Soil water, soil water pipe, Soil fixture, Sewage, Drain, Drainage installation, Pipe arrangements: of plumbing, advantages and disadvantagesTerms and uses of sanitary fitments: • Flushing devices: sectional sketches, location, purpose, advantages and disadvantages of: Cistern, Flush valve,Water traps: Requirements for an efficient trap, identify and label sectional views and sketches, location and function as well as the loss of water seals of traps (causes and prevention Sanitary fitments: working parts, the working principles and labeling of sectional sketches and the uses of the following sanitary fitmentsHigh- and low-level cisterns for water closets (advantages and disadvantages

Fundamentals to be Prioritised	Civil Technology: Construction Grade 10: Proposed Topics/Concepts per Priority
Occupational Health and Safety (Specific) **Materials (Specific)** **Equipment and Tools (Specific)** **Graphics as Means of Communication (Specific)**	• Safety and health aspects associated with storage of materials: On site In workshops, Hazardous materials in the workplace. Definition and advantages associated with good housekeeping, practice in the workshop and on site • Manufacturing processes of bricks: Clay bricks: face, semi-face, stock Cement brick. Differentiation between cellular and keyed bricks, advantages of bricks having holes over a solid brick, Woodworking tools. Plumbing tools. Setting out tool: dumpy level. Brick cutting tools: for e.g. comb and club hammer, cold chisel, bolster and sledge hammer Plastering tools. • Freehand sketching and scale drawings of the full brick, Quarter bat, Half bat, Bevelled bat, Queen closer, King closer, Soldier course, Sailor course, Header course, Brick on edge stretcher course. Scale drawings of a wall built in stretcher bond showings: The alternate plan course, Front elevation with raking back and toothing, End elevation, Block bonding, Vertical cross-section through sub-structure of a building.
Quantities (Specific) **Concrete and Brickwork (Specific)** **Concrete Foundations(Specific) Form work**	• Introduction to SI units. Calculation of: Area of foundation, Volume of sand, Volume of cement, Volume of stone, Volume of water, Quantities for a small building up to floor. Definition of concrete 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, Procedure, Outcomes of slump test • Leveling and compacting of concrete,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: Purpose,Properties,Location.Reinforcement for concrete: Identification,Reason,Qualities,Properties. Methods of tying reinforcement Spacers used with reinforcements: Purpose, Types. • Purpose and functions Types of soil and soil conditions Strip and step foundations. Excavations in different types of soil. Definition of striking of formworkFactors to be observed when striking of formwork • Label drawings of square and circular columns

Fundamentals to be Prioritised	Civil Technology: Construction Grade 11: Proposed Topics/Concepts per Priority
Occupational Health and Safety (Specific) **Materials (Specific)** **Equipment and Tools (Specific)** **Graphics and Communication (Specific)** **Quantities (Specific)**	• Safety and health aspects associated with storage of materials: On site, in workshops, hazardous materials in the workplace, HIV/Aids preventative measures, awareness of substance abuse, drugs, alcohol. Sketches: Queen and King closer, Bull nose bricks (external and internal return) Materials in built environment: Properties of bricks, Manufacturing process of bricks and cement, medium strength concrete (25 MPa). parts, accessories and uses of construction • Scale drawings of the following: Semi-circular arch, Segmental rough arch Gauged segmental arch. wooden single door frame, wooden arch door frame, floor plan of a house with 3 bedrooms, a sitting room, a kitchen, a toilet and a bathroom. Freehand sketches. Calculate quantities of materials: Calculate the following materials required for a one room building with a door and a window excluding the roof. Types of soil and soil conditions Strip and step foundations. Excavations in different types of soil. Definition of striking of formworkFactors to be observed when striking of formwork • Label drawings of square and circular columns
Joining (Specific) **Construction:** **Excavations (Specific)** **Foundations: (Specific)** **Concrete (Specific)** **Formwork (Specific)** **Construction steel (Specific)** **Construction: Cavity walls (Specific)**	• Joining bricks to: Steel doors and windows, Aluminium doors and windows, Wooden doors and windows Cavity walls: Different types, materials and spacing of ties • Describe and discuss with the aid of sketches: Horizontal checks of foundation excavations with the aid of instruments. The purpose of datumpek. Keeping excavations free from water using the following methods: Pumping out water Creating drains Baling • Describe and discuss by means of freehand sketches methods of keeping excavations from collapsing in the following types of soil: Loose soil Dry soil Loose, wet soil. Description, sketches and location of foundations: Pad, Wide strip Short bored (auger) pile. • Reinforcement for the following concrete structures: Square, Round and L shaped columns, a beam, concrete floor. Definition and purpose of formwork. Form oils and emulsions. Properties of good formwork. Materials used and the identification of different parts of formwork used. Lintels: formwork and methods of erecting and supporting • Purpose. Use Type Sizes of pre-stressed lintels. Identification, use, sketches and properties of the steel sections. The purpose, advantages and disadvantages of cavity walls: Scale drawings Different methods of finishing off openings of tops of cavity walls
Construction (Brickwork) **Staircase (Specific)** **Roof covering (Specific)**	• Front elevation and alternate plan courses of a wall built in English bond. Scale drawings of alternate plan courses of corners (quoin), “T” junctions and cross junctions of walls built in English bond. Waterproofing: Position and method of installing DPC in the following areas in a building: Windows Doors • Wall.Concrete staircase: Terminology for staircases General principles of staircase design • Roof covering and Purpose Material used for roof covering. Characteristics of IBR and corrugated iron sheeting. Characteristics of concrete roof tiles

Fundamentals to be Prioritised	Civil Technology: Woodwork Grade 10: Proposed Topics/Concepts per Priority
Occupational Health and Safety (Specific) **Materials (Specific)** **Equipment and tools (Specific)** **Graphics as Means of Communication (Specific)**	• Definition and advantages associated with good housekeeping • practice in the workshop and on site • Sketch and labels of the cross-section of a tree trunk. Description and sketches of the following timber defects: Heart shake, Cup shake, Star shake, Waney edges, Knots. Identification and proper use of the following: • Plumbing tools: • Measuring and setting out tools: Mortise gauge Folding Rule Cutting tools: Knocking tools: Warrington (cross peen) hammer Files (Rasps): Round file, Half round file. • Freehand sketching of the following workbench accessories: Sketches in good proportion of the following: • Longitudinal half lap joint, Corner half lap joint. Scale drawings of the Vertical section through the frame head and top rail of a door. Cross-sectional views of a solid and laminated beam measuring 70 mm thick and 225 mm wide • An isometric drawing of a timber wedge
Joining (Specific) **Quantities:(Specific)** **Casement (Specific)** **Doors (Specific)**	• Sketches and application joints: Tongue and groove Finger joint, Butt • • Properties, uses, precautions and applications of water resistant • adhesives for timber. Calculation of materials and sundry items for a simple bathroom cabinet with framed door/s to house a mirror, glass or flat panel. Cutting list for the doors: One and two panel doors with flat panels, Ledge batten door • Sketches of vertical sections through the following • frame members of a casement: Frame headframe stile, Sill. • Sketches of vertical sections through the following members of a casement: Top rail, Stile. • Sketches of vertical sections through the following members of a casement: Bottom rail, Glazing bars. Internal doors: Drawing of the front elevations, horizontal sections, application and constructional details of • Hollow core flush panel door • Solid laminated flush panel door. The option of using alternate materials as panels for flush panels doors. Methods of edging doors. External doors

Fundamentals to be Prioritised	Civil Technology: Woodwork Grade 11: Proposed Topics/Concepts per Priority
Occupational Health and Safety Act 85 of 1993 (OHS) (Specific) **Materials (Specific) Equipment and Tools (Specific)** **Graphics as Means of Communication (Specific)** **Joining (Specific)**	• Definition and advantages associated with good housekeeping practice in the workshop and site. • Seasoning of timber: Definition of seasoning of timber. Description of artificial and natural methods of seasoning. Advantages and disadvantages of artificial and natural methods of seasoning, Reasons, Advantages of seasoning timber. • Sketches to show conversion of logs into timber using Application and uses of • Hard wood, Beech, Oak, Yellowwood. Identification and use of the Table saw, Band saw, Thicknesses / surface planer, Spindle moulder, Radial arm saw, Drill press, Combination belt and disc sander and Lathe. Identification of parts and uses of the portable woodworking machines: Jig saw Belt Sander Orbital Sander Router Electric plane. • Application and sketches of the profiles in good proportion of the mouldings: Different types of Skirtings, Architraves, Dado rails, Quadrant, Scotia, Cornice, Rebate, planted mould, Stuck mould and Oval mould 64Scale drawings: Solid core flush panel door • Vertical section through the bottom rail of a casement and the sill with the glass in position. A horizontal section through a part of a casement showing the vertical glazing bar, casement stile and pane in position. • Application, uses and drawings of the following woodworking, joints (exploded and assembled views): Mortice and Tenon joint, Double mortice and Tenon joint, Bare face Tenon
Quantities:(Specific) Casement (Specific) Doors (Specific) Doors (Specific) Centering (Specific)	• Calculate the materials required to erect a ceiling Include the. Cornice skirting Sketch of horizontal section through the mullion and adjacent casement stiles with glass and putty in position. • External doors: application, drawing of front elevations, horizontal and vertical sections and constructional details of doors • Sketches showing methods of construction and erection of centres for the following types of arches with spans not exceeding 900mm: Flat arch Semi-circular arch

6.2 Electrical Technology Grade 10-11

Fundamentals to be Prioritised	Electrical Technology: Digital Electronics Grade 10-11: Proposed Topics/Concepts per Priority
Occupational Health and Safety **Tools and measuring instruments** **Basic Principles of Electricity** **Power Sources** **Electronic Components** **Logics** **Principles of Magnetism**	• Responsibilities, Workshop Rules & Procedures. Introducing the OHS Act, • Machinery Regulations and • Electrical Machinery Regulations • Tools and how to use them • Introduction of electricity as the core of the subject • Basic power sources such as the battery and how they operate • Basic electronic components and how they operate • Boolean Logic and basic Logic gates with their applications • Principles of magnetism and the relevant laws • Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements
Waveforms **RLC** **Semiconductor Devices** **Logics**	• Introduction of waveforms, pulse technique and wave shaping as an approach to electronics • The effect of AC on Series RLC Circuit • Introduction of components and solid-state devices • Boolean Logic, Karnaugh Maps, • Logic Probes, RTL, TTL and • Logic ICs Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements
Fundamentals to be Prioritised	**Electrical Technology: Electronics Grade 10-11: Proposed Topics/Concepts per Priority**
Occupational Health and Safety **Tools and measuring instruments** **Basic Principles of Electricity** **Power Sources**	• Responsibilities, Workshop Rules & Procedures. Responsibilities, Workshop Rules & Procedures • Tools and how to use them • Introduction of electricity as the core of the subject • Basic power sources such as the battery and how they operate • Basic electronic components and how they operate • Principles of magnetism and the relevant laws • Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements
Electronic Components **Principles of Magnetism** **Waveforms** **RLC** **Semiconductor Devices** **Power Supplies** **Amplifiers** **Sensors and Transducers**	• Introduction of waveforms, pulse • technique and wave shaping as an approach to electronics • The effect of AC on Series RLC Circuit • Semiconductor Devices • Principle of operation of linear power supplies, series and shunt using regulation • Principle of operation and application of transistor amplifiers • Sensors and transducers as the interface between real world conditions and electronic circuitry • Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements

Fundamentals to be Prioritised	Electrical Technology: Power Systems Grade 10-11: Proposed Topics/Concepts per Priority
Occupational Health and Safety **Tools and measuring instruments** **Basic Principles of Electricity** **Electronic Components** **Domestic Installations** **Principles of Magnetism**	• Responsibilities, Workshop Rules & Procedures • Tools and how to use them • Introduction of electricity as the core of the subject • Basic electronic components and how they operate • House wiring from supplier to the power outlets and domestic appliances • Principles of magnetism and the relevant laws • Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements
Machines **AC Generation** **Transformers** **RLC** **AC motors and starters**	• Introducing of DC machines, their construction and operating principles • Single Phase AC Generation • How electricity is generated • Single-phase Transformers • Induction, the operation of transformers and types of transformers • RLC • The effect of AC on Series RLC Circuit • Single phase motors • Introduction to single phase motors, types of single-phase motors and operation Informal practical tasks to be demonstrated by the teacher • Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements

6.3 Mechanical Technology Grade 10-11

Fundamentals to be Prioritised	Mechanical Technology: Automotive Grade 10: Proposed Topics/Concepts per Priority
Safety	• Basic First Aid, HIV/Aids Awareness, OHS Act, Safe and hazardous conditions
Tools	• Tools and how to use them
Joining Methods	• Introductory concepts: Basic knowledge skills
Forces	• Different types of forces found in engineering components: Pulling force (Tensile), Compressive force, Shearing force
Maintenance (generic)	• Properties of lubricants, • Friction lack of maintenance
Systems and Control	• Basic carburetion, Air filters, Hydraulic brake system: • Gr.9 Hydraulic (Disc brake), Electron theory –basic electrical principles, Characteristics of magnetism., Electromagnets., Ohm's Law., Electrical units and measurements., Use of the Multi-meter, Basics series and parallel circuits, Battery – lead acid type
Engines (generic)	• Operating principles of 2 and 4 stroke internal combustion engines
Maintenance (Specific)	• Lubrication systems, Temperature control, Cooling systems, Maintain fluid levels
Terminology	• Single plate clutch, Manual gearbox • Function and operations of driveshaft's
Engines (specific)	• Identification and function of engine components conventional layouts Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements

FUNDAMENTALS TO BE PRIORITISED	MECHANICAL TECHNOLOGY: AUTOMOTIVE GRADE 11: PROPOSED TOPICS/CONCEPTS PER PRIORITY
Occupational Health and Safety **Tools** **Maintenance** **Terminology** **Forces** **Maintenance (specific)** **Systems and Control (specific)** **Engines**	• **Introducing the OHS Act,** • **Machinery Regulations and** • **Electrical Machinery Regulations** • Purpose-made tooling and equipment, dial indicators, telescopic gauges and measuring instruments • Malfunction of power tools due to lack of maintenance • Workshop administration • Automotive calculations and application • Engine lubrication • Oil pumps purpose and operation • Oil control • Final drives, Purpose and layout of drive systems, Hydraulic brakes, Axles, steering control Suspension layouts, Electricity, conventional ignition systems, Starting circuit, Supplemental systems, traction control and air bag control • CI engines, Injectors & Valve assemblies • Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements

Fundamentals to be Prioritised	Mechanical Technology: Fitting & Machining Grade 10 Proposed Topics/Concepts per Priority
Safety	• **Safety (Generic)** • **Basic first aid** • **HIV/Aids Awareness** • **OHS act** • **Safe and hazardous conditions**
Tools	• Tools (Generic) • Hand tools • Measuring tools
Materials (generic)	• Characteristics and uses
Forces	• Forces (Generic) • Types of forces • Basic calculations
Jointing Methods (generic	• Drill and key sizes • Semi-permanent joining
Maintenance (generic)	• Properties of lubricants (Viscosity only) • Friction. • Lack of maintenance
Systems and control (Specific)	• Identify various drive systems • Screw threads Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements

Fundamentals to be Prioritised	Mechanical Technology: Fitting & Machining Grade 11 Proposed Topics/Concepts per Priority
Safety (Generic)	• Basic first Aid HIV/Aids Awareness • OHS Act • Machine specific safety measures
Tools (Generic)	• Purpose made tooling and equipment
Materials (Generic)	• Equipment used during manufacturing of steel • Properties of engineering materials
Maintenance (Specific)	• Malfunction of power tools due to lack of maintenance
Terminology (Specific)	• Lathe work • Taper work • Screw cutting • Milling machine safety and parts • Milling operations
Forces	• Effects of forces • Moments • Basic calculation on stress
Maintenance (Specific)	• Causes of malfunction on lathes, milling machines and power tools
Joining Methods (Specific)	• ISO metric V-thread • Calculations on size of drills and bolts
Systems and control (Specific)	• Velocity calculations • Transfer of movement • Hydraulics and pneumatics Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements)

Fundamentals to be Prioritised	Mechanical Technology: Welding & Metalwork Grade 10: Proposed Topics/Concepts per Priority
Safety	• Basic First Aid • HIV/Aids Awareness • OHS act • Safe and hazardous conditions • conditions
Tools	• Tools and measuring tool: how to use them
Joining Methods (generic)	• Drill and key sizes • Semi-permanent joining
Forces	• Types of forces • Basic calculations
Maintenance	• Properties of lubricants Lack of maintenance
Terminology (specific)	• Welding terms • Welding symbols • Welding joints • Developments • Templates • Principles and functions of welding machines • Electrical aspects regarding arc welding and gas welding
	• Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements

Fundamentals to be Prioritised	Mechanical Technology: Welding & Metalwork Grade 11: Proposed Topics/Concepts per Priority
Safety	• **Basic first Aid HIV/Aids Awareness** • **OHS Act** • **Machine specific safety measures**
Tools	• Purpose made tooling and equipment
Materials	• Equipment used during manufacturing of steel • Properties of engineering materials
Forces	• Effects of forces moments and torques • System of forces • Moments, Stress and strain
Joining Methods	• Joining processes, Gas Arc and MIG • Spot Welding • Welding defects, causes and remedies • Heat treatment of steel
Maintenance	• Malfunction of Power Tools due to lack of Maintenance
Tools (Specific)	• Purpose-made Tooling and Equipment
Terminology	• Use of templates • Roof trusses • Terms and definitions • Welding symbols
Developments	• Steel sections
	• Informal practical tasks to be demonstrated by the teacher • PAT (Simulations and project) must be done as per amended requirements

6.4 Engineering Graphics and Design Grade 10-11

Fundamentals to be Prioritised	Engineering Graphics and Design Grade 10: Proposed Topics/Concepts per Priority
General Drawing Principles	• The correct use and care of drawing instruments • The dangers of sharp instruments that could cause bleeding and the transfer of HIV/AIDS • Relevant line types as contained in the *SANS (SABS) 10111 and 10143 Guidelines* • General lettering (writing) and annotation requirements as contained in the *SANS (SABS) 10111 & 10143 Guidelines* • General dimensioning requirements as contained in the *SANS (SABS) 10111 & 10143 Guidelines.* ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Free-hand Drawings	• Introduce, practice and apply the basic hand movements needed to draw proportional single, multi view and pictorial drawings on plain paper and/or grid sheets. ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Setting up of a Drawing Sheet	• Set up A4 and A3 sized drawing sheets with a border and basic name/title blocks ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Geometrical Constructions	• Practice and apply the following constructions: bisecting lines and angles, perpendicular lines, angles, dividing a line, a circle through three points, circle divisions, inscribed and circumscribed circle to triangles, fillets, tangents, convex and concave tangential arcs • Construct regular polygons with 3, 4, 5, 6 & 8 sides. Determine the centre of the polygons. • Construct an ellipse. ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Scales	• Practice and apply Different scales, e.g. 5:1, 2:1, 1:2, 1:25, 1:50, 1:75, 1:100 etc. • The application of any scale to all types of drawing ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Solid Geometry	**1st angle orthographic views** of right-regular prisms and pyramids with 3, 4, 5, 6 and 8 sides only, as well as cylinders and cones. The axis of the solids may be perpendicular, parallel or inclined to one principal projection plane only. Include the following: • Layout planning, Sectional views, • The true shape of the cut surface, Hidden detail must be shown, unless otherwise stated ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Mechanical Drawings	3rd angle orthographic working drawings with non-sectional and sectional views of mechanical castings and objects from industry. **Include the following:** Title, scale, hidden detail, dimensioning, centre lines, cutting planes, hatching detail, notes, symbol of projection and layout planning ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Civil Drawings	Limited to single-storey dwellings, 1st angle orthographic working drawings with floor plans, basic single line elevations and sectional elevations showing the detail of the foundation to the slab. Include the following: • Annotations, labels, dimensioning and scales • Relevant abbreviations and graphical symbols • On the floor plan only: windows and doors • Hatching detail • Perimeters and total- and floor areas ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!
Isometric Drawing	Simple isometric drawings with isometric and non-isometric lines as well as auxiliary views. ALL THE CONTENT AND SKILLS ARE NEW AND ESSENTIAL FOR GRADE 10 AND THE CONTINUATION INTO GRADE 11, AND CANNOT BE SHIFTED OR TRIMMED!

Fundamentals to be Prioritised	Engineering Graphics and Design Grade 11: Proposed Topics/Concepts per Priority
Solid Geometry	1st angle orthographic views of solids or a combination of solids, which includes solids with holes. The solids and shape of the holes may be either right-regular prisms or pyramids with 3, 4, 5, 6 and 8 sides only, cylinders or cones. The axis of the solids may be perpendicular, parallel or inclined to one principal projection plane only. Include the following: • Layout planning • Sectional views • The true shapes of the cut surfaces • Hidden detail must be shown, unless otherwise stated **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**
Mechanical Drawings	3rd angle orthographic working drawings with non-sectional, sectional, half-sectional and part-sectional views of simple mechanical assemblies. Include the following: • Title, scale, hidden detail, dimensioning, centre lines, cutting planes, hatching detail, notes, symbol of projection and layout planning • Hexagonal bolts, nuts and lock nuts, washers/spacers. keys and keyways and appropriate labels • Different types of section, e.g. aligned section, revolved section, removed section, etc. • Conventional presentation of common features • Format and content of working drawing name/title blocks **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**
Civil Drawing	Limited to single-storey dwellings, 1st angle orthographic working drawings with floor plans, detailed elevations and sectional elevations showing the detail of the foundation to the ceiling height, but not including the ceiling itself. Include the following: • Annotation, labels, dimensioning, scales • Relevant abbreviations and graphical symbols • On all relevant views/elevations: windows, doors and fixtures such as WC, bath, sink, shower, built-in cupboards etc. • Hatching detail and the application of colours • Perimeters and total- and floor areas • Format and content of layout/working drawing name/title panels **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**
Isometric Drawings	Simple to complex isometric drawings with isometric and non-isometric lines as well as auxiliary views and circles. **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**
Perspective Drawings	2- Point perspective drawings of simple castings, dwellings and civil structures The HL, PP and SP can be varied to provide any desired view. **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**
Interpenetrations	1st angle orthographic views showing the curve of interpenetration formed between two solids or pipes joined at either 30°, 45°, 60° or 90°. • The solids or pipes have to be right-regular geometrical prisms, with 3, 4, 5, 6 & 8 sides, and/or cylinders only, the axes of the two solids or pipes have to meet in a common plane, the curves of interpenetration have to be symmetrical, and hidden detail must be shown, unless otherwise stated. **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**
Developments	The surface developments of the parts of the interpenetrating solids or pipes **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**
Loci of Cams	The principles of the cam in simple mechanical applications in which the following has to be shown: • the cam shaft and follower detail, the complete displacement graph, the complete cam profile • The motion has to be uniform, the direction has to be emphasised., the follower has to reciprocate on the vertical centre line of the cam shaft, and the follower has to be wedge-shaped. **ALL THE CONTENT AND SKILLS ARE ESSENTIAL FOR GRADE 11 AND THE CONTINUATION INTO GRADE 12, AND CANNOT BE SHIFTED OR TRIMMED!**

6.5 Technical Mathematics Grade 10-11

Fundamentals to be Prioritised	Technical Mathematics Grade 10-11: Proposed Topics/Concepts per Priority
Grade 10	Comply with Amended ATP Topics to be covered in the final examinations: **Paper 1:** Algebra and Functions and Graphs **Paper 2**: Analytical Geometry, Trigonometry, Euclidean Geometry and Mensuration
Grade 11	Comply with Amended ATP Topics to be covered in the final examinations: **Paper 1:** Algebra and Functions and Graphs **Paper 2**: Analytical Geometry, Trigonometry, Euclidean Geometry and Mensuration

6.6 Technical Sciences Grade 10-11

Fundamentals to be Prioritised	Grade 10 Technical Sciences Proposed Topics/ Concepts per Priority
MECHANICS: **Moment of force**	• Moment of a force about a point is defined as the turning effect of the force about that point. • It is measured as the product of the force and the perpendicular distance from the point to the line of action of the force Torque = $F x r_{\perp}$ SI unit: N.m • Use the formula to calculate torque. **Laws of moments** • For a body in equilibrium the sum of the clockwise moments about a point must be equal to the sum of anticlockwise moments about the same point. • Do calculations to show that the clockwise moment is equal to the anti-clockwise moment Experiment *Use a meter stick and mass pieces to prove the laws of moments.* • (Materials: Meter sticks, mass pieces, retort stand, etc.) **Simple Machines** • Define a lever as a simple machine. • Understand that machines are used to make work easier. • Define a fulcrum as the turning point of the lever. (The lever rotates about this point). • Identify different types of levers used in daily life. • Define type 1, type 2 and type 3 levers. • Define mechanical advantage as the ratio of load to effort $MA = \frac{\text{Load(L)}}{\text{Effort(E)}} = \frac{\text{Effort distance(e)}}{\text{Load distance(l)}}$ • Do calculations using the above formula. • Mechanical advantage has no unit. Experiment • *Determine the mechanical advantage of type 1 lever.* • (Materials: Stick, mass pieces, knife edge etc.). • Consolidation and revision
MECHANICS **Energy**	**Gravitational Potential Energy** **Define gravitational potential energy of an object as the energy it has because of its position from the surface of the earth.** E_P = mgh or (U = mgh) Do calculations using the above equation. **Kinetic energy** **Define kinetic Energy as the energy of an object due to its motion.** $E_k = \frac{1}{2}mv^2$ or $K = \frac{1}{2}mv^2$ Do calculations using the above equation. Experiment: *Determine the potential energy of an object at different heights.* (Materials: 1 kg mass piece, meter stick, retort stand etc.). **Mechanical Energy** • **Define mechanical energy as the sum of the gravitational potential energy and kinetic energy.** $M_E = E_P + E_K$ Do calculations using the above equation.

MATTER AND MATERIALS: Classification of matter	**Classification of matter:** • Define a pure substance as a single type of material (elements or compounds). • Define an element as the simplest type of a pure substance. • Define a compound as a substance made up of two or more elements in the exact ratio. • Classify substances as pure, compounds or elements. • Name compounds using the names of the elements from which they are made. • Define the terms cation and anion. • Identify cations and anions. • List the common compound anion, only sulphate, carbonate, sulphite, hydroxide
ELECTRICITY & MAGNETISM: Electric Circuits	**Components of electric circuit:** • Draw the components of a circuit using appropriate circuit symbols. • Give the meanings of all symbols used. **Current:** • Define current, I, as the rate of flow of charge. It is measured in Ampere (A), which is the same as Coulomb per second • Calculate the current flowing using the equation $I = \frac{Q}{\Delta t}$ • Indicate the direction of the current in circuit diagrams (conventional). **Potential difference:** • Define potential difference in terms of work done and charge. $V = \frac{W}{Q}$ **Emf:** • Emf is the potential difference across the cell when no current is flowing in the circuit (open circuit). • Give the difference between emf and potential difference. Emf and pd are measured in volts (V). • Do calculations using the above equations. Measurement of voltage (pd) and current Experiment: *Build an electric circuit to measure current through a resistor and to measure the voltage across a resistor; draw diagram of the circuit*. (Materials: Conducting wire, cells, Voltmeter, resistor, Ammeter, Switch etc.) **Resistance** • Resistance is defined as the opposition to the flow of electric Current. $1\ \Omega = 1\ V.A^{-1}$ • Give a microscopic description of resistance in terms of electrons moving through a conductor and colliding with the particles of which the conductor (metal) is made and thereby transferring kinetic energy. • State and explain factors that affect the resistance of a substance. Experiment: *Investigate the following factors that affect the resistance of a conductor:* *Temperature* *Thickness* *Length* *Type of materials* (Materials: Copper and nichrome wires of different thicknesses, Cells, Voltmeter, Ammeter, switch etc.) **Resistors in Series**

	• Resistors are in series when they are connected end to end such that the current has only one path through each resistor. $R_s = R_1 + R_2 + R_3$ • The same current flows through each resistor. $I_T = I_1 = I_2 = I_3$ • Series circuits are called potential dividers. $V_T = V_1 + V_2 + V_3$ Experiment: *Set up a circuit to show that series circuits are voltage dividers, while current remains constant*. (Materials**:** Light bulbs or resistors, batteries, switches, connecting leads, ammeters, voltmeters etc.) **Resistors in parallel** • Resistors are in parallel when they are connected to the same point such that the current has different paths through each resistor. $\frac{1}{R_P} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$ • Alternatively, when we have two resistors in parallel we can use the formula. $R_P = \frac{R_1 \times R_2}{R_1 + R_2}$ • Voltage is constant across each resistor, connected in parallel. $V_T = V_1 = V_2 = V_3$ • Resistors in parallel are current dividers. $I_T = I_1 + I_2 + I_3$ Experiment: *Set up a circuit to show that parallel circuits are current dividers, while potential difference remains constant.* (Materials: Light bulbs or resistors, batteries, switches, connecting leads, ammeters, voltmeters etc.) Administering of the PAT 3 experiment
ELECTRICITY & MAGNETISM **Electrostatics**	**<u>Electrostatics</u>** Two kinds of charge • Explain that all materials contain positive charges (protons) and negative charges (electrons). • Explain that an object which has an equal number of electrons and protons is neutral (no net charge). • Explain that positively charged objects are electron deficient and negatively charged objects have an excess of electrons. • Describe how objects (insulators) can be charged by contact (or rubbing). Experiment • *Investigate the two kinds of charges*. • Use any of the following: 1. A Perspex rod, a Polythene rod, a woolen cloth, small pieces of paper. 2. Van der Graaf generator. 3. Gold leaf electroscope. Charge conservation • The principle of conservation of charge states that the net charge of an isolated system remains constant during any physical process. • Apply the principle of conservation of charge. • Determine the charge of two objects after they touch and separate using: $Q = \frac{Q_1 + Q_2}{2}$

	• Use the above equation to solve problems involving charges. Give various situations to calculate the charge when two charges touch and separate **NOTE:** This equation is only true for identical conductors.
MATTER AND MATERIAL: Metals, Metalloids and Non-metals & Structure of an Atom	**Metals, Metalloids and Non-metals** • Classify substances as metals, metalloids and non-metals using their properties. • Identify their positions on the Periodic Table. • Describe metalloids as having mainly non-metallic properties. • Revise the classification of materials as: electrical conductors, semiconductors and insulators. **Structure of the atom:** Atomic number, mass number with their symbolic presentation: • Define the atomic number of an element as the number of protons in the atom. • Define the mass number as the number of protons and neutrons in the atom. • Use a periodic table to determine the number of: a) protons b) electrons c) neutrons in different elements. • State the charge of a proton, neutron and electron
HEAT AND THERMODYNAMICS	**Heat and temperature** • Define heat as a form of energy. SI unit of heat is joule (J). Temperature is an indication of how hot or cold a body is. SI unit of temperature is kelvin (K) Temperature is measured with a thermometer in degree Celsius (^{0}C). • Alcohol thermometer, Mercury thermometer, Thermoelectric thermometer. • Give the application of thermometers in technology. Demonstration: Use a mercury thermometer to measure the temperature of the following substances: (a) ice water (b) tap water (c) boiling water. Experiment *Measure the melting point of wax.* (Materials: Paraffin wax, Bunsen burner, Thermometer, 500 ml beaker, boiling tube, clamps, etc.) • Celsius scale is used to measure temperature for general purposes. • The Kelvin scale is used for thermodynamics calculations. **T = t+273** **T** is the temperature in kelvin. **t** is the temperature in degree Celsius. • Use the above equation to convert temperature from Celsius to Kelvin.
PAT: Experiment	Teachers can choose to do the formal experiment for PAT using any of the following modalities: • Teacher demonstration and learner worksheet; OR • PHET simulations; OR • Other Simulations; OR • Theory of the Practical Worksheet; OR • Teachers can allow learners to conduct the experiments at school if they can comply with the requirements for social distancing and sanitisation.

FUNDAMENTALS TO BE PRIORITISED	TECHNICAL SCIENCES GRADE 11 PROPOSED TOPICS/CONCEPTS PER PRIORITY
WAVES AND SOUND	**Pulses** • Define a pulse as a single disturbance in a medium. • Define a transverse pulse as a pulse in which the particles of the medium vibrate at right angles to the direction of propagation of the pulse. • Define a longitudinal pulse as a pulse in which the particles of the medium vibrate parallel to the direction of propagation of the pulse. **Experiment 6:** Observe the motion of a single pulse **Waves** • Define a wave as a succession of pulses. • Define a transverse wave as a wave in which the particles of the medium vibrate at right angles to the direction of propagation of the wave. • Draw the transverse wave. • Define a longitudinal wave as a wave in which the particles of the medium vibrate parallel to the direction of propagation of the wave. • Draw the longitudinal wave. • Define amplitude as the maximum displacement of a particle from its rest (equilibrium) position. • Define a crest as the uppermost point on a transverse wave. • Define a trough as the lowermost point on a transverse wave. • Define points in phase as any two points that are in the same state of vibration. • Define wavelength (as the distance between two successive points in phase. SI unit: m • Draw and label transverse and longitudinal waves. • Define the period (T) as the time taken to complete one wave. SI unit: s • Define frequency (f) as the number of waves per second. SI unit: hertz (Hz) Note: 1 Hz = 1 s^{-1} Relationship between period and frequency: • $T = \frac{1}{f}$ • Use the above equation to solve problems involving period and frequency in the content of technology. **Wave speed:** • Define wave speed as the distance travelled by the wave in one second. $v = \frac{distance\ travelled}{time\ taken}$ or $v = \frac{\lambda}{T}$ or $v = f\lambda$ • Use the above equations to solve problems involving speed, wavelength and frequency, distance, time, in the content of technology. • Sound waves are longitudinal waves. • Investigate the speed of sound waves in different mediums (gas, liquid or solid). • Define the reflection of sound waves as the bouncing back of the wave from a surface. • Define an echo as the reflection of a sound wave. • Define pitch as a measure of how high or low a note is. • Frequency of sound determines its pitch. The higher the frequency, the higher the pitch. • Loudness is determined by the amplitude of the sound; the higher the amplitude, the louder sound. • Use wave patterns to demonstrate pitch and loudness; Infrasound: frequencies less than 20 Hz; Audible sound: frequencies from 20 Hz to 20 000 Hz. • Ultrasound: frequencies greater than 20 000Hz. • Application of infrasound and ultrasound related to technology.

ELECTRICITY AND MAGNETISM **Electric circuits**	**Ohm's Law** Ohm's law states that the current in a conductor is directly proportional to the potential difference across it, at constant temperature. V= IR Use the above equation to do calculations (include graphical calculations). **Experiment 10 –** Determine the resistance of an unknown resistor. **Ohmic and non-Ohmic conductors:** • Any conductor that obeys Ohm's law is called an Ohmic conductor. Give examples of Ohmic conductors. • A conductor that does not obey Ohm's law is called non-Ohmic conductor. Give examples of non-Ohmic conductors. Experiment 11 Obtain current and voltage data for a piece of copper wire and semi-conductor and determine which one obeys Ohm's law. **Circuit calculations** • Use series and parallel resistors in combination with Ohm's law. **Emf** • Emf is defined as the potential difference across a cell when the circuit is open. • Internal resistance is defined as the resistance inside the cell when current flows through it. **(No calculation needed)** Experiment 12 *Determine the internal resistance of a battery*
ELECTRICITY AND MAGNETISM **Electrostatics**	**Coulomb's Law** Coulomb's Law states that the force of attraction or repulsion between two point charges is directly proportional to the product of their charges and inversely proportional to the square of the distance between the two charges. F = $\frac{kQ_1Q_2}{r^2}$ • Use the above equation to calculate the force and charge. **Electric field** • Define the electric field as a region of space in which an electric charge experiences a force. E = $\frac{F}{Q}$ • Use the above equation to calculate the force, charge and electric field. • The direction of the electric field at a point is the direction that a positive test charge (+1C) would move if placed at that point. **Electric field lines** • **Draw electric field lines:** a) Around a positive charge b) Around a negative charge c) Between a positive and a positive charge d) Between a negative and a negative charge e) Between a positive and a negative charge. • Electric field between parallel plates. E = $\frac{V}{d}$ • Do calculations by using the above equation. • Discuss the relationship between E, V and d. • Draw electric lines between two parallel plates. • Discuss application of electrostatics related to technology.

CHEMICAL CHANGE **Oxidation and Reduction**	• Oxidation is defined as the loss of electrons. • Give examples of oxidation. • Reduction is defined as the gain of electrons. • Give examples of reduction. • An oxidizing agent is defined as a substance that undergoes reduction. • A reducing agent is defined as a substance that undergoes oxidation. • Rules for assigning oxidation numbers. • Assign oxidation numbers in various molecules. • Electrolysis is the decomposition of a substance when an electric current is passed through it. • Cathode is the electrode where reduction takes place. • Anode is the electrode where oxidation takes place. **Experiment 15** • *Electrolysis of a salt solution.* • (Materials: Carbon electrodes, beaker, copper chloride, water, power source, connecting wires, switch, etc.)
PAT: Experiment	Teachers can choose to do the formal experiment for PAT using any of the following modalities: • Teacher demonstration and learner worksheet; OR • PHET simulations; OR • Other Simulations; OR • Theory of the Practical Worksheet; OR • Teachers can allow learners to conduct the experiments at school if they can comply with the requirements for social distancing and sanitisation.

7. HUMAN AND SOCIAL STUDIES

7.1 Life Orientation Grade 10-11

Fundamentals to be Prioritised	Life Orientation Grade 10: Proposed Topics/Concepts per Priority
Study Skills	**Study skills** **Study methods** **Critical, creative and problem-solving skills** **Process of assessment: internal and external assessment** **Annual study plan**
Social and Environmental	Contemporary social issues that impact negatively on local and global communities: Concepts: social and environmental justice Social issues e.g. crime, poverty, Social, constructive and critical thinking skills Social responsibilities including the knowledge and skills Purpose and contribution, areas of strength and possible improvements
Development of the Self in Society	**Changes associated with development towards adulthood: adolescence to adulthood** **Emotional changes and social changes** **Values and strategies to make responsible decisions regarding sexual intercourse**
Careers and Career Choices	Diversity in jobs Opportunities within different career fields including work in recreation, fitness and sport industries: Awareness of trends and demands in the job market: emerging demands or changing patterns of careers and scarce skills and the job market
Democracy and Human Rights	Living in a multi-religious society: understanding ethical traditions and/or religious laws of major religions in South Africa
Fundamentals to be Prioritised	**Life Orientation Grade 11: Proposed Topics/Concepts per Priority**
Career and Career Choices	**Competencies, abilities and ethics that will assist in securing a job and developing a career:** **Knowledge about self in relation to the demands of the world of work and socio-economic conditions: skilled, semi-skilled, unskilled and physical labour**
Democracy and Human Rights	Democratic participation and democratic structures Role of sport in nation building Contributions of South Africa's diverse religions and belief systems to a harmonious society
Study Skills	**Study styles and study strategies** **Examination writing skills** **Time-management and annual study plan** **Goal-setting skills**
Social and Environmental Responsibility	Environmental issues that cause ill-health Climate change: causes, impact on development, mitigation and adaptation Risky behaviour and situations: personal safety, road use, substance use and abuse, sexual behaviour, risk of pregnancy, teenage suicides, hygiene and dietary behaviour, sexually-transmitted infections

7.2 Religion Studies Grade 10-11

Fundamentals to be Prioritised	Religion Studies Grade 10: Proposed Topics/Concepts per Priority
Variety of Religions	**Various clusters of religions** **The beginnings of the religions of the world** **The nature of the religions in South Africa** **Statistical spread of religions** **Interaction of religions**
Common Features of Religion as a Generic and Unique Phenomenon	Definitions of religion Aspects of understanding religion Major dimensions common to all religions Origins of religions Roles of social forms, institutions and roles in religion
Topical Issues in Society	**Topical issues in South Africa** **Topical issues in Africa and the world** **Principles of ethical decision-making pertaining to public life**
Research into and Across Religions	Important principles of research in Religion Studies Rituals Inter-religious relationships

Fundamentals to be Prioritised	Religion Studies Grade 11: Proposed Topics/Concepts per Priority
Variety of Religions	Main developments of religions The mutual interdependence of religion and social factors Influence and adaptation between religions Important concepts Approaches aimed at interreligious dialogue Conceptual distinctions
Common Features of Religion as a Generic and Unique Phenomenon	Symbols Theories about religion The nature and role of narrative and myth in religion Types of rituals and their role in religions Concepts: faith, worship, prayer, meditation, mysticism, spirituality and the artistic expression of religion
Topical Issues in Society	**Religion and the state** **How religious beliefs influence the development of state policies and practices** **Religion and politics** **Religions and the natural environment** **Co-responsibility and cooperation of religions**
Research into and Across Religions	Interviews on gender issues Relaxation and leisure from an ethical point of view

7.3 Geography Grade 10-11

Fundamentals to be Prioritised	Geography Grade 10: Proposed Topics/Concepts per Priority
The Atmosphere	• Composition and structure of the atmosphere • Heating of the atmosphere • Moisture in the atmosphere
Geomorphology	• The structure of the Earth • Plate tectonics • Folding and faulting • Earthquakes • Volcanoes
Population	• Population distribution and density • Population structure • Population growth • Population movements
Water Management in South Africa	• Water Management in South Africa • Floods
Mapwork	• **Mapwork:** ▪ Reading and interpreting synoptic Weather maps ▪ Reading and interpreting topographic maps ▪ Reading and interpreting orthophoto maps ▪ GIS ▪ Map Skills
Fundamentals to be Prioritised	**Geography Grade 11: Proposed Topics/Concepts per Priority**
The Atmosphere	• The Earth's energy balance • Global air circulation • Africa's weather and climate • Drought and desertification
Geomorphology	• Topography associated with • horizontally layered rocks • Topography associated with • inclined/tilted rock strata • Topography associated with • massive igneous rocks • Slopes
Development Geography	• The concept of development • Frameworks for development • Trade and development • Development Issues and Challenges • Role of development aid
Resources & Sustainability	• Soil and soil erosion • Conventional energy sources • Non-conventional energy sources
Mapwork	• Reading and interpreting synoptic Weather maps • Reading and interpreting topographic maps • Reading and interpreting orthophoto maps • GIS • Map Skills

7.4 History Grade 10-11

Fundamentals to be Prioritised	History Grade 10: Proposed Topics/Concepts per Priority
World around 1600	Any TWO of the following four topics: • Ming China • Songhai • Moghul India • Europe
European expansion and conquests during the 15th to 18th Centuries	• **Africa:** Portugal and the destruction of the Indian Ocean • The Dutch East Indian Company • The Spanish Conquest of the Americas
French Revolution	• Conditions in France that made a revolution probable by 1789 • The causes and the course of the revolution • Casting off the ancient regime: The new ideas of liberty, equality, fraternity and individual freedom; • the meaning of these in the context of the late 18th century. • The significant events during the Revolution
Transformations in Southern Africa after 1750	• **Political changes from 1750 to 1820** • -Expansion of southern Tswana chiefdoms • -The rise of Ndwandwe kingdom under Zwide • **(**Only **ONE** case study to be taught) • -Tswana chiefdom • -Zulu kingdom • -Basotho kingdom • **Political revolution** • In the east: break-up of the Ndwandwe kingdom under Zwide • Rise of Ndebele kingdom under Mzilikazi • The role of Boer, Kora and Grigua raiders • Other states and paramountcies: Gaza, Swazi, Pedi, Mpondo • **LEGACY OF SHAKA** • How has Shaka been remembered? • How Shaka has been portrayed - past and present (or representations of Shaka); • Sources/evidence for our histories of Shaka; and • Why was Shaka portrayed in this way?
How did Colonial Expansion into the Interior Transform South Africa?	**Britain takes control of the Cape** • Indigenous population driven out or drawn into labour force • Changing labour patterns: ending of slave trade (1807) and slavery (1834) at the Cape and control of labour • Expanding frontiers and trade • Boer response to British control: trekking into the interior • Xhosa responses: co-operation and conflict, including cattle killing **The Zulu kingdom and the colony of Natal** • The need for controlled labour force: indentured Indian labourers (sugar), also labourers for railways and coal • The Anglo – Zulu war
South African War and Union	**Background to the South African War: mining capitalism** • South Africa on the eve of the war • Influx of capital and development of mining companies and stock exchange as well as technologies • Emergence of classes: capitalists, the middle class and workers • Creation of racially divided industrial labour force – the legislation of job reservation and low black wages, creating structural insecurity for white workers and breeding racism **South African War from 1899 to 1902** • Britain increasing interest in South Africa with the discovery of minerals • Political and economic struggle for control of the goldfields • End of the war: peace negotiations • Role and experiences of women in the war; • Role and experiences of black South Africans in the War;

Fundamentals to be Prioritised	History Grade 11: Proposed Topics/Concepts per Priority
Communism in Russia 1900 – 1940	• What is Communism? • The writings of Karl Marx • The causes of the 1905 revolution • The link between 1905 & 1917 revolutions • The February & October 1917 revolutions • The civil war & War Communism • Lenin seizes control of the state • Lenin's interpretation of Marxism: Marxism-Leninism • Women & the Russian Revolution • The death of Lenin & struggle for power • Stalin's interpretation of Marxism-Leninism (collectivization & industrialization; purges; effects of Stalin's policies; women under Stalin)
Capitalism in USA 1900-1940	• The nature of Capitalism in the USA – entrepreneurial & competitive; with rugged individualism; free market; and with minimal state control over business; • The American dream of individual possibilities – 'rags to riches' • Capitalist boom of the 1920s • USA society in the 1920s • Wall Street crash of 1929: reasons, socio-economic impact • Election of Roosevelt: offering the New Deal • Analysis of the New Deal: legislation & programmes for relief, recovery & reform • Opposition to the New Deal: analysis of the criticism • Assessment of the New Deal • Outbreak of the Second World War & economic recovery of the USA • Impact of & responses to the crisis of Capitalism • Conclusion: cynical nature of Capitalism
Ideas of Race	• **Theories and practice** • Notions about hierarchies of race in the 19th century • Eugenics • Modern understanding of race: human genome project • Practices of race & eugenics in the USA, Australia, Namibia & South Africa • **Case Study: Australia & indigenous Australians** • Colonisation of Australia • Race theories in Australia in early 20th century: debates around 'racial suicide' & 'racial decay' • White immigration policies & children from Britain sent to Australia after WW2 • The stolen generation: OR • **Case Study: Nazi Germany and the Holocaust** • Hitler's consolidation of power from 1933 • Nazi racial ideology • The creation of a racial state in Germany • Groups targeted by the Nazis • Choices that people made
Nationalisms	**Case study: The Rise of African nationalism** • **What is nationalism?** • Origins of nationalism • Initiation of nationalist movements • Theory of nationalism as an imagined community • APO and formation of the SANNC (ANC) & call to unite African people of SA because of the Union of SA and the Land Act; • role of professionals and traditional leaders • Influence of World War 2 – Atlantic Charter & AB Xuma's African Claims, as well as returning soldiers • Different types of African Nationalism – Africanism of the ANCYL & PAC split, following the Freedom Charter, • which widened the definition of the 'nation' in the 1950s and beyond • The rise of Afrikaner nationalism • FAK, Broederbond, media and programme of economic affirmative action in the 1920s & 1930s • Definition of the *Volk*, its relation to class and race issues in education, labour & religion • Nationalism in power – towards Apartheid

Fundamentals to be Prioritised	History Grade 10 - 11: Proposed Topics/Concepts per Priority
Apartheid South Africa – How unique was Apartheid?	• Racism and segregation in the 1920s and 1930s • Segregation after the formation of the Union • The National party victory • What was Apartheid? • How did Apartheid differ from Segregation? • Why did the NP adopt a policy of Apartheid? • Legalising Apartheid • Creation of Apartheid state • Laws against multiracial labour • Banning of the CPSA • Overcoming (Resistance to) Apartheid • Programme of Action • Mass mobilisation • Alliances • The Apartheid state's response to resistance against Apartheid • The Sharpeville massacre and its impact • Rivonia Trial and its consequences

8. MATHEMATICAL, COMPUTER AND LIFE SCIENCES

8.1 Computer Applications Technology Grade 10-11

Fundamentals to be Prioritised	Computer Applications Technology Grade 10-11: Proposed Topics/Concepts per Priority	
	Grade 10	**Grade 11**
Applications Concepts	• Word Processing (Introductory) • Spreadsheets (Introductory)	• Word Processing (Intermediate) • Spreadsheets (Intermediate) • Database (Introductory)
Solution Development	• Develop basic computer-based solution utilising appropriate applications (word processing and spreadsheets) to solve a variety of problems represented by real-life scenarios	• Develop computer-based solution utilising appropriate applications (Word processing, spreadsheets & database) to solve a variety of problems represented by real-life scenarios
Theory Concepts	**Introductory concepts:** • Systems Technologies, Network Technologies, Internet & Communication Technologies, Data and Information Management, Social Implications	**Intermediate concepts**: • Systems Technologies, Network Technologies, Internet & Communication Technologies, Data and Information Management, Social Implications

8.2 Information Technology Grade 10-11

Fundamentals to be Prioritised	Information Technology Grade 10-11: Proposed Topics/Concepts per Priority	
	Grade 10	**Grade 11**
Programming Concepts	**Introductory concepts:** • Sequences, Loops, Conditionals, Operators • Data, Events, Basic built-in functions and procedures, Basic string manipulation, • Basic algorithms as listed in the Grade 10 CAPS	**Intermediate concepts:** • Sequences, Nested Loops, Nested Conditionals • Operators, Data, Events, String manipulation, • Built-in functions and procedures • Text Files, Database foundations • Algorithms as listed in the Grade 11 CAPS
Solution Development	• Basic algorithm development to create a software solution according to a set of rules and/or requirements specified in the problem statement or by a client/business/individual	• Algorithm development to create a software solution according to a set of rules and/or requirements specified in the problem statement or by a client/business/individual
Theory Concepts	**Introductory concepts:** • Systems Technologies, Network Technologies, Internet Technologies, Information Management, Social Implications	**Intermediate concepts:** • Systems Technologies, Network Technologies, Internet Technologies, Information Management, Social Implications

8.3 Life Sciences Grade 10-11

Fundamentals to be Prioritised	Life Sciences Grade 10-11: Proposed Topics/Concepts per Priority
Content Progression in the Phase and Subject Terminology	**Grade 10** • Ecosystems • Classifications relating to Biodiversity • Plant and Animal cell structure and function • Fossil formation and fossil studies • Cell Division • History of humans **Grade 11** • Study of viruses and bacteria • Plant reproductive cycles • Cellular respiration • Human impact on the Environment • Excretion in humans • Water availability • Loss of Biodiversity • Food security
Skills: Scientific and Investigative Skills Practical and Manipulation Skills	• Skills include scientific investigative skills i.e. formulation of a question, formulation of a hypotheses, variables, reliability, validity, drawing of graphs and tables • Application questions • Interpretation of data using graphs/tables/case studies

8.4 Physical Sciences Grade 10-11

Fundamentals to be Prioritised	Physical Sciences Grade 10 Proposed Topics/Concepts per Priority
ELECTRICITY AND MAGNETISM: Electrostatics, Electric circuits	• Two kinds of charge • Forces exerted by charges on each other (descriptive), ➢ attraction by charged and uncharged objects (polarisation) • Charge conservation • Charge quantisation • Emf, potential difference (pd) • Current • Measurement of voltage (pd) and current • Resistance • Resistors in series • Resistors in parallel
CHEMICAL CHANGE: Physical and chemical change Representing chemical change Quantitative aspects of chemical change	• Define a physical change and give examples. • Define a chemical change and give examples. • Conservation of atoms and mass • Law of constant composition • Write word equation from chemical equations and vice versa • Use (s), (aq), (l) and (g) to indicate phases. • Write balanced chemical equations • Interpret balanced equations in terms of conservation of atoms and mass • Mole concept • Molar mass, relationship to relative molecular mass and formula mass • Calculate molar mass • Relationship between mass, mole and molar mass • Percent composition • Empirical formulae; Calculations using mole, molar mass, molar volume of gases, concentration of solutions, Stoichiometric calculations, Stoichiometric calculations
MECHANICS: Vectors and scalars Motion in one dimension	• Define a vector and a scalar quantity • Classify physical quantities as vectors and scalars • Properties of vectors: equality of vectors, negative vectors, addition and subtraction of vectors • Define the term resultant vector • Find resultant vector graphically (tail-to- head method) and by calculation for maximum four forces (one dimension). • Reference frame, position, displacement and distance • Average speed, average velocity and acceleration. • Conversion between units of speed and velocity • Discussion of control test and corrections • Interpret acceleration
MECHANICS: Instantaneous speed and velocity and the equations of motion	• Instantaneous speed and velocity • Describe (words and graphs) and distinguish between uniform and uniformly accelerated motion; Draw graphs of uniform and uniformly accelerated motion. • Interpret graphs of uniform and uniformly accelerated motion. • Equations of motions; Motion of vehicles and safety issues.
MECHANICS: Energy	• Gravitational potential energy; Kinetic energy; Mechanical energy (E_M) • Conservation of mechanical energy (in the absence of dissipative forces)
SBA: Practical Work	Teachers can choose to do the formal experiment for SBA using any of the following modalities: • Teacher demonstration and learner worksheet; OR • PHET simulations; OR, Other Simulations; OR • Theory of the Practical Worksheet; OR Teachers can allow learners to conduct the experiments at school if they can comply with the requirements for social distancing and sanitisation.

Fundamentals to be Prioritised	Physical Sciences Grade 11 Proposed Topics/Concepts per Priority
CHEMICAL CHANGE: Quantitative aspects of chemical change	• Molar volume of gases; 1 mole of gas occupies 22,4 dm^3 at 0 °C (273 K) and 1 atmosphere (101,3 kPa). • Volume relationships for gases under the same conditions of temperature and pressure (volume related to number of particles). • Concentration of solutions, calculate molar concentration of solutions. • Stoichiometric calculations including limiting reagents • Calculate percentage yield of a chemical reaction. • Determine empirical formulae and molecular formulae of compounds • Determine the percentage $CaCO_3$ in an impure sample of sea shells (purity or percentage composition). • Stoichiometric calculations with explosions as reactions e.g. $2NH_4NO_3 \rightarrow 2N_2(g) + 4H_2O(g) + O_2(g)$ $2C_8H1_8 + 25O_2 \rightarrow 16CO_2 + 18H_2O$ • Stoichiometric calculations using reaction in airbags (sodium azide): $2NaN_3(s) \rightarrow 2Na(s) + 3N_2(g)$
ELECTRICITY & MAGNETISM: Electrostatics	• Coulomb's Law: $F = \frac{kQ_1Q_2}{r^2}$ • Force exerted on a charge by one or more charges in one dimension (1D) and two dimensions (2D). • Electric field and its direction. • Electric field patterns for various configurations of charges. • Define the magnitude of the electric field at a point as the force per unit charge: $E = \frac{F}{q}$ (E and F are vectors). • Calculate the electric field at a point: $E = \frac{kQ}{r^2}$
ELECTRICITY & MAGNETISM: Electromagnetism	Magnetic field near a current carrying wire • Use the Right-Hand Rule to determine the direction of the magnetic field associated with: (i) A straight current carrying wire (ii) A current carrying loop (single) of wire (iii) A solenoid • Draw the magnetic field lines around: (i) A straight current carrying wire (ii) A current carrying loop (single) of wire (iii) Solenoid • Discuss qualitatively the environmental impact of overhead electrical cables. • State Faraday's Law. • Use words and pictures to describe what happens when a bar magnet is pushed into or pulled out of a solenoid connected to a galvanometer. • Use the Right-Hand Rule to determine the direction of the induced current in a solenoid when the north or south pole of a magnet is inserted or pulled out.
ELECTRICITY & MAGNETISM: Electric circuits	• Relationship between current, voltage and resistance at constant temperature. • Ohmic and non-ohmic conductors. • Use Ohm's law, $R = \frac{V}{I}$, for series and parallel circuits. • Power measured in watt (W). • Electrical power dissipated in a device: $P = VI$, $P = I^2R$, $P = \frac{V^2}{R}$

	• Electrical energy: E = Pt measured in joule (J) • Kilowatt hour (kWh) & cost of electricity.
CHEMICAL CHANGE: Energy in chemical reactions	• Discussion and corrections of control tests • Enthalpy and its relationship to heat of reaction. • Exothermic and endothermic reactions • Potential energy graphs for exothermic and endothermic reactions with and without catalysts. • Activation energy.
SBA: Practical Work	Teachers can choose to do the formal experiment for SBA using any of the following modalities: • Teacher demonstration and learner worksheet; OR • PHET simulations; OR • Other Simulations; OR • Theory of the Practical Worksheet; OR • Teachers can allow learners to conduct the experiments at school if they can comply with the requirements for social distancing and sanitisation.

8.5 Mathematical Literacy Grade 10-11

Fundamentals to be Prioritised	Mathematical Literacy Grade 10-11: Proposed Topics/Concepts per Priority
Grade 10	• Comply with Amended ATP • Topics to be covered in the final examinations: • **Paper 1:** Finance, Data Handling and Probability • **Paper 2**: Measurement, Probability and Maps, plans and other representation of the physical world
Grade 11	• Comply with Amended ATP • Topics to be covered in the final examinations: • **Paper 1:** Finance, Data Handling and Probability • **Paper 2** : Measurement, Probability and Maps, plans and other representation of the physical world

8.6 Mathematics Grade 10-11

Fundamentals to be Prioritised	Mathematics Grade 10-11: Proposed Topics/Concepts per Priority
Grade 10	• Comply with Amended ATP • Topics to be covered in the final examinations: • **Paper 1:** Algebra, Patterns and Sequences, Probability and Functions and Graphs • **Paper 2**: Analytical Geometry, Trigonometry and Euclidean Geometry
Grade 11	• Comply with Amended ATP • Topics to be covered in the final examinations: • **Paper 1:** Algebra, Patterns and Sequences, Probability and Functions and Graphs • **Paper 2**: Analytical Geometry, Trigonometry and Euclidean Geometry

9. SERVICES

9.1 Consumer Studies Grade 10-11

Fundamentals to be Prioritised	Consumer Studies Grade 10-11: Proposed Content per Priority
The Consumer	• **Grade 10:** Consumer needs and wants. Consumer rights and responsibilities. Decision making. Sustainable consumption. Factors influencing consumer buying behaviour. Evaluating food, clothing and furniture outlets. Marketing. Marketing strategies. The 5P Marketing mix model. The AIDA model. • **Grade 11:** Income and expenditure of South African families. The household budget. • Banking and payment methods. Consumer protection policies and practices. • Consumer organisations. Channels for consumer complaints. Income and expenditure of South African families. The household budget. Banking and payment methods. • Consumer protection policies and practices. Consumer organisations. Channels for consumer complaints.
Food and Nutrition	• **Grade 10:** Food practices of consumers. Energy and nutritional requirements of consumers. South Africa's food-based dietary guidelines. The six food groups in the SA food guide pyramid. Nutrients and their functions in food groups. Daily meal planning. • The six food groups in the SA food guide pyramid. Food hygiene, food safety, food spoilage, food storage, kitchen pests. • **Grade 11:** Functions and sources of nutrients. Nutritional and energy needs of the young adult consumer group. Food contamination and food hazards
Design Elements and Principles	**Grade 11:** • Design elements (line, shape, form, space, colour and texture). • Design principles (proportion, balance, rhythm, harmony, emphasis). • Colour (terminology, colour wheel, colour combinations). • Application in clothing and interior finishes.
Fibres and Fabrics	**Grade 10:** • The properties of fibres and fabrics in clothing and furnishings: natural fibres, regenerated cellulose fibres, synthetic polymer fibres, textile blends. The choice of textiles for clothing and soft furnishing. **Grade 11:** • Appearance, properties and uses of fabric construction techniques for clothing and furnishings. Fabric properties and finishes for clothing and household textiles.
Clothing	**Grade 10:** • The young adult's choice of suitable clothing. • Adaptive clothing for the disabled.
Housing and Interior	• **Grade 10**: Factors influencing housing decisions. Design features in housing and interiors: ergonomics and universal design. • Enabling housing environments for the disabled. • **Grade 11:** Space planning, Choice of furniture. Evaluation criteria when purchasing furniture.
Entrepreneurship	• **Grade 10**: What is entrepreneurship? Calculate the cost of products. Choice of items for small- scale production. Planning for small -scale production. • **Grade 11:** The choice, production and marketing of homemade products/ items. Marketing: the marketing process. Core principles of marketing. Production: production costs. Determine the selling price.

9.2 Hospitality Studies Grade 10-11

Fundamentals to be Prioritised	Hospitality Studies Grade 10-11: Proposed Content per Priority
Sectors and Careers	**Grade 10:** • Food and beverage establishments. Services provided by each. **Grade 11:** • Kitchen brigade and restaurant brigade. Policies governing working conditions. OHSA Learning pathways in the hospitality industry.
Nutrition and Menu Planning	**Grade 10:** • SA Food pyramid. Nutrients and their functions. Nutritional value of meals. • Principles of menu planning. Menu planning for continental and English breakfasts, brunches and light meals. **Grade 11:** • Significance of South African culinary uniqueness. • Providing food for different cultural needs • Menu planning for hospitality establishments. Menu planning for special tea occasions and three course meals. Costing a recipe and a portion of the recipe.
Kitchen and Restaurant Operations	**Grade 10:** • Appliances, equipment and utensils in the kitchen and restaurant. • Recipes *Mise-en-place* in the kitchen. • Cooking methods. Knife skills **Grade 11:** • Receiving stock; Storekeeping
Food Commodities	**Grade 10:** • Fruit, Scones and muffins, Pancakes and crumpets, Tea and coffee, Eggs, Dairy products • Cereals, Minced meat, Pasta, Salads and salad dressings, • Interpretation of recipes**.** **Grade 11:** • Yeast products, Cakes and biscuits, Stocks, Soups, Sauces, Fish, Poultry, Rice, Vegetables, Herbs and Spices.
Food and Beverage Service	**Grade 10:** • *Mise-en-place* in restaurant, • Continental and English breakfasts, brunches and light meals. • Table setting, • Service and clearing techniques for buffet-style and plated service. Customer relations, **Grade 11:** • Types of service, • Preparing venue and setting tables for teas and three-course meals • Sequence and techniques of food and beverage service for table d'hôte menus. • Greeting and serving guests
Hygiene	**Grade 10:** • Hygiene on food premises, General safety practices in the kitchen and restaurant, Basic treatment of injuries, Kitchen pests. **Grade 11:** • Food poisoning, food spoilage, food contamination, temperature control, • Preventative safety • Measures, Handling emergency situations.

9.3 Tourism Grade 10-11

Fundamentals to be Prioritised	Tourism Grade 10-11: Proposed Content per Priority
Tourism Sectors	**Grade 10: Introduction to Tourism** • Types of tourists and tourist profiles, The different modes of transport, • Accommodation establishments: facilities and services offered by each type; The South African grading system, Food and beverage establishments, The attraction sector, Structure of the South African tourism industry. **Grade 11:** • Transport services in South Africa-Airports, airlines and airport operations; technology at airports to facilitate travel; Tourism bus industry; Tourism train industry; Luxury cruise liner industry; Car rental; Job and career opportunities in the tourism industry; Requirements and inherent qualities needed to work in the tourism industry; Entrepreneurial opportunities.
Map Work and Tour Planning	**Grade 10:** • Map terminology and symbols, Types of maps, Location of South Africa's borders, provinces, etc. on a colour map. Location of South Africa and the SADC countries, continents, oceans, island groups and tourism regions on a colour map of the world; Distance indicators and distance tables. **Grade 11:** • Tour itinerary, Concepts: itinerary, logical tour planning, scheduled tours, Factors to consider when planning an itinerary, Different types of itineraries, Writing an itinerary
Tourism Attractions	**Grade 10:** • Tourist attractions in the provinces of South Africa, South African fauna and flora**;** **Grade 11:** • Main tourist attractions in the SADC countries.
Sustainable and Responsible Tourism	**Grade 10**: • Sustainable tourism concepts; Three pillars of sustainable tourism (planet, people, profit); Responsible tourism concepts; Good environmental practices; Global warming and the tourism industry.
Domestic, Regional and International Tourism	**Grade 10:** • Domestic tourism – Concepts, Benefits for South Africa, Domestic tourism statistics, Payment methods and technology for payment in South Africa; **Grade 11:** • The Domestic Tourism Growth Strategy (**2012 – 2020),** The five-domestic travel market segments according to the Domestic Tourism Growth Strategy; The SADC member countries.
Culture and Heritage Tourism	**Grade 10:** • Culture and heritage- Concepts, elements and importance of heritage, Heritage sites. **Grade11:** • South African cultural uniqueness, South African heritage bodies.
Foreign Exchange	**Grade 11:** • Foreign exchange and its value to the South African economy, Conversion of currencies.
Communication and Customer Care	**Grade 10:** • Communication (verbal and written), Communication technology (equipment), • Service excellence: concepts, importance, advantages, consequences and recommendations, **Grade 11:** • Global distribution systems; Customer care for foreign tourists, Customer complaints, Managing quality service.
Marketing	**Grade 10:** • Marketing of tourism products, services and sites. • Factors to consider during the marketing process. **Grade 11:** Promotional/advertising techniques, Marketing budget