

REPUBLIC OF RWANDA



MINISTRY OF EDUCATION
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ICT SYLLABUS FOR UPPER SECONDARY EDUCATION

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TABLE OF CONTENT

PARTICIPANTS TO THE PREPARATION OF THIS CURRICULUM	2
TABLE OF CONTENT	3
INTRODUCTION	5
GENERAL ORIENTATION	7
EVALUATION APPROACH	8
DETAILED CURRICULUM	10
SENIOR 4	10
THEME II: MICROSOFT OFFICE	25
CHAPTER I: Microsoft Word	25
CHAPTER II: Microsoft Excel.....	29
DISTRIBUTION OF LESSONS: Senior 4.....	34

SENIOR 5	42
CHAPTER I: INTERNET	42
CHAPTER II: Microsoft Word.....	46
CHAPTER III: Microsoft Excel	48
CHAPTER IV: Ms PowerPoint	50
DISTRIBUTION OF LESSONS: Senior 5.....	52
SENIOR 6	60
CHAPTER I: Microsoft Word	61
CHAPTER II: Microsoft Excel.....	62
CHAPTER III: Microsoft PowerPoint.....	63
CHAPTER IV. Computer Graphics.....	66
DISTRIBUTION OF LESSONS: Senior 6.....	68
REFERENCES	78

INTRODUCTION

Information and Communication Technology is an over changing field which plays a crucial role in our economic growth as well as in our daily lives. The present curriculum is the revision of previous version for 2006. This new version goes in deeply some elements. There are some new notions which are added. With this curriculum we provide practical, real-world skills and knowledge to learners. Its practical approach creates ‘evidence of understanding’ rather than solely ‘evidence of knowledge learnt’.

It is essential that MINEDUC exposes students and teachers to ICT to improve the quality of education and technical proficiency of our human resources, thus leading to increased productivity and accelerated development.

This curriculum focuses on four main themes:

- Introduction to ICT to familiarize learners with the computer architecture and operating system.
- Microsoft Office to familiarize learners with the use of ICT tools in daily office activities and the impact of ICT in our daily life.
- Introduction to graphics to empower learners with skills to format images and digital photos.
- Internet explorer to familiarize learners with the Web communication and research.

Some curriculum content are repeated and emphasized at different levels to facilitate their mastery.

GENERAL ORIENTATION

The MINEDUC recognises that most of schools have no IT qualified teachers to deliver the subject of ICT. However the subject ICT consists on familiarising students to the Information (and communication) technology tools, therefore, any science teacher, if well trained in the content of the subject, should deliver it efficiently. To this end, the Ministry of Education has trained a sufficient number of teachers, and we plan to train other teachers so that each school will have at least two teachers trained on the use of ICT tools. Of course, teachers will use the modules developed to this end, as well as various resources available in the library and Internet. This curriculum supposes that every school has laboratory equipped with computers with an Internet connection (one computer for two or three students will be sufficient), hence, teacher should focus on practical exercises rather than theoretical concepts that are quickly forgotten. Practical exercises in groups will be completed by individual homework to enhance the competencies of students. Due to the rapid evolution of ICT, some contents of

this curriculum may become obsolete before their delivery, therefore, we recommend teachers to use the Internet and physical libraries to be informed on the evolution of Information Technologies.

EVALUATION APPROACH

During day to day evaluation and after each chapter, practical exercises will be done to help learners understand the lesson. After a certain number of chapters, teachers will organize situations with experience integration. At the end of a term, a year or even a cycle, there will be a general evaluation which will include practical exercises and some theoretical concepts. All these forms of evaluation should focus on practices that relate to daily life situations.

GENERAL OBJECTIVES

By the end of Upper Secondary Education, the learner should be able to:

- Use and explain the role of some computer hardware and software components
- Edit and print documents using a Word Processing Package
- Manage data using Spreadsheets
- Prepare a PowerPoint presentation
- Use the Internet for communication and research
- Prepare information and host it to the web server
- Provide security for him/her and for computer when using the computer
- Manage graphics

DETAILED CURRICULUM

SENIOR 4

THEME 1: INTRODUCTION TO ICT

Specifics objectives	Contents	Teaching/learning Activities
List ICT technologies and where they are used in our daily life	ICT and my world <ul style="list-style-type: none">• What is ICT• Basic Elements of ICT• ICT in our daily life	Explain to the learners the national ICT policy. Ask learners to give example where ICT is used.

	<ul style="list-style-type: none"> • The impact of ICT in education, social and economical life of Rwandan government ICT initiatives 	<p>Organize learners into groups and each group identifies the impact of ICT in education, social and economic sectors.</p>
<p>Identify various connectors and ports</p>	<p>Introduction to computer system</p> <p>Hardware</p> <p><i>Connectors and ports</i></p> <ul style="list-style-type: none"> • Definition of I/O ports and connectors • Serial ports • Parallel port 	<p>Help the learners to identify different connectors as well as input and output ports</p> <p>Help the learners to list what's new</p>

<p>Explain the role of different I/O devices</p> <p>Use different I/O devices</p> <p>Differentiate types of memory</p>	<ul style="list-style-type: none"> • USB • Keyboard , Mouse Connectors • VGA Connector <p><i>Peripherals</i></p> <ul style="list-style-type: none"> ▪ Definition ▪ Categories I/O devices <ul style="list-style-type: none"> • Input devices (mouse, keyboard, scanner, CD/DVD-ROM, Floppy disk, etc) • Output devices (monitor, Floppy disk, CD/DVD-ROM writer, Printer, etc) 	<p>and guess their utilities.</p> <p>Practical exercises on how to connect mouse, keyboard, monitor to the CPU</p> <p>Help the learners to copy and paste the document from and to different devices (CD, Scanner, flash disks, etc)</p> <p>Exercises on exploring the CD,</p>
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	<p><i>Memory</i></p> <ul style="list-style-type: none"> ○ Definition ○ Role of memory ○ Features <ul style="list-style-type: none"> ▪ Capacity ▪ Speed ▪ Non volatility ○ Types of memory <ul style="list-style-type: none"> ▪ ROM (Read Only Memory) ▪ RAM (Random Access Memory) ▪ External Memories (hard disk, Floppy disk, CD, flash disk, etc) 	<p>DVD</p> <p>Help learners to open a central unit and comment on different types of memory</p> <p>Explain the advantages and disadvantages of each type of memory</p>
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<p>Explain the role of the hard disk</p>	<p>Role of the hard disk</p> <p>Parts of the hard disk</p> <ul style="list-style-type: none"> • Sectors, Track • Read/Write head • Platter, Cylinder 	<p>Discuss the role and the contents of the hard disk</p>
<p>Use the keyboard</p>	<p><i>The keyboard</i></p> <ul style="list-style-type: none"> ○ Definition ○ keyboard connector ○ Keyboard AZERTY ○ Keyboard QWERTY ○ Alphabetical keyboard ○ Numerical keyboard 	<p>Open a hard disk drive or a Floppy drive and observe different areas of a disk</p> <p>Ask the learners to observe the keyboard, its</p>

	<ul style="list-style-type: none">○ Function keys○ Shortcut keys	<p>components and identify the new elements which are not common on different keyboards.</p> <p>Switch between AZERTY and QWERTY</p> <p>Exercises on connecting the keyboard on the</p>
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		<p>central processing unit</p> <p>Help learners to change the keyboard from AZERTY to QWERTY and vice versa.</p> <p>Exercises on how to use different shortcut keys.</p>
<p>Explain various system software</p>	<p>Software</p> <ul style="list-style-type: none"> • System software <ul style="list-style-type: none"> ○ Operating system (Windows, 	<p>Based on previous content seen in O' level, Teacher</p>

<p>Classify different type of application software</p> <p>Differentiate a licensed software and open source software.</p>	<ul style="list-style-type: none"> ○ Unix, Linux, DOS, etc) ○ Compiler, assembler software and drivers ● Application software <ul style="list-style-type: none"> ○ Software license, Copyright, Plagiarism ○ Open source software and free software. 	<p>organises learners into small groups to list different types of computer system, to define an operating system and list common operating systems.</p> <p>Explain to the learners the different types of application software and how</p>
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		to access to each application software.
<p>Explain different careers opportunities in the ICT sector</p> <p>Describe ICT careers and show its role in any organization and how they affect professional.</p>	<ul style="list-style-type: none"> • Carrier opportunities in IT field <ul style="list-style-type: none"> ▪ Software programmers ▪ Systems engineers ▪ Technicians ▪ Project managers ▪ Testers ▪ Technical authors ▪ Web developers ▪ Database administrator ▪ Network administrator 	<p>Brainstorming with learners to illustrate the carrier opportunities in IT field and assign learners to investigate the careers which are available locally and their duties.</p> <p>Explain to learners</p>

	<ul style="list-style-type: none"> ▪ Hardware builders ▪ System analysts 	<p>the role of IT careers especially for those which are not locally available.</p> <p>Describe any ICT career and show its role in any organization and how it affect professional.</p>
<p>Demonstrate how to use ICT equipments accordingly.</p>	<p>Computer Ergonomics</p> <p>Safety procedures to protect ICT equipments</p> <ul style="list-style-type: none"> • General safety guidelines for ICT tools. • Proper use of computer 	<p>Discuss with the learners the better position while working on/with a</p>

<p>State general safety guideline for ICT users.</p>	<p>equipments</p> <ul style="list-style-type: none"> • Proper way of sitting in front of a computer 	<p>computer.</p> <p>Ask learners to arrange computers in a laboratory or to identify a better way to arrange computer labs.</p>
<p>Identify a mobile gadget for each generation.</p> <p>Configure a mobile phone to work as a modem and state mobile phone generations</p>	<p>Mobile phone communication</p> <p>Concept of mobile phone communication</p> <p>Mobile phone communication infrastructure</p> <p>Evolution of mobile telephones</p> <ul style="list-style-type: none"> • 1G • 2 G • 3G 	<p>Teacher shows to the learners a mobile device for each generation</p> <p>Teacher shows to the</p>

<p>Explain the use of PDAs.</p>	<p>Use a telephone as a computer modem Personal Digital Assistants (PDAs)</p>	<p>learners how to configure a mobile phone to work as a modem.</p> <p>The teacher helps learners to configure a mobile phone to work as a modem.</p>
<p>Explain the troubleshooting techniques</p>	<p>Troubleshooting for user</p> <ul style="list-style-type: none"> • Troubleshooting concepts • Hardware and software compatibility problems • Windows troubleshooting 	<p>Ask learners to illustrate the steps to be followed in order to identify when a computer</p>

<p>Explain computer troubleshooting.</p>	<p>utilities(event view, device manager, disk management)</p> <ul style="list-style-type: none"> • Boot concept and safe mode • Restore point and backup system 	<p>has a problem.</p> <p>Learners carry out some troubleshooting like Restore point and backup.</p>
<p>State hardware and software compatibility problems Use windows troubleshooting</p>	<p>Maintenance for user</p> <ul style="list-style-type: none"> • Maintenance concepts • Role of maintenance in computer system • Check disk, disk defragmentation • Computer cleaning procedures • System upgrade 	<p>The teacher helps the learners to understand clearly the difference</p>

<p>utilities.</p> <p>Reboot a computer</p> <p>Boot a computer in safe mode.</p> <p>Create a restore point and a back up disk.</p> <p>Explain maintenance preventive Techniques.</p>	<p>Computers threats</p> <ul style="list-style-type: none"> • Virus, Trojan horse, Adware, Spyware, Hoaxer, Malware 	<p>between troubleshooting and maintenance.</p> <p>Ask learners to do themselves disk defragmentation, to remove threats.</p> <p>Differentiate computer threats</p>
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<p>Explain the maintenance concepts.</p> <p>Illustrate the reasons why computers need to be maintained.</p> <p>State steps to clean computer equipments.</p> <p>Define different computer threats.</p> <p>Define a computer firewall.</p>	<p>Computer security</p> <ul style="list-style-type: none"> • Computer firewall • BIOS/Operating system password <p>Show how to upgrade a windows operating system</p>	<p>Give the role of a computer firewall</p> <p>Configure a BIOS password.</p>
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THEME II: MICROSOFT OFFICE

CHAPTER I: Microsoft Word

Specific objectives	Contents	Teaching/learning activities
<p>At the end of this chapter, the learner will be able to:</p> <p>Format a text</p>	<p>Formatting a text</p> <ul style="list-style-type: none">• Style, Font , Size, colour• Paragraph• Column• Tabulation• Paragraph spacing• Inserting symbols: Special characters, bullet and numbering• Borders and shading	<p>Ask learners to reproduce document already formatted</p> <p>Give various exercises to familiarise with formatting a text</p>

<p>Edit a text</p>	<ul style="list-style-type: none"> • Page numbers, header and footer. <p>Text editing</p> <ul style="list-style-type: none"> • Search/Find, Replace • Deleting a range of text • The undo command • Spelling and Grammar <p>Synonyms</p>	<p>Perform practical exercises on the various tips.</p>
<p>Create and edit a table</p>	<ul style="list-style-type: none"> • Inserting a table • Inserting a column • Inserting a row • Deleting table 	<p>Choose several different examples of document and ask learners to prepare a document according to the given examples.</p>

<p>Insert mathematical equations</p>	<ul style="list-style-type: none"> • Deleting row • Deleting column • Merging cells • Splitting cells • Drawing a table • Table auto format • Formula <p>Equation editor</p>	<p>Several practical exercises on creating, editing and handling a table using MS Word are necessary.</p> <p>Familiarise learners with equation editor</p> <p>According to the combination followed by learners, the teacher asks learners to create a document and to insert the</p>
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<p>Print a document</p>	<ul style="list-style-type: none"> • Page setup • Print preview • Print dialog box • Selecting printer name • Print options • Printing one or more copies • Printing in black / white or colour • Print page ranges 	<p>mathematical equations used in their combinations.</p> <p>Exercises on printing one or more copies of a coloured document, in black and white</p> <p>Printing in landscape and portrait</p>
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CHAPTER II: Microsoft Excel

Specific objectives	Contents	Teaching/learning activities
<p>At the end of this chapter ,the learner will be able to:</p> <p>Use some basic excel tasks</p>	<p>Basic excel tasks</p> <ul style="list-style-type: none">• Open• Close• New document• Undo• Save, save as• Sheet• Selecting a cell• Validating a cell• Deleting cell contents• Modifying cell contents	<p>Practical exercises on the use of basic Excel tasks</p>

<p>Manage sheets in Excel Workbook</p>	<ul style="list-style-type: none"> • Selecting group of cells • Increase and reduce the cell size • Delete row and columns • Duplicate cell • Selecting a sheet • Renaming a sheet • Insert new sheets • Moving a sheet in a workbook • Deleting a sheet 	<p>Help learners to understand the difference between book and the sheets in excel. Use practical examples like an exercise book.</p> <p>Practical exercises.</p>
<p>Format cells and their contents</p>	<p>Formatting text and cells</p> <ul style="list-style-type: none"> • Choosing Font, size, colour • Adjusting Column width 	<p>Explain to learners that they are some similarity</p>

	<ul style="list-style-type: none">• Adjusting row height• Alignment of cell• Number format• Inserting columns• Inserting rows• Merging cells• Creating borders• Patterns	<p>between MS word and Excel especially on Text Formatting.</p> <p>Let the learners make some trial and error on formatting text and cells.</p> <p>Ask the learners what is special in excel formatting</p>
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<p>Use some functions and perform mathematical operations</p> <p>Merge cells</p>	<p>Numbers and mathematical Calculations</p> <ul style="list-style-type: none"> • Addition • Multiplication • Division • Subtraction • AutoSum • Absolute and relative Reference • Functions <ul style="list-style-type: none"> ○ Average ○ Minimum ○ Maximum • Merging cells 	<p>Give to the learners many practical exercises in groups and individual homework.</p> <p>Practical exercises related to daily life:</p> <ul style="list-style-type: none"> ▪ Invoices ▪ Total marks ▪ Payroll list ▪ Etc. <p>Exercises on the Merging cells</p>
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<p>Print an excel worksheet</p>	<ul style="list-style-type: none"> • Page setup • Print preview • Print dialogue box • Print options • Print one or more copies • Print in black / white or colour • Print page ranges • Printing a selection 	<p>Ask learners to use the prior knowledge on printing and try to print by themselves a document in excel.</p> <p>Emphasize on particularity of excel on printing</p> <p>Exercises of printing one or more copies of a worksheet.</p> <p>Print colour or white and black worksheet</p> <p>Practical exercises (individual and in group)</p> <p>Print in Landscape and portrait format</p>
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DISTRIBUTION OF LESSONS: Senior 4

1st Term

THEME 1: INTRODUCTION TO ICT

Week	Specific Objectives	Contents	Timing (periods)
		Hardware	
1	List ICT technologies and its use in our daily life	Introduction to Information and Communication Technology	2
2	Identify various connectors and ports	Connectors and ports	1
	Use different I/O devices	Peripherals	1
3	Explain the role of different I/O devices	Familiarising with different peripherals	2

Week	Specific Objectives	Contents	Timing (periods)
4	Explain the role of the hard disk	Role and parts of the hard disk	2
	Differentiate types of memory	Memory	
5	Use the keyboard	The keyboard and its components	2
6	Explain various System Software	System Software	2
7	Classify different type of application software	Application software	2
8	Explain carriers opportunities in ICT field	Carriers opportunities in IT fields	2
9	Demonstrate how to use ICT equipments accordingly	Computer ergonomic	2

Week	Specific Objectives	Contents	Timing (periods)
10	Explain mobile phone communication	Mobile phone communication	2
11	Revision		2
12	Exams		2
			24

2nd Term:

Week	Specific Objectives	Contents	Timing (periods)
1-2	Explain troubleshooting concept	Troubleshooting for user	4
3-4	Explain preventive maintenance concept	Maintenance for user	4

Week	Specific Objectives	Contents	Timing (periods)
5	Define computer threats	Computer threats	2
6	Define computer firewall	Computer security	2
	Set up a system password	BIOS/Operating system password	
7	Internet threats	Internet Security	2
8	Evaluation		2
			16

THEME II: MICROSOFT OFFICE

CHAPTER I: Microsoft Word

Week	Specific Objectives	Contents	Timing (periods)
9	Format a text	Text formatting	2
10	Edit a text	Text editing	2
11	Revision		2
12	Exams		2
			8

3ND TERM

Week	Specific Objectives	Contents	Timing (periods)
1	Create and edit a table	Creating and editing a table	2
2	Insert mathematical equations	Equation editor	2
3	Print a document	Page setup and printing	1
	Evaluation		1
			6

CHAPTER II: Microsoft Excel

Week	Specific Objectives	Contents	Timing (periods)
4	Use some basic excel tasks	Basic excel tasks	2
5	Use some basic excel tasks	Familiarising with basic excel tasks	2
6	Manage sheets in Excel Workbook	Managing worksheets	2
7	Format cells and their contents	Formatting text and cells	2
8	Format cells and their contents	Familiarising with text and cell formatting	2
9	Use some functions and perform mathematical operations	Numbers and mathematical Calculations	2

Week	Specific Objectives	Contents	Timing (periods)
10	Merge cells	Merging cells	2
	Print an excel worksheet	Printing and page setup	
11	Revision		2
12	Exams		2
			18

SENIOR 5

CHAPTER I: INTERNET

Specific objectives	Contents	Teaching/Learning activities
<p>At the end of this chapter the learner will be able to :</p> <p>Define and launch a Web Browser</p> <p>Navigate within a website</p>	<p>Definition of web browser</p> <p>Elements of web browser</p> <ul style="list-style-type: none">• Browser buttons• Address bar• Status bar• Scroll bar• Home page• Front /back buttons• Refresh button	<p>Learners open a browser.</p> <p>Organize learners into groups and discuss themselves what they are seen on the opened window.</p> <p>Encourage learners to navigate within different website using different browser tools.</p>

<p>Build a simple web page</p> <p>Explain the need of web hosting</p> <p>Differentiate services given from a web hosting</p> <p>Host a website</p>	<p>Introduction to HTML</p> <ul style="list-style-type: none"> • What is HTML • Creating a web page <p>Web hosting needs</p> <ul style="list-style-type: none"> • Disk space • Bandwidth • Cost • Web hosting features <ul style="list-style-type: none"> • Host a website on web server 	<p>The teacher organises learners into small groups and helps them to build a simple web page using HTML.</p> <p>The teacher helps learners to identify the role played by website owner and hosting server owner.</p> <p>The teacher helps learners to host a website to the free online hosting server.</p>
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<p>Search on Internet</p>	<p>Search engines</p> <p>The role of search engines in our daily activities.</p> <p>How to use search engine</p> <ul style="list-style-type: none">• Google• iTunes• Blogs and forums• etc	<p>The teacher organises learners into groups and assign each group a topic to be developed using different search engines.</p>
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THEME II: MICROSOFT OFFICE

CHAPTER I: Microsoft Word

Specific objectives	Contents	Teaching/learning activities
<p>At the end of this chapter the learner will be able to:</p> <p>Insert a table of contents</p> <p>Insert footnotes</p> <p>Insert header and footer</p>	<p>Automatic Table of contents</p> <ul style="list-style-type: none">• Applying Style• Title numbering and hierarchy• Page number <p>Footnotes</p> <p>Header and footer</p> <ul style="list-style-type: none">• Automatic page	<p>Practical exercises on automatic table of contents</p> <p>Exercises on footnotes</p> <p>Create a document containing</p>

<p>Insert office objects</p>	<p>numbering</p> <ul style="list-style-type: none"> • Automatic date • Automatic Author's name <p>Office objects</p> <ul style="list-style-type: none"> • Clip Art • Word Art • Auto Shapes • Organisation chart • Chart • Date and time • Symbols 	<p>several pages with elements such as the page number, date.</p> <p>Practical exercises</p> <p>Practical exercises (in groups and individual) on Insertion of objects such as Clip Art, Word Art, Symbols.</p>
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<p>Use some functions and operators</p>	<ul style="list-style-type: none"> • Operators <ul style="list-style-type: none"> ▪ Arithmetic: addition (+), subtraction (-), (*), division (/), exponent (^) Comparison: equality (=), inferiority (<), superiority (>), >=, <=, <> 	<p>Practical exercises on the use of functions and operators</p>
<p>Merge cells</p>	<p>Merging cells within a cell</p>	
<p>Sort data</p>	<ul style="list-style-type: none"> • Ascending Order • Descending Order • Select 	<p>Exercises on the Merging cells</p>
<p>Edit a Worksheet</p>	<ul style="list-style-type: none"> • Copy 	<p>Exercises on sorting</p>

	<ul style="list-style-type: none"> • Cut • Paste • Search/Find and replace 	Exercises in groups and individual homework.
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CHAPTER III: Ms PowerPoint

Specific objectives	Contents	Teaching/learning activities
<p>At the end of this chapter the learner will be able to:</p> <p>Explain the use of PowerPoint</p>	<p>Ms PowerPoint</p> <ul style="list-style-type: none"> • Definition • Role <p>PowerPoint Environment</p> <ul style="list-style-type: none"> • Title Bar 	<p>The teacher uses a PowerPoint presentation with slide show and get feedback from students on the area of application of Ms PowerPoint</p>

<p>Launch Ms PowerPoint</p>	<ul style="list-style-type: none"> • Menu Bar • Toolbars • Formatting tool bar • Title • Sub title • Creating new presentation • Blank presentation • Design template • Auto content wizard 	<p>Launch PowerPoint and observe the PowerPoint environment.</p> <p>Individual exercises</p>
<p>Create a new presentation</p>		<p>Create presentations using the various methods</p> <p>Practical exercises (individual and in groups)</p>

Create, Insert a slide	<ul style="list-style-type: none">• creating a slide• Inserting a slide• Modifying a slide	Exercises on creating, inserting and modifying a slide
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DISTRIBUTION OF LESSONS: Senior 5

THEME I: MICROSOFT OFFICE

Week	Specific Objectives	Contents	Timing (periods)
1	Define and launch a Web browser	Introduction to www, web page, web site	2
2	Browse within the website using the hyperlinks.	Web browser	2
3	Create, manage favourites using Internet Explorer	Favourites	2
4	Differentiate a web page from a website	website	2
5	Give the role of ISP	Internet Service Provider	2

Week	Specific Objectives	Contents	Timing (periods)
6	Build a simple web page	HTML	2
7	Build a simple web page	HTML	2
8	Explain the need of web hosting	Host a website	2
9	Search on Internet	Search engine	2
10	Evaluation		2
11	Revision		2
12	Exams		2
			24

2rd Term:

CHAPTER I: Microsoft Word

Week	Specific Objectives	Contents	Timing (periods)
1	Insert a table of contents	Automatic Table of contents	2
2	Insert footnotes, header and footer	Footnotes, header and footer	2
3	Insert office objects	Office object: Clip Art	2
4	Evaluation		2
			8

CHAPTER II: Microsoft Excel

Week	Specific Objectives	Contents	Timing (periods)
5	Edit a worksheet	<ul style="list-style-type: none">• Select, Copy, Cut, paste	2
6	Edit a worksheet	<ul style="list-style-type: none">• Find and replace	2
7	Split cells	<ul style="list-style-type: none">• Horizontal splitting• vertical splitting• Horizontal and vertical splitting	2
8	Merge cells	Merging cells within a cell	2
9	Sort data	Sorting (Ascending Order, Descending Order)	2

Week	Specific Objectives	Contents	Timing (periods)
10	Use some functions and operators	<ul style="list-style-type: none"> • Functions: average; max, min 	2
11	Revision		2
12	Exams		2
			16

3RD TERM

Ms Word

Week	Specific Objectives	Contents	Timing (periods)
1	Use some functions and operators	<ul style="list-style-type: none">• Operators :<ul style="list-style-type: none">○ Arithmetic: addition (+), subtraction (-), multiplication (*), division	4
2	Use some functions and operators	<ul style="list-style-type: none">• Function : If	4
3	Use some functions and operators	<ul style="list-style-type: none">• Operators:<ul style="list-style-type: none">○ Arithmetic: puissance (^)	2

Week	Specific Objectives	Contents	Timing (periods)
4	Use some functions and operators	<ul style="list-style-type: none"> • Operators: <ul style="list-style-type: none"> ○ comparison : equal (=), less than (<), bigger than (>), less than or equal to (≤), greater than or equal to (≥), not equal to (≠) 	2
5	Evaluation		2
			14

CHAPTER III: Microsoft PowerPoint

Week	Specific Objectives	Contents	Timing (periods)
6	Explain the use of PowerPoint	Ms PowerPoint	1

Week	Specific Objectives	Contents	Timing (periods)
	Launch Ms PowerPoint		
7	Create a new presentation	Creating new presentation New bank presentation	3
8	Create a new presentation		2
9	Insert a slide	Creating new presentation Design template	2
10	Evaluation		2
11	Revision		2
12	Exams		2
			14

SENIOR 6

CHAPTER I: Microsoft Word

Specific objectives	Contents	Teaching/learning activities
<p>At the end of this chapter the learner will be able to:</p> <p>Draw an object</p> <p>Send one document to many recipients</p>	<ul style="list-style-type: none">• Drawing toolbars• AutoShapes • Mail Merge• Mail merge assistant• List of standard models• Data source	<p>Exercises in groups and individual on drawing using the drawing tools located in the drawing toolbars</p> <p>Perform Practical exercises on mail merge</p>

CHAPTER II: Microsoft Excel

Specific objectives	Contents	Teaching/learning activities
<p>At the end of this chapter the learner will be able to:</p> <p>Use graphs</p> <p>Use some functions and operators</p>	<p>Graphs</p> <ul style="list-style-type: none"> • Creating chart • Chart Assistant • Modification of the chart elements • Inserting data table and comments in the chart • Modifying a chart title • Modifying the legend • Functions: If, hyperlink • Operators <ul style="list-style-type: none"> ▪ Comparison: =, <, >, >=, <=, <> 	<p>Practical exercises on graphs</p> <p>Exercises to familiarise with functions and operators</p>

CHAPTER III: Microsoft PowerPoint

Specific objectives	Contents	Teaching/learning activities
<p>At the end of this chapter the learner will be able to:</p> <p>Format a presentation</p>	<p>Formatting a slide</p> <ul style="list-style-type: none">• Font• Size• Colour• Font Style (Bold, Italic, underline)	<p>Change the size, the colour and the style of the font in a slide</p>

<p>Animate a presentation</p>	<ul style="list-style-type: none"> • Handout Master • Notes Master • Animation • Custom animation • Slide transition 	<p>Familiarise with animation of a presentation</p>
<p>Print a presentation</p>	<ul style="list-style-type: none"> • Printing a presentation • Print preview • Printing a copy or multiple copies • Printing one slide on a page • Printing more slides on a page 	<p>Exercises on printing in black and white or in colour, printing one or more copies of a presentation</p>

CHAPTER IV. Computer Graphics

Specific Objectives	Contents	Teaching /Learning Activities
<p>At the end of this chapter the learner will be able to:</p> <p>Edit an image</p>	<p>Introduction to computer graphics</p> <p>What is an image</p> <p>What is a pixel</p> <p>Define digital photo</p> <p>Characteristic of a digital photo</p> <p>Definition of computer graphic</p> <p>Use of computer graphic</p> <p>Different types of graphic applications</p> <ul style="list-style-type: none">• Image editing	<p>Teacher helps learners to define the image and digital image</p> <p>Teacher uses available application software to explain how to manipulate a digital photo.</p>

	<ul style="list-style-type: none">• Illustration software Common used image file type(file extension) Basic image manipulation <ul style="list-style-type: none">• Magnifying a photo• Cropping a photo• Delete photo background• Manage photo layer	Practical exercises on image editing
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DISTRIBUTION OF LESSONS: Senior 6

1st TERM

CHAPTER I: Microsoft Word

Week	Specific Objectives	Contents	Timing (periods)
1	Draw an object	➤ Drawing toolbars	2
2	Draw an object	AutoShapes	2
3	Draw an object	Exercises on AutoShapes	2
4	Send one document to many recipients	➤ Mail Merge ➤ Mail merge assistant ➤ List of standard models Data source	2
5	Send one document to many recipients	Familiarising with mail merging	2

Week	Specific Objectives	Contents	Timing (periods)
6	Send one document to many recipients	Familiarising with mail merging	2
7	Send one document to many recipients	Familiarising with mail merging	2
8	Evaluation		2
			16

CHAPTER II : Microsoft Excel

Week	Specific Objectives	Contents	Timing (periods)
9	Use charts	Charts	2
10	Use charts	Charts <ul style="list-style-type: none">• Editing charts	2
11	Revision		2
12	Exams		2
			8

2ND Term

Microsoft Excel (suite)

Week	Specific Objectives	Contents	Timing (periods)
1	Use charts	Charts <ul style="list-style-type: none">• Inserting data table and comments in the chart	2
2	Use charts	Charts <ul style="list-style-type: none">• Modification du titre d'un graphique	2
3	Use some functions and operators	<ul style="list-style-type: none">• Function : If	2
4	Use some functions and operators	<ul style="list-style-type: none">• Function : hyperlink,	2
5	Use some functions and operators	<ul style="list-style-type: none">• Function : median	2

Week	Specific Objectives	Contents	Timing (periods)
6	Use some functions and operators	<ul style="list-style-type: none"> • Operator : <ul style="list-style-type: none"> ○Comparison : equal to (=), less than (<) 	2
7	Use some functions and operators	<ul style="list-style-type: none"> • Operator : <ul style="list-style-type: none"> ○Comparison : greater than (>), less than or equal to (<=) 	2
8	Use some functions and operators	<ul style="list-style-type: none"> • Operator : <ul style="list-style-type: none"> ○Comparison : greater than or equal to (>=), not equal to (<>) 	2
9	Use some functions and operators	○More Exercises on functions and operators	2
10	Evaluation		2

Week	Specific Objectives	Contents	Timing (periods)
11	Revision		2
12	Exams		2
			24

3rd Term

Week	Specific Objectives	Contents	Timing (periods)
1	Change the size and the colour of the text	Font, Size, Colour, Font Style (Bold, Italic, underline)	2
2	Insert graphics	Graphics: Clip art, Word Art, Library Images, Inserting image from a file	2

Week	Specific Objectives	Contents	Timing (periods)
3	Explain the importance of each presentation view	Slide view	2
4	Animate a presentation	<ul style="list-style-type: none"> • Animation 	2
5	Animate a presentation	<ul style="list-style-type: none"> • Custom animation • Slide transition • Familiarising with slide animation 	2
9	Print a presentation	Printing a presentation (print preview, printing one or more slides on a page etc.)	2
10	Evaluation		2
11	Revision		2
12	Exams		2
			18

CHAPTER III: Microsoft PowerPoint

Week	Specific Objectives	Contents	Timing (periods)
1	Change the size and the colour of the text	Font, Size, Colour, Font Style (Bold, Italic, underline)	2
2	Insert graphics	Graphics: Clip art, Word Art, Library Images, Inserting image from a file	2
3	Explain the importance of each presentation view	Slide view	2
4	Animate a presentation	<ul style="list-style-type: none">• Animation	2
5	Animate a presentation	<ul style="list-style-type: none">• Custom animation• Slide transition• Familiarising with slide animation	2

Week	Specific Objectives	Contents	Timing (periods)
9	Print a presentation	Printing a presentation (print preview, printing one or more slides on a page etc.)	2
10	Evaluation		2
11	Revision		2
12	Exams		2
			18

CHAPTER IV: Computer graphics

Week	Specific Objectives	Contents	Timing (periods)
1	Introduction to computer graphics	computer graphics concepts	2
2	State different graphic application	computer graphics application	2

	Define a pixel	Digital photo	
7	Demonstrate image manipulation	image manipulation	2
8	Demonstrate image manipulation	image manipulation	2
9	Print a picture	Printing a digital picture	2
10	Evaluation		2
11	Revision		2
12	Exams		2
			16

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