Form 6 – Computer Studies

Course Outline

The Form 6 PSSC Computer Studies program is a very tight syllabus with little room for relaxation, there is a lot of work to do and a lot will be learned and pained over. There is not enough time in the school calendar for new students, nor previous students to cover the syllabus completely. To succeed we all have to work hard, starting yesterday.

The course will introduce computers through hands-on exercises beginning from the fundamentals of computer systems to the office use, personal exploration on computers.

Assessment Process – The Common and Uncommon Achievement Criterias

The skills to be graded (achieved) during the course will be taught and listed for students. Students will be required to demonstrate these skills to retain a pass in the skill category and are expected to assist fellow students not yet at the same level of expertise. Once the charted skill are obtained, it must be retained through demonstration to peers. Inability to demonstrate the skill is an indicator of misunderstanding of the application of the skill and will result in a downgrade of the skill.

The weighting of instructor lead course material will be:

1. Personal Computer systems and management	35%
2. Using Personal Computer applications: word-processing spreadsheet flatfile database	35%
3. Principles of computer Programming	20%
4. Desktop Publishing	10%

Students may choose from the following optional topics as a replacement for Desktop Publishing.

5. Data integration between computer applications	10%
6. Computers for leisure and learning	10%
7. Computer Presentations	10%
8. Computer Graphics	10%
9. Using e-mail	10%
10. Keyboarding Skills	10%
11. History of Computing	10%

Topics 5 through 11 will not be formally instructed during regular class sessions and students wishing to pursue these topics will gain support from teaching staff and resource materials. Students will need to discuss with staff their proposed independent study subject **before the end of March** to ensure adequate time is set aside for evaluation, and for supportive materials to be available to the student.

Given enough time during the course, Topic 5 and Topic 9 will be discussed and studied within the regular schedule.

Schedule of Course Work for the Year

	Week	# of classes	Topic	Practical Work	Reference / Resources	Assessment Criteria
General Computer Knowledge	**1** **2**	**5** **5**	Computers – A definition How a Computer Works Input / Output Devices Keyboard Mouse Common Hardware faults	*The more time spent in this session the less elsewhere* Turning on / off, wall power, unit power (1.5.1, 1.5.2) User Logon Accounts Mouse, practise *Use **MS Hearts** to provide a collaborative learning environment and initiate perception that the class learns together. Use solitaire on non-networked systems.*	*Feb 2 – 6* *Feb 9 – 13* *Feb 16 - 20* *Course Notes – MSDOS part2* *Handouts* *Windows 95 Quick Guide* *Windows 95 Software* *Windows 95 Step-by-Step* *Windows 95 Tutorial* *Windows 95 Help* *Windows 95 for Dummies*	*1.1.1* *1.1.2* *1.1.3* *1.1.2* *1.1.5*
	3	**3**	WIMP – Windows Interface Items - Icons – Pictures - Task Bar - Start Button - Desktop - Windows on Work - Dialog/Windows Items • Text box • Check box • option button • default button • list box • combo box • toolbars • status bar	Windows 95 Interface *Use **MS Encarta** to introduce a networked based application with applications in many other subjects for the students.* • *Mouse skills are developed* • *Text box dialogs introduced* • *Option Buttons (radio buttons)* • *Menus* *User Interface options* Paintbrush/Microsoft Word Printer Cut and Paste operations • *Take an article from Encarta to Word, add signature from paint. Use only the brief of an article relevant in another class, eg. History.*		
	4	**5**	Impact / Non-Impact Printers Serial / Parallel Devices Modem	Connecting / Removing Printers Removing / Adding Printer (Driver) Printing from Software *(1.2.3)* • *Each student to produce a timetable of their course for the Term.*	Feb 23 – 27 Mar 2 – 6 Windows 95 Step-by-Step Windows 95 Help *Course Notes* Printer Manual Windows 95 for Dummies APC Magazine	*1.2.1* *1.2.2* *1.2.4* *1.2.5*
	5	**3**	Computer Viruses	Introduce the use of A: and C:, demonstrate with an opened machine Save files to diskette Copy files between Hard Disk and floppy		*1.7.6* *1.7.7*
		1	Summary Quiz			

Operating System	**6**	**4**	Operating system List main functions Different Operating Systems	Run anti-virus software Check diskettes for virus Creating a System Disk Saving Files onto the floppy diskette Using Help Anti-Virus Software - Run - Detect a Virus - Remove a Virus	Mar 9 – 13 Mar 16 – 20 Anti-virus Help Anti-virus Manual MS-DOS Manual *Notes*	*1.5* *1.3.1* *1.5.3*
			'Booting' a computer Startup Disk File System			*1.5.5* *1.5.6*
	7	**5**	Disk Storage *(track, sector, format)* Backing Up			*Topic 1 – ABO start (Mar 16-20)*
Word Processing	**8** **9** **10**	**5** **5** **4**	Advantages & Disadvantages Wordwrap Font / Font-size	Install Exercise Files Save Files to Floppy Diskette Editing Text Formatting Saving to Floppy Disk Paragraph Formatting Shortcut Keys Toolbar Shortcuts Spell Checker / Thesaurus	*Mar 23 – 27* *Mar 30 – Apr 3* *Apr 6 – 9 (Easter)* *MSWord97 Step-by-Step*	*Topic 1 – ABO finalised (Mar 23 – 27)* *2.2.1, 2.6.1, 2.3.1, 2.4.1, 2.5.1, 2.5.2, 2.7.2, 2.7.3* *Topic 2.1 ABO start by Apr. 3* *Topic 2.1 ABO finalise by Apr. 9*
Programming	**11**	**2**	QBasic IDE Print Variables & Memory Storage Variable Assignment Keywords	QBasic Lab *(handouts)*	Apr 14, 15 Sipoti Faka-Kolisi Apr 20 – 24 Apr 27 – May 1 *Course Notes: Programming* QBasic Help	*CAT 1 by Apr. 15th* **Project Based Elective must be Finalised including team members.**
	12	**5**	Commenting / Documenting Code Operators Conditional structures			*IA Programming 1 by Apr. 24*
	13	**5**	Iterative structures			*English Paper 1 by May 1*
Term Break May 4 – 6		**3**	Summary Review / Examinations			*IA Programming 2 by May 6*

Term 2

	Wk	# of classes	Class Work	Practical Work	Reference	Assessment Criteria
CPU	**1**	**5**	CPU Diagram Dataflow a computer Binary Numbers	*Continue exercises for previous lab topic*	*May 18 – 22* *May 25 – 29* *June 1 - 5*	*IA Programming 3 by May 22*
	2	**5**	ASCII			*CAT 2 by May 31*
	3	**3**	Bytes, kilobytes, mega, giga Memory Addressing Primary Storage Secondary Storage			*English Paper 2 by May 29*
Mid-Year	**4**	**2**	Review & Examination		*June 8 – 12*	

Spreadsheets	**5**	**5**	Definition Formulas Reference System What if scenarios	Starting, Saving Excel's Formula Bar Editing Formulas Column width, Row height Fill Cells	*June 15 – 19* *June 22 – 26* *June 29 – Jul 3* *Jul 6 – 10* *Excel 97 Step-by-Step*	*Topic 2.2 ABO Start by June 26* *Topic 2.2 ABO finalise by Jul 10*
General Knowledge	**6**	**5**	Computer Categories			
	7	**3**	Hardware & Software			
	8	**3**	System Software –vs- Applications Identify some important applications			*Accounting Assign. 1 by Jul 3*
Database	**9**	**5**	Non-electronic database Tables, fields, records		*Jul 13 – 17* *Jul 20 – 24* *Jul 27 - 30* *Lesson 1 – 4* *Access 97 Step-by-Step*	*CAT 3 by Jul 15*
	10	**5**	Design Principles Forms			
	11	**4**	Advantages & Disadvantages Updating Backing Up Security Issues			*Topic 2.3 ABO start by Jul 24*
	12 **13**				*Aug 3 – 7* *Aug 10 – 14* *Aug 17 - 22*	*Topic 2.3 ABO finalise by Jul 30*
Term Break Aug 24 - 28			Summary Review / Examinations		*Aug 24 – 28* *Aug 31 – Sep 4*	*CAT 4 by Aug 31* ***Project Due*** **(Presented): 3 Day Training Course, by Sep. 4th**

Term 3

	Wk	# of classes	Class Work	Practical Work	Reference	Assessment Criteria
Windows Explorer	**1**	**5**	File System Folders, Sub-Folders Creating, Renaming	File System Management	*Sep 7 – 11* *Sep 14 – 18* *Sep 21 – 27* *Sep 28 – Oct 2*	
	3	**5**	Common Windows commands covering MSDOS alternatives. *(date, time, del, ren, copy, type, md, cd, rd, dir, tree, cls, format, command.com)*			**Project Electives Due by Sep 18**
	4	**5**	Program settings Initialisation Files			
Final Exam	**5**	**3**			*Oct 5 – 9*	
Desktop Publishing	**5** **6** **7**	**2** **3** **3**	Page Layout	Save Files to Floppy Diskette Editing Text Formatting Saving to Floppy Disk Paragraph Formatting Shortcut Keys Toolbar Shortcuts Spell Checker / Thesaurus	*Oct 12 – 16* *Oct 19 – 23*	
	8 **9** **10**		***Summary Week*** ***Study Week*** ***PSSC Examinations***		*Oct 26 – 30* *Nov 2 – 6* *Nov 9 – 13*	
	11 **12** **13**				*Nov 16 – 20* *Nov 23 – 27* *Nov 30 – Dec 4*	

If you have reached this far, the key thing about a successful 1998 computer course for you, is how much time you will sacrifice to catch up on the fundamentals you are weak in (such as: typing, reading) and how willing you will be to pursue learning without supervision. Your success will be mostly your responsibility, with your staff ready and willing to work with you.

For those familiar with Computers, plan to spend at least 3 hours of laboratory work per week, independent of the course schedule to ensure your successful comprehension of the course. Those without previous computer experience should plan accordingly for extra laboratory work.

The goal of the course is not to follow the prescription, but to have **everyone** in the course understand and able to apply the skills and knowledge developed in the course. This is the reason why students will have to be prepared to sacrifice personal time and enjoyment to complete the course successfully.

Project Based Learning

Students are encouraged to participate in elective Projects which will direct their personal skills development in an enjoyable learning condition. Both Form 6 courses will coordinate Projects and grading will be applied towards internal standings.

One elective project must be selected by each student working in a group in which each members contribution will be required for a successful paper submission.

Project		**Skills Development**	
English Papers *(everyone)*	One English paper should be required for word processing each term (total of three wordprocessed papers) as a minimum start.	Typing, Keyboard practise Font sensibility Layout sensibility Styles Printing	Coordination with English Department required
Accounting *(everyone)*	Obtain Worksheet examples from accounting staff and have students develop spreadsheets and how to achieve solutions for this.	Formulas Editing	Coordination with Accounting Department required
Sports Records *(elective)*	Obtain school sports records	Database Management Database Design Database Data Entry Database Backup	
ThinkQuest 98 *(elective)*	ThinkQuest 98 is about sharing the knowledge and learning achieved by students with the rest of the world. A broad range of topics are nominated each year for ThinkQuest, resources on ThinkQuest 98 have been sent to FWC and will be made available to schools when received. Examples of the works are available on http://www.qsc.edu.to	HTML HyperText Markup Language The Internet Electronic Mail Modems Network Bandwidth Graphics Design Styles Screen Display Design Research Investigation and Writing Questionnaire Design	
3 Day Training Course *(elective)*	*If students are interested in showing their friends how to use computers, organise them to develop their own Introduction to Computers Training Course*	User interaction User Interface Almost everything there is with basic introduction.	Great benefit for the student and school
Student Proposals *(elective)*	*Students are free to make propositions on any field of computing which will enhance their skills and can be evaluated.*		

Keys:
CAT – Common Assessment Task, set by SPBEA
ABO – Assessment by Observation, set by SPBEA
IA – Internal Assessment, set locally
ia – PSSC internal assessment component (from 100%)