

Computer Essentials

Microsoft Windows 8



Important Notice

All candidates who follow an ICDL/ECDL course must have an official ICDL/ECDL Registration Number (which is proof of your Profile Number with ICDL/ECDL and will track all tests taken). Without such a Registration Number, no tests can be taken and the candidate will not be able to obtain an International Computer Driving Licence, nor any other form of certificate or recognition for the course.

Registration Numbers are obtainable from ICDL/ECDL Training and Testing Centres or directly from Specto.

How to use this Manual

Using this manual you will encounter the following features:



Let's Remember!

Take note of the informative reminders.

Let's Do It!

Practical Exercises.

This is a practical guide for anyone using *Microsoft® Windows® 8* software.

Go to: www.specto.co/data. Follow the on screen instructions to download the appropriate data file. Copy and paste the complete Let's Do It! folder to the hard drive (C-Drive) of your computer. Open the templates from this folder. A separate folder can be created to save completed exercises if necessary.

This manual was written for *Windows® 8* users. If a different operating system is used, some dialog boxes may look different, but the content is the same.

A screen resolution of *1366 x 768* was used in compiling this manual. Working in a different screen resolution, or with an application window which is not maximized, will change the look of the *Office 2013 Ribbon*. The *Ribbon* appearance is dynamic, as it will change to fit the space available. For example, the full *Ribbon* may show a group containing several options, but if space is restricted it may show a single button that you need to click to see the same options.

Table of Contents

Module Goals.....	1
Computers and Devices	1
ICT.....	1
Define the Term Information and Communication Technology (ICT).....	1
Different Types of ICT Services / Uses.....	2
Hardware	3
Main Types of Computers	3
Desktop Computer.....	3
Laptop / Notebook.....	3
Tablet.....	4
Main Types of Devices	4
Smartphone	4
Media Player.....	5
Digital Camera	5
Main Parts of a Computer	6
Define the Term Processor	6
Define the Term Random Access Memory (RAM).....	7
Read Only Memory (ROM)	8
Cache Memory	8
Define the Term Storage	8
Impact on Computer Performance	8
Main Types of Integrated and External Equipment.....	9
Printer	9
Impact Printers.....	10
Non-Impact Printers	10
Printer Driver	10
Print Spooler	10
Screen.....	10
Cathode Ray Tube (CRT) Screens	11
Liquid Crystal Display (LCD) Screens	11
Light-Emitting Diode (LED) Screens	11
Screen Resolution	12
Scanner	13
Keyboard	14
Mouse	15
Trackpad / Touchpad	16
Webcam (Web Camera)	16
Microphone.....	16
Speakers.....	17
Docking Station.....	17
Input and Output Ports	18
What is a Port?	18
USB Port	18
HDMI Port	18
Software and Licencing.....	19
Operating System Software (System Software)	19
Application Software.....	20
End-User License Agreement	21
Types of Software Licenses.....	21

Proprietary License	21
Open Source License	22
Shareware / Trial Version License.....	22
Freeware License	22
Start Up, Shut Down	22
Starting the Computer	22
Log On using Username and Password	23
Log Off, Shut Down the Computer using an Appropriate Routine	25
Restart the Computer using an Appropriate Routine	26
Desktop, Icons, Settings.....	26
Desktop and Icons	27
Desktop	27
Taskbar	27
Working with Icons.....	28
Select an Icon	29
Move an Icon	30
Create a Desktop Shortcut Icon	30
Shortcut to a Programme.....	30
Shortcut to a Folder, File or Drive.....	31
Move a Desktop Shortcut Icon	32
Rename a Desktop Shortcut Icon	32
Delete a Desktop Shortcut Icon.....	32
Using Windows	32
Parts of a Window	32
Title Bar.....	33
Menu Bar	33
Toolbar	33
The Ribbon.....	33
Status Bar.....	33
Scroll Bar	33
Scroll Arrow	33
Scroll Box	33
Open a Window	34
Expand a Window	34
Collapse (Minimize) a Window.....	34
Maximize a Window.....	34
Restore a Window (Restore Down)	34
Resize a Window.....	34
Move a Window	35
Close a Window	35
Switch between Open Windows	35
Tools and Settings	35
Help Function	35
Toolbar	34
Methods to find Help on Specific Topics	36
The Search Box.....	37
Browse Help	38
Control Panel	39
View the Computer's Basic System Information	42
Desktop Configuration Settings	43
Date and Time Properties.....	43
Volume Settings	44

Desktop Background and Colour Settings	44
Resolution Settings	45
Keyboard Settings	46
Shut Down a Non-Responding Application	47
Install and Uninstall an Application	47
Install a New Software Application	47
Uninstall a Software Application	48
Connect a Device to a Computer	48
Disconnect a Device using an Appropriate Routine	49
Capture an Active Window	49
Capture a Full Screen, Active Window	49
Capture a Full Screen Image	49
File Management	51
Introducing Files and Folders	52
File Explorer	53
Open File Explorer	53
Add a Folder to a Library	55
Preview Pane	55
Navigate between Drives, Folders, Subfolders and Files	56
Display File or Folder Properties	57
Change View to Display Files and Folders	58
Identify Common File Types	59
Open a File, Folder or Drive	61
Naming Files and Folders	62
Create a Folder	63
Rename a File or Folder	63
Search for Files by Properties	64
Find a File or Folder	64
Search for a File by Name or Content	65
Search by Name	65
Search by Content	66
Search for a File by Date Modified / Date Created	66
Search for a File by Size	66
Search for Files using Wildcards	67
View List of Recently Used Files	67
Organising Files and Folders	68
Select an Individual File or Folder	68
Select Adjacent Files or Folders	68
Select Non-Adjacent Files or Folders	69
Sorting Files	69
Copy, Move Files and Folders	70
Copy a File or Folder between Folders	70
Copy Files or Folders between Drives	70
Move a File or Folder between Folders	70
Move a File or Folder between Drives	71
Delete a File or Folder	71
Restore Files and Folders from the Recycle Bin	72
Empty the Recycle Bin	72
Storage and Compression	73
Main Types of Storage Media	73
Internal Hard Disk	73
External Hard Disk	74

Solid State Hard Drives (SSD)	74
USB Flash Drive (Flash Disk)	74
Network Drives.....	75
CD-ROM Drive (Compact Disk Read-Only Memory)	75
CD-R (Compact Disk Recordable) and CD-RW (Compact Disk Rewritable) Disk Drives.....	76
DVD ROM (Digital Versatile Disk)	76
Blu-Ray Disc	76
Memory Card	77
Online File Storage.....	77
Storage Capacity Measurements.....	78
View Available Space on a Storage Device.....	79
File and Folder Compression	79
Compress Files and Folders	80
Extract Compressed Files and Folders to a Location on a Drive	80
Outputs	81
Working with Text.....	81
Word Processing Applications	81
Notepad	81
WordPad	81
Exit an Application	82
Open a File within an Application	82
Create a New Document and Enter Text.....	83
Move, Copy Text, Paste Screen Capture.....	83
Move Text within a Document.....	83
Move Text between Open Documents	84
Copy Text within a Document	84
Copy Text between Open Documents.....	84
Paste a Screen Capture into a Document.....	84
Save and Name a Document	84
Printing	85
Install a New Printer.....	85
Uninstall a Printer	85
Print a Test Page	86
Set a Default Printer	86
Print a Document	86
Desktop Print Manager	87
View a Print Job's Progress.....	87
Pause, Restart or Cancel a Print Job	87
Networks	88
Network Concepts.....	88
What is a Network?	88
The Purpose of a Network	88
Network Terminology	88
Internet	89
Main Uses of the Internet.....	89
The World Wide Web (WWW)	90
Voice over Internet Protocol (VoIP)	90
Electronic Mail (E-mail)	90
Instant Messaging	91
Intranet	91
Virtual Private Network (VPN)	92
Data Transfer Rate	92

Downloading from, Uploading to a Network.....	93
Network Access.....	94
Options for Connecting to the Internet	94
Phone Line	94
Dial-Up Connection	94
Asymmetrical Digital Subscriber Line (ADSL).....	94
Mobile Phone	95
General Radio Packet Service (GPRS).....	95
Enhanced Data GSM Environment (EDGE)	95
Third Generation (3G) and High-Speed Downlink Packet Access (HSDPA).....	96
Using a Mobile Phone as a Modem	96
Cable.....	96
Wi-Fi	97
WiMax	97
Satellite	98
Internet Service Provider (ISP).....	99
Recognise the Status of a Wireless Network	99
Connect to a Wireless Network	101
Security and Well-Being	102
Protecting Data and Devices.....	102
Good Password Policies	103
Firewall	104
The Purpose of Making Backups	105
Importance of Regularly Updating Software	105
Malware	107
Viruses	107
Worms.....	107
Trojan Horses	108
Spyware	108
How Malware Can Infect a Computer or Device.....	108
Use Anti-Virus Software to Scan a Computer.....	109
Scan Specific Drives, Folders or Files	110
Protecting a Computer against a Malware Infection.....	110
Health and Green IT	111
Ensure the Well-Being of a User while using a Computer or Device.....	111
Avoid Danger when Working with a Computer	111
Golden Rules when Working with Computers	112
Computer and Device Energy Saving Practices	112
Turning Off.....	113
Automatic Shutdown.....	113
Backlight.....	114
Sleep Mode Settings	114
What is E-Trash or E-Waste?	115
How to Stop or Limit E-Waste.....	116
Accessibility Enhancement Options	116
Voice Recognition Software.....	116
Screen Reader Software	117
Screen Magnifier	117
On-Screen Keyboard.....	118
High Contrast	118
Windows Key.....	119
Additional Exercises.....	120

Module Goals

This module sets out essential concepts and skills relating to the use of devices, file creation and management, networks and data security.

Successful candidates will be able to:

- ↗ Understand key concepts relating to ICT, computers, devices and software.
- ↗ Start up and shut down a computer.
- ↗ Work effectively on the computer desktop using icons, windows.
- ↗ Adjust the main operating system settings and use built-in help features.
- ↗ Create a simple document and print an output.
- ↗ Know about the main concepts of file management and be able to efficiently organise files and folders.
- ↗ Understand key storage concepts and use utility software to compress and extract large files.
- ↗ Understand network concepts and connection options and be able to connect to a network.
- ↗ Understand the importance of protecting data and devices from malware and of backing up data.
- ↗ Recognise considerations relating to green IT, accessibility and user health.

Computers and Devices

The following outcomes are covered in this category:

- ↗ Define the term Information and Communication Technology (ICT).
- ↗ Identify different types of ICT services/uses like: Internet services, mobile technology, office productivity applications.
- ↗ Define the term hardware. Identify the main types of computers like: desktops, laptops, tablets. Identify the main types of devices like: smartphones, media players, digital cameras.
- ↗ Define the terms processor, Random Access Memory (RAM), storage. Understand their impact on performance when using computers and devices.
- ↗ Identify the main types of integrated and external equipment like: printers, screens, scanners, keyboards, mouse/trackpad, webcam, speakers, microphone, docking station.
- ↗ Identify common input/output ports like: USB, HDMI.
- ↗ Define the term software and distinguish between the main types of software like: operating systems, applications. Know that software can be installed locally or available online.
- ↗ Define the terms operating system and identify some common operating systems for computers and devices.
- ↗ Identify common examples of applications like: office productivity, communications, social networking, media, design, mobile applications.
- ↗ Define the term End-User License Agreement (EULA). Recognise that software must be licensed before use.
- ↗ Outline the types of software licenses: proprietary, open source, trial version, shareware, freeware.
- ↗ Start a computer and log on using a username and password.
- ↗ Log off, shut down, restart a computer using an appropriate routine.

ICT

Define the Term Information and Communication Technology (ICT)

ICT is an acronym for **Information and Communication Technology**. There is no universally accepted definition of ICT as the concepts, methods and applications involved in ICT are constantly evolving. However, the following can be said of ICT: it refers to all aspects of managing, communicating and processing information. Although computers are central to information management, Information and Communication

Technology embraces more than just the Internet and computers. It includes computer hardware and software, telecommunications, audio-visual systems, cabling, microwaves, radio waves, etc.

ICT can be seen as a combination of information technology and communication technology to create or provide a massive network of electronic devices, including computers. These electronic devices have developed into powerful tools for gathering, manipulating, storing, processing, receiving and transmitting information. Communication between computers can be seen as the process whereby computers transfer electronic information between one another.



ICT is about saving time, being more effective, working smarter and communicating faster and more effectively. It is used by people in all sectors, e.g. individuals, schools, small businesses and large companies around the world, for example using *Mxit* to communicate with friends or using 3G to connect to the Internet.

Different Types of ICT Services / Uses

Information technology is the process of using a computer or device to obtain and handle information and data. It is something that is used by people all over the world in their businesses as well as in their homes. Before the information-technology age came to be, individuals had to obtain and handle their information by hand, which was quite time-consuming.

ICT includes various uses, such as the following:

- ↪ **Internet services:** The Internet is a world-wide network of computers that can be used in various ways. You can find almost anything you need on the Internet, from information to software and items to buy and sell. The Internet enables faster and cheaper means of communication, e.g. e-mail and social networking websites. E-mail is the most common form of electronic communication. Video conferencing is ideal for business communication when different persons may need to be reached across the country or across different time zones. Video conferencing uses a camera, microphone monitor, loudspeakers and an Internet connection. The Internet can also be used in education by making use of e-learning.
- ↪ **Mobile technology:** Since the start of this millennium, a standard mobile device has gone from being no more than a simple two-way pager to being a mobile phone, GPS navigation device, an embedded web browser and instant messaging client, and a handheld game console. Many experts argue that the future of computer technology rests in mobile computing with wireless networking. With the introduction of smartphones and tablet computers, there has been a transformation in the way people access and share information. Mobile technology includes mobile devices, e.g. a notebook computer, and mobile communication services. Wireless Internet connections and Bluetooth connectivity are examples of mobile communication services. These mobile devices and services allow consumers to use their technology on the road, such as connecting a notebook to a wireless service in an airport. Mobile technology makes life more convenient and allows services that would otherwise not exist. Some restaurants, for example, let their customers pay for meals using a wireless credit/debit card, removing the need to pay at a register. Mobile devices allow people to work just about anywhere. Businessmen, for example, can hook up to a wireless connection and respond to e-mail or receive the latest financial reports while on an airplane.
- ↪ **Office productivity applications:** A suite of functions, including word processing, spreadsheets, databases, presentation software and an e-mail programme, e.g. *MS Office* and *OpenOffice*. Office productivity applications improve productivity in the home and workplace by saving time and effort. Productivity software's purpose is to make tasks easier. Office productivity applications also enable multiple people to work on the same file at the same time.

Hardware

Computer hardware refers to all **physical parts** of a computer. These are the parts that can be seen and touched either inside or outside the computer case. The hardware components include the parts that are used to input, process, output and store information. Examples include the mouse, screen, hard drive, and printer. In other words - any type of device, even the computer as a whole, which consists of physical parts, is regarded as hardware.

Main Types of Computers

Desktop Computer

A **desktop computer** is a personal computer and often called a PC. A PC is any general purpose computer whose size, capabilities and price make it useful for individuals and which is intended to be operated directly by an end-user.

Although the initial intended use for a PC is for a single end-user, it can also be connected to a network of PCs that link them together in order to share information and equipment with other users. Externally, a desktop computer normally consists of a system case/unit, monitor, mouse and keyboard.

The speed and capacity or size of personal computers has improved immensely in the last few years. Sizes differ from mere entry level PCs to very fast and advanced systems, all depending on the needs of the user. The cost of personal computers has steadily decreased over the last few years and is more affordable for the average household or business.

Technology has become part of our daily lives and therefore users of computers can include practically anybody from teachers, students, dentists, doctors, scientists, accountants, receptionists, cashiers etc. Some functions that a desktop computer is used for are:

- ↪ Creating various types of documents, such as memos, letters and reports.
- ↪ Budgeting and performing accounting tasks.
- ↪ Analysing numeric information.
- ↪ Searching through lists or reports for specific information.
- ↪ Scheduling and planning projects.
- ↪ Creating illustrations.
- ↪ Communicating by using e-mail.
- ↪ Internet browsing as well as doing business on the Web.



Laptop / Notebook



A **laptop** or **notebook** is a lightweight, portable computer that includes a screen, keyboard and trackpad/touchpad. These are built-in items and not separate items as with a desktop computer. These computers can operate from a built-in battery or electricity. It is designed to be portable and can be used in locations without electricity. The size or speed and capacity are mostly the same as a standard desktop computer.

Laptop / notebook computers are still slightly more expensive than desktop computers, as they contain more expensive components. However, the prices of entry level laptops are much the same as that of an entry level desktop computer.

Laptops / notebooks can be used as a single computer or connected to a network. Laptop computers can be used by any of the users mentioned for personal computers. More typical users are people that need to travel or work from both the home and office, such as journalists, sales people, managers. It can be used for the same functions as a desktop computer.



Let's Remember!

The difference between a laptop and notebook today is mainly what the manufacturer chooses to call its product. Technically and traditionally, the difference between the two is a matter of size. In fact, many consumers will look for a laptop, but find almost everything is now called a notebook.

Tablet

A **tablet** is a computer that can either look like a notebook or more like a slate-shaped device. Tablets are mobile computers, but larger than smartphones and personal digital assistants. Tablets come in various sizes and are mostly operated by touch screen (see later). A tablet computer may be connected to a keyboard with a wireless link or a USB port, but most tablets have on-screen virtual keyboards. A stylus pen or a digital pen can also be used as an input device. The fastest growing category of portable computer is the tablet.

Tablet computers typically draw power from a rechargeable battery. Battery life for tablets varies between models. A tablet has an operating system capable of running small programmes. Programmes for tablets tend to be less complex than computer programmes. The common term for these programmes is applications or "apps".

Although tablets can be used by any of the users mentioned for desktop computers, more typical users include people that need to do presentations or people that need to record and process data outside of the normal office environment, such as architects and designers. It is also widely used for entertainment purposes, e.g. playing games.



Main Types of Devices

Smartphone

A **smartphone** is a mobile phone offering advanced computing and connectivity capabilities. Smartphones differ from ordinary mobile phones in two fundamental ways: how they are built and what functions they can perform. A smartphone is a phone that runs complete operating system software, providing a standardised interface and platform for application developers.



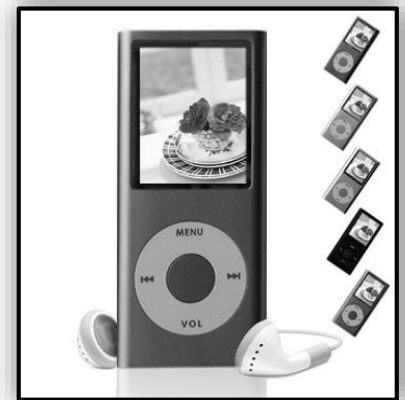
In terms of features, most smartphones support full featured e-mail capabilities with the complete functionality of a personal organiser. Other functionalities may include an additional interface, such as a miniature keyboard, a built-in camera, contact detail management, built-in navigation hardware and software (GPS), the ability to read business documents in a variety of formats, such as PDF and *Microsoft Office*, media software for playing back music, browsing photos and viewing video clips or even secure access to e-mail.

Many modern smartphones also include high-resolution touch screens and web browsers that display standard web pages as well as mobile-optimised sites.

The most common operating systems (OSs) used in smartphones are: *Symbian OS*, *BlackBerry OS*, *Apple's iOS*, *Linux* and *Microsoft's Windows Phone*. Such operating systems can be installed on many different phone models, and typically each device can receive multiple OS software updates over its lifetime.

Media Player

A **multimedia player** is a portable electronic device, its main feature being the capability to store, organise and play audio, image, video and document files. Larger, non-portable devices are also available. Most media players can communicate with other devices through Bluetooth or connecting to it via a cable. This enables the user to copy music and video files as desired. Earphones and a set of speakers make it more practical for the user. The most advanced and expensive players can have TV reception. Examples are the MP3, MP4 and iPod. These multimedia players can literally be part of anything or take on any form, for example as part of a watch, sneakers, sunglasses, helmets, etc. Many data storage devices are also media players. Any device that can store and play back multimedia may also be considered a media player.



Digital Camera



Digital cameras provide a convenient way of storing video or still photographs without the hassle of changing film or developing photographs. Images and videos are recorded on an electronic image sensor. Information is stored on a microchip or memory card. This information can be transferred from the memory card in the camera to a computer via a cable. In most digital cameras, the images are saved directly on a small CD / DVD or a memory card.

Digital cameras can display images on a screen immediately after being recorded, and a user can store or delete images from the memory. Many digital cameras can also record moving video with sound. Some digital cameras can perform elementary image editing. Most cameras sold today are digital and digital cameras are also incorporated into many devices, e.g. mobile phones.