

Subject Title: Information and Communication Technology

Introduction

Information and Communication Technology (ICT) is a diverse set of tools and resources used to communicate, create, disseminate, store and manage information. Communication and information are at the very heart of the education process. With the increased use of ICT in almost every aspect of our daily lives, ICT has become a potentially powerful enabling tool for educational change and reform. Effective use of ICT at school can help to develop transferable ICT skills and provide useful support in the different domains of the Pre-Vocational curriculum.

In the context of the current curriculum reform, rooted in an evolving social and economic context, students use ICT tools to find, explore, analyse, select, exchange and present information in a responsible and creative manner. They learn how to employ ICT for rapid access to information, ideas and experiences from a wide range of people, communities and cultures. Increased capability in the use of ICT promotes initiative and independent learning with students being able to make informed judgments about when and where to use ICT to the best effect, and to consider its implications for home and work, both at present and in the future.

The aims of ICT at Pre-Vocational Secondary

The learning of ICT as a subject on its own and ICT in an integrated approach in all the other domains provide opportunities for students to:

- have a learning support with the help of ICT tools within the different domains
- make use of ICT tools to analyse, interpret and present information judiciously
- embed ICT in the development of vocational skills
- develop the necessary technical mind frame, ICT skills and attitudes
- use effectively ICT tools for problem solving and intended trade skills

Assessment objectives

Students should be able to:

- demonstrate an understanding of the use of ICT in modern society.
- show confidence and competence in the handling of the computer and the use of computer applications.
- access, select, interpret and evaluate information for suitability, correctness, and currency.
- communicate with others, using computer-mediated communication.
- perform mathematical calculations and modelling using the computer.
- effectively present their work, using appropriate computer applications.

Mode of Assessment

Portfolio-based assessment

Learners at pre-vocational level need to master the ICT skills by hands-on practice. In so doing, it is proposed that activity sheets for each individual item in the syllabus be developed. Students are to work out the activities in a sequential and progressive manner and after successfully carried out the activities they will keep the copies in their portfolios. At the end of the week or a predetermined short period, educators will collect the portfolios for an evaluation of the work done and progress made. In this context, a summative assessment could also be carried out to determine the level of competencies acquired.

Curriculum content

Year 1

Computers in our daily life	<ul style="list-style-type: none">• Computer applications• Main benefits in using computers in everyday life• Computer and human brain• Microchips in computers and other devices• Evolution of computers
Knowing the Computer Room	<ul style="list-style-type: none">• The computer room and examples of different types of computer room• Items in a computer room• Working in a computer room/laboratory• Safety guidelines and care of computer devices• Sitting postures when working with a computer• Good practices when sitting at the computer table• Health problems related to bad postures• Correct posture when using a computer
MS Paint	<ul style="list-style-type: none">• Working with MS Paint program• Components and features of the MS Paint window• Using the Tool Box• Using the Colour Box (Palette)• Drawing of lines and shapes• Colouring of drawings• Selecting, moving and zooming part of a drawing
Fundamentals of a Computer System	<ul style="list-style-type: none">• Types of computer system: microcomputer, minicomputer, mainframe and supercomputer• Components of a computer system• Functions of each component of the computer system• Input and output devices
Computer Operations	<ul style="list-style-type: none">• Basic computer operations: Start and Shut down a computer• The Windows environment: opening a program, exploring the desktop, icons, minimize, maximize, restore and close windows• Using the mouse: Right Click, Left Click, Single Click, Double Click, Drag and Drop• Keys on the keyboard• Using the keyboard• Working with files and folders: create, save, delete and rename of a folder and file

MS Word

- Working with MS Word program
- Components and features of the Word Processing window
- Using MS Word to create a new document
- Using the keyboard keys: Caps Lock, Enter, Space, Backspace and Delete
- Using MS Word features: font size, font type, font colour, format (bold, italic and underline)
- Preview and Print a Word document

<p>Fundamentals of a computer System</p>	<ul style="list-style-type: none"> • Characteristics of the different types of computers: microcomputer, minicomputer, mainframe, and supercomputer • Data processing task of a computer system • Common computer terms; data, input, information, processing and output • Characteristics and uses of input and output devices • Data representation: Binary digits and bytes • Storage capacity of storage media • Analogue and digital signals
<p>Computer Operations</p>	<ul style="list-style-type: none"> • Windows environment • Exploring the program menu • Managing files and folders: Locate and run files and programs from the start menu, search for files and folders, delete, copy, rename and move files and folders • Managing different windows at the same time • Exploring My Computer • Print Preview and Printing • Recycle Bin
<p>Word Processing</p>	<ul style="list-style-type: none"> • Character formatting • Paragraph formatting: Alignment, Line spacing, Bullets and Numbering • Insert Header and Footer, Page Numbers, Borders and Shading • Spell Check, Grammar and Thesaurus • Find and Replace • Drawing Toolbar • Insert picture and clip art • Format pictures • Insert and format tables.
<p>MS Excel</p>	<ul style="list-style-type: none"> • Working with MS Excel program • Components and features of MS Excel window • Rows and Columns: changing size of a row and a column • Active cell, cell address and range of cells • Entering data in a worksheet • Formulas and functions • Basic mathematical operations • Insert row and column
<p>MS PowerPoint</p>	<ul style="list-style-type: none"> • Working with MS PowerPoint program • Components and features of MS PowerPoint window • Adding text to a slide and save the presentation

	<ul style="list-style-type: none"> • Exploring Home Ribbon in MS PowerPoint • Opening a saved presentation • Formatting fonts of a slide • Adding new slides • Inserting and formatting of text box in a slide • Inserting picture from Clip Art • Deleting a slide from a presentation • Apply a Design Template • Adding a shape • Adding and Removing animations effects • Running a slide show • Printing a PowerPoint presentation
<p>The Internet</p>	<ul style="list-style-type: none"> • The Internet and network of computers • Requirements for connecting to the Internet • Features of a website • Internet access • Searching information on the Internet • Downloading picture, song, and copy of text from website • Bookmark a website

<p>Fundamentals of a computer system</p>	<ul style="list-style-type: none"> • The Operating System • Functions of an operating system • Types of operating systems • Types of user interfaces
<p>Computer Operations</p>	<ul style="list-style-type: none"> • Using devices such as scanners, printers, CD/DVD writers, microphones and speakers • Control panel functions: setting time and date, desktop setting, modifying attributes of the monitor and screen saver setting • Installing/uninstalling programs
<p>MS Excel</p>	<ul style="list-style-type: none"> • Formatting of cells • Adding lines and borders to a range of cells • Formatting background of a range of cells • Expressing numbers as percentages • Using Functions in spreadsheet: SUM, AVERAGE, MAX, MIN, COUNT • Insert Graphs and Charts: Bar Chart, Pie Chart and Line Chart • Page setup • Inserting Header and Footer
<p>Application of computers</p>	<ul style="list-style-type: none"> • Services to computer users: <ul style="list-style-type: none"> ○ E-commerce ○ Online shopping ○ Online banking ○ Videoconferencing / Teleworking
<p>Computer Network</p>	<ul style="list-style-type: none"> • Computer network components. • Types of networks. • Network topology: <ul style="list-style-type: none"> ○ Star ○ Bus ○ Ring ○ Hybrid

Computer Viruses	<ul style="list-style-type: none">• Computer Viruses• Types of Viruses• Security measures to protect computers against virus attacks.• Anti-Viruses• Data Back-Ups

Year 4

Computer ethics	<ul style="list-style-type: none">• Safety rules in the computer room• Common issues of computer ethics• Internet software downloads
MS PowerPoint	<ul style="list-style-type: none">• MS PowerPoint interface• Exploring MS PowerPoint Window• Insert sound, movie, and hyperlink• Remove a hyperlink• Insert pictures from file and clip art into a slide• Add custom animation effects• Apply slide transitions• Run a slide show
Internet: Electronic Communication	<ul style="list-style-type: none">• Electronic communication: email• Demonstrations:<ul style="list-style-type: none">○ Create email account○ Accessing an email account○ Composing an email○ Attaching a document to an email○ Downloading an attachment from an email○ Replying an email
Ms Word	Word processing practical lab activities
Ms Excel	Spreadsheet practical lab activities