basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

2023/24 ANNUAL TEACHING PLANS: COMPUTER APPLICATIONS TECHNOLOGY: GRADE 12 (TERM 1)

TERM 1	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
CAPS TOPIC	_Systems technologies:_ **General Concepts** (theory) ± ½ week, 2 hours	_Systems technologies:_ **Hardware** (theory) ± 1 week, 4 hours	_Systems technologies:_ **Hardware** (theory) ± ½ week, 2 hours _Systems technologies:_ **Software** (theory) ± ½ week, 2 hours	_Systems technologies:_ **Social Implications** (theory) ± ½ week, 2 hours _Solution development:_ **Databases** (practical & theory) ½ week, 2 hours	_Solution development:_ **Databases** (practical & theory) 1 week, 4 hours	_Solutions development:_ **Databases** (practical & theory) 1 week, 4 hours	_Solution development:_ **Spreadsheets** (practical and theory) 1 week, 4 hours	_Solution development_ **Spreadsheets** (practical and theory) 1 week, 4 hours	_Solution development:_ **Word processing** (practical and theory) 1 week, 4 hours	_Solution development:_ **Word processing** (practical and theory) ½ week, 2 hours _(Both inland & coastal)_ _Information management & PAT_ ½ week, 2 hours _(Inland only)_	_Information Management & PAT_ ½ week, 2 hours _(Both Inland & Coastal)_ _Information management & PAT_ 1 week, 4 hours _(Coastal only)_
CORE CONCEPTS, SKILLS, AND VALUES	• Types of computer systems for different uses: Personal, SOHO, mobile and power users • Role and use of data, information, knowledge, conclusion, decision as part of information management • Reasons for using computers • Convergence – what is it?	• Input, output, processing, storage, and communication as part of the information processing cycle, consolidate and reinforce hardware and software regarding uses, making buying decisions • Input & output devices: Multi-touch screen, HDMI, 3D printers, monitor – response time of display devices (e.g., p 10)	**Hardware continued** • Storage devices and media: SSD, card reader (e.g., p10) • Troubleshooting: Fix ordinary problems, new technologies • **Software** that enhances accessibility, efficiency, productivity • Uses of common applications • Web-based applications vs installed applications • Interpret system requirements, common software problems and upgrades • Risks of using flawed software	**Social issues:** • Environmental issues • User-centred design in software applications such as: • Website • Database form • Presentations **Database:** • Reinforce content, concepts, and skills from Grade 11	**Database:** • Revise forms and queries (e.g., p7) • Reports • Design reports – grouped, group headers and footers, calculations in groups such as sum, average, counting, maximum, minimum, add fields with calculations in queries, reports, data validation techniques, queries using and, or, not, wildcards (*), IS null operator		**Spreadsheets:** • Reinforce content, concepts, and skills • Function vs formula (e.g., p7) • Named ranges (e.g., p7) • More complex functions: Nested IF, vertical and horizontal LOOKUP also XLOOKUP (e.g., p7), including error indicator #N,A, variations of known functions ROUNDUP, ROUNDOWN, COUNTIFS, SUMIFS, • Additional functions: RANDBETWEEN, UPPER, LOWER, AND, OR (e.g., p7) • SUBTOTAL feature (AVERAGE, COUNT, SUM) • Combination of functions, formulae to solve problems • Basic date and time calculations (YEAR, MONTH, DAY, DAYS, HOUR, MINUTE, SECOND, TIME, TODAY, NOW) – (reference, e.g., p7) • Edit group on the Home tab: Find and select (e.g., p7)		**File management:** Extract a password protected .exe file (e.g., p6) **Word processing** • Reinforce content, concepts, and skills from Grade 10 and 11 • Links (bookmark, hyperlink, cross-reference) • Referencing options: Index and table of figures (e.g., p6) • Reviewing, proofing, and tracking changes • Line breaks (pagination issues such as widow, orphan control), • Electronic forms: Legacy controls (e.g., p6) • Import data collected via electronic forms, incl. MS & Google forms (e.g., p6)	**Word processing:** • Select options in the editing group (e.g., p7) • Completion of Word processing work from the previous week _(Both inland & coastal)_ **Information management & PAT:** • Reinforce content, concepts and skills from Grade 10 and Grade 11 _(Inland only)_	**Information Management & PAT:** • Setting questionnaires, gather information and data, discuss the writing of professional, formal reports, discuss the use of spreadsheet and database in professional reports _(Inland only)_ • **Information management & PAT:** • Reinforce content, concepts and skills from Grade 10 and Grade 11, setting questionnaires, gather information and data, discuss the writing of professional, formal reports, discuss the use of spreadsheet and database in professional reports _(Coastal only)_
INFORMAL ASSESSMENT (MINIMUM)	2 x Tasks: Theory	4 x Tasks: Theory	2 x Tasks: Theory (HW) 2 x Tasks: Theory (SW)	2 x Tasks: Theory 2 x Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical	2 Tasks: Practical
SBA (FORMAL ASSESSMENT) COMPLETED BEFORE END OF TERM	**TASK 1:** Theory test min 50 marks		**Date completed: By end of term**		**TASK 2:** Practical test min 50 marks				**Date completed: By end of term**		**PAT** Phase 1 To be completed before the end of term

2023/24 ANNUAL TEACHING PLANS: COMPUTER APPLICATIONS TECHNOLOGY: GRADE 12 (TERM 2)

TERM 2	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10-11
CAPS TOPIC	*Network technologies: networks* (theory) ± ½ week, 2 hours	*Network Technologies: networks* (theory) ± ½ week, 2 hours *Social Implications* (theory) ± ½ week, 2 hours	*Solution development:* HTML, web Design (practical & theory) ± ½ week, 2 hours	*Solution development:* HTML, web design (practical & theory) ± 1 week, 4 hours	*Solution development:* Spreadsheets (practical & theory) ± 1 week, 4 hours	*Solution development:* **Spreadsheets** (practical & theory) ± ½ week, 2 hours *Solution development:* **Word processing** (Practical & Theory) ± ½ Week, 2 hours	*Solution development:* **Word processing** (Practical & Theory) ± ½ Week, 2 hours *Solution development:* **Database** (Practical & Theory) ± ½ Week, 2 hours	*Information Management and PAT* (Practical & Theory) ± 1 week, 4 hours	*Information Management and PAT* (Practical & Theory) ± 1 week, 4 hours	June exams
CORE CONCEPTS, SKILLS, AND VALUES	• Wide area networks (WAN): Internet as an example of a WAN, Internet services, government internet services and information, Streaming, • Make buying and informed decisions regarding internet connection and access, concept of broadband and bandwidth • Throttling & shaping • Fair use policy • Communication and communication devices – standards for wireless communication, modem & router, NFC (e.g., p10) and clarification of blurred technologies (e.g., p13) • Internet technologies • URL shortener, browser add-on, using browsers productively, IoT, wearables, • (e.g., p10-11)	• Completion of **network tech.** from previous week • **Social implications:** • Computer crimes in relation to hardware, software, information, identity, bandwidth theft, theft of time and services, Internet-related fraud & scams – phishing, spoofing, pharming (e.g., p11) • Internet attacks - DDoS attacks, taking over PCs – bots and zombies, right to access vs. right to privacy, misuse of personal information, security issues – clickjacking, ransomware (e.g. p11) avoiding security threats (include security technologies such as VPN, firewall, screen lock pattern (e.g. p11) etc., safeguards against criminals, viruses and threats, the impact of technology on the global community, distributed computing cyber security issues, how technology benefits society – crowdfunding, BYOD, big data, Bitcoin, 4IR, 5IR, Blockchain (e.g. p12)	• Reinforce content from Grade 11: • Underline tag, border around an image (e.g., p7) • Good website, page design - consider • Use of colour (basic)	• **HTML tables** • Syntax: Table tags • Attributes: Border, cell padding • Create links to target location (e.g., p7) • Develop a web page for a specific scenario • All tags on the HTML tag list [See Grade 12 NSC CAT P1 QP Addendum]	• Reinforce and consolidate content, concepts, and skills, text functions such as: Left, right, mid, concatenate, len, value, find (also to find the position of text in a cell)	• Completion of spreadsheet, Word from previous week • Reinforce and consolidate content, concepts, and skills • Mail merge - different data sources • E.g., database, Word table, spreadsheet, CSV	• Objects: Reinforce manipulation (tables, graphics), linking and embedding • Reinforce tabs • Reinforce and consolidate content, concepts, and skills, design a database for a specific scenario • Interpret and deduce data and information, e.g., derive data type or validation rule of certain fields without specific instructions (e.g., p7)	• Practical assessment task: Reinforce information management skills, use information and data gathered: Processing and analysing • HTML: Use the Cite tag in PAT (not examinable) (e.g., p7)	• **June exams** • Include transfer of skills from one application to another (e.g., p7)	
INFORMAL ASSESSMENT (MINIMUM)	2 x Tasks: Theory	4 Tasks: Theory	2 x Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical			
SBA (FORMAL ASSESSMENT) COMPLETED BEFORE END OF TERM	**TASK 3:** Alternative task, test Min 50 marks			**PAT** Phase 2 To be completed before the end of term				**MID-YEAR EXAM** **TASK 4:** Paper 1 (practical) – 150 marks, and: Paper 2 (theory) – 150 marks		

2023/24 ANNUAL TEACHING PLAN: COMPUTER APPLICATIONS TECHNOLOGY: GRADE 12 (TERM 3)

TERM 3	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9-11
CAPS TOPIC	*Practical assessment task:* Reinforce information management skills, use information and data gathered: Processing and analysing (Practical & theory) ± 1 week, 4 hours	*Practical assessment task:* Reinforce information management skills, use information and data gathered: Processing and analysing (Practical & theory) ± 1 week, 4 hours	*Systems technologies:* **System software and computer management** (Practical & theory) ± 1 week, 4 hours	*Internet technologies:* **Communications** (Practical & theory) ± 1 week, 4 hours	*Social implications* (Practical & theory) ± ½ week, 2 hours *Solution development:* **Word processing** (Practical & theory) ± ½ week, 2 hours	*Solution development:* **Spreadsheets** (Practical & theory) ± 1 week, 4 hours	*Solution development:* **Database** (Practical & theory) ± ½ week, 2 hours *Solution development:* **HTML, web design** (Practical & theory) ± ½ week, 2 hours	*Information management & PAT completion* **Consolidation** (Practical & theory)	Prelim examination, PAT completion
CORE CONCEPTS, SKILLS, AND VALUES	• Practical assessment task • Reinforce information management skills • Use information and data gathered: Processing and analysing	• Practical assessment task • Reinforce information management skills • Use information and data gathered: Processing and analysing	• Role of the operating system, manage programs, management of files: Operating system utilities, schedule, update, security features such as access control, backup, anti-virus software, factors that influence performance • File management: Extract a password protected .exe file (e.g., p6)	• Types of digital communications – video conferencing, typical features of web browsers, uses of computer communications, digital communications • Communication devices	• **Social implications** • Impact and use of social networking sites and technologies, legal and ethical issues on the use of social media, remote access (incl. VPN), creating opportunity for e-commuting, e-working and e-learning, m-learning, blended learning (e.g. p12), how technology can benefit or harm society, information overload, virtual reality (VR) and augmented reality (AR), artificial intelligence (AI) (e.g. p12), (geotagging (e.g. p12) • **Word processing** Documents using style focusing: Page layout that includes advanced Word processing techniques, techniques of integration with other software including linking objects	• **Spreadsheets** • Date and time, maths, statistical, text, logical, lookup and reference, use more advanced combinations of functions and formulas, appropriate graph for a given scenario	• **Database** • Consolidate and reinforce content, concepts, and skills • Create a database for a given scenarios • Techniques of integration with other software • Multiple related tables but work with only one table at a time (e.g., p7) • **Web development** Reinforce content, concepts, and skills as well as good website, page design	• **Practical assessment task** • Reinforce information management skills • Use information and data gathered: Processing and analysing • **Consolidation** Consolidated concepts skills and values	• **Preparatory exams** • Include transfer of skills from one application to another (e.g., p7)
INFORMAL ASSESSMENT (MINIMUM)			3 Tasks: Theory 1 Task: Practical	2 Tasks: Practical 2 Tasks: Theory	2 Tasks: Theory 2 Tasks: Practical	4 Tasks: Practical	4 Tasks: Practical		
SBA (FORMAL ASSESSMENT) COMPLETED BEFORE END OF TERM	**PAT** Phase 3 To be completed before the end of term						**TRIAL EXAM** **TASK 5**: Paper 1 (practical) – 150 marks, and: Paper 2 (theory) – 150 marks		

2023/24 ANNUAL TEACHING PLAN: COMPUTER APPLICATIONS TECHNOLOGY: GRADE 12 (TERM 4)

TERM 4	WEEK 1	WEEK 2	
CORE CONCEPTS, SKILLS, AND VALUES	• Reproduce and create documents that incorporate text, graphics, and data • Manipulate graphics and text within documents • Use integrated software to create and design documents for specific purposes • Apply general principles of layout and design to a document process • Emphasise information using techniques such as placement and colour • Create documents by customising templates • Use media, visual literacy, and technology skills to create products that express understanding	• Consolidate content, concepts and skills previously covered using case studies to: ♣ or software and make informed decisions • Identify general hardware configuration • Understand computers and their uses • ICTs as tools to access information and to communicate with others around the world • Make better buying decisions interpret advertisements and make judgements about quality and usefulness when buying equipment and software • Know how to fix ordinary computer problems and deal with challenges that arise from utilising computers • Know the appropriate use the Internet and e-mail, Appropriate use application packages • Make informed decisions and choices in selecting communication devices and modes of communications for a given scenario • Know what kind of computer uses benefit and advance work and career path opportunities • Know how to protect oneself against online villains and threats • Understand technology concepts, systems, and operations and how it operates efficiently, effectively, and accurately • Know how to apply digital tools to: Communicate, gather, analyse, use information, solve problems • Understand technology concepts, systems, and operations and how it operates efficiently, effectively, and accurately • Recommend specific hardware, software for a specific scenario • Know about upgrading and how to integrate equipment with new products, technology • Understand when to upgrade, when to buy new equipment or software and make informed decisions	**Final NSC examinations**

ADDITIONAL INFORMATION

TEACHING TIME PER WEEK	4 hours per week required • If contact time is lost a **recovery plan must be in place** • Your recovery plan and remediation plan must be reflected in your subject improvement plan – update it throughout the year • Indicate on the teaching plan what has been competed to track your progress • Application packages share common features (formatting, editing, page layout, illustrations, etc.) reinforced these when teaching different packages • Use the guideline documents to complete PAT
RESOURCES (OTHER THAN TEXTBOOK) **TO ENHANCE LEARNING**	**Hardware** • Data projector • 1 Learner per computer • Entry level computers networked • Multifunction printer • Internet connectivity **Software** • Notepad ++ • Office 2016 or later version (Word, Excel, Access, PowerPoint) • Windows 10 or later version **Maintenance plan** **General** • Slide presentations - summarised content • Notebook for summaries and activities • Online content, resources • Video clips • Posters with new concepts, formulas, functions • Previous question papers

EXAMPLES OF FORMATIVE ASSESSMENTS, RETRIEVAL PRACTICE	• Concept maps for summaries • Brainstorm sessions • Quizzes (Google Forms, MS Forms, Kahoots!, etc.) for retrieval practice	• Competitions, gaming (fun activities) • Peer assessment • Extended opportunities, activities, etc.
IMPORTANT DOCUMENTS TO USE WITH THE ATP	• Updated CAPS for 2023 with updated CAT Grade 10 content • Introduction to HTML booklet, Grade 11 DBE textbook Chapter 15 page 216 • Chapter 4 – latest Assessment Instructions • Gr 12 Exam Guidelines with new concepts (new technologies where applicable)	