Introduction

While some of this course is about you, the student, doing the research to find answers for yourself, it helps to have a little concrete, reliable information to get you started. While any of this information is readily available if you surf the Web, it's good to have a few "basics" so everyone is singing to the same tune at the start.

There's a whole pile of terms and acronyms you need to be familiar with, here are a few to get you started:

Term	Meaning	Your notes
Motherboard	The main circuit board in a PC, on which components like CPU and RAM are mounted, with connections to many peripheral devices, such as disk drives and printers	
CPU	Central Processing Unit (the PC's "main" chip)	
BIOS	Basic Input/Output System	
ATA	AT Attachment	
IDE	Integrated Drive Electronics	
EIDE	Enhanced Integrated Drive Electronics	
SATA	Serial ATA	
ATAPI	ATA Packet Interface	
PATA	Parallel ATA[1]	
HDD	Hard Disk Drive	
CD	Compact Disc	
CD-R	Compact Disc Recordable	WORM
CD-RW	Compact Disc Rewritable	
DVD	Digital Video Disc	
DVD-R	DVD Recordable	WORM
DVD-RW	DVD Rewritable	
SSD	Solid State Drive	
FDD	Floppy Disk Drive[2]	

[1] See Page 3 for history and clarification of these terms
[2] Floppy Disks are a bit dated now.

Master	The drive (or device) with priority on a shared communication interface	
Slave	The secondary device on a shared communication interface	
Parallel	Communication link carrying many bits at one time over many connectors	
Serial	Communication link carrying a single bit at a time	
USB	Universal Serial Bus	
RAM	Random Access Memory	
Volatile		
ROM	Read-Only Memory	
Non-volatile		
PROM	Programmable ROM	WORM
EPROM	Erasable Programmable ROM	
Cache	"a collection of data duplicating original values stored elsewhere on a computer, usually for easier access" Generally refers to an area of memory used to store a copy of data so it may be accessed faster	
Flash	Non-volatile memory storage media – e.g. SSD, USB flash drives …	
WORM		
DOS	Disk Operating System	
MAC OS	Operating system for Apple Macintosh machines	
UNIX	Operating system	
LINUX	Open-Source Unix	
Command Line	Operating system (or other interface) controlled using basic typed entry commands	
GUI	Graphical User Interface	

ATA

The term AT [as in PC AT] was first used by IBM back in 1984.
PC AT: Personal Computer, Advanced Technology.
ATA:

- AT Attachment, an interface standard for connection of storage devices, principally hard disk drives [HDDs].
- 40-pin connector
- 16-bit parallel data transfer.
- Also commonly known as IDE [Integrated Drive Electronics]
- Later development: EIDE [Enhanced IDE, sometimes called “Fast ATA / ATA2”

SATA

Serial AT Attachment, introduced in 2003

- Reduced cable size (seven conductors rather than 40 or 80)
- Reduced cost (fewer cable conductors == less copper)
- Enables “hot swapping”.
- Faster data transfer (higher signalling rates)

PATA

Parallel AT Attachment –the same as ATA – the P was added in 2003 to distinguish earlier parallel ATA standards from the newer SATA standards.

ATAPI

ATA Packet Interface
A protocol added to PATA/SATA to enable it to handle a wider range of devices than just hard disk drives. For example, ATAPI enables PATA and SATA to handle media that can be ejected (such as CD/DVD), with the commands to eject a disc, and to identify whether or not a drive has a disc present.

CD

Compact disc
Laser-read optical disk with 700 MB storage capacity

DVD

Digital Video Disc
Laser-read optical disk with 4.7 GB storage capacity [9.4 GB in “dual layer” mode]

Open Source

Software that is free to download, use, share. The **source code** is also freely available, so users can modify it to suit their own needs, edit bugs…

Source Code

Original computer program code, written by humans, intended to be readable by humans, later compiled or interpreted to machine code for a computer to execute.

Other places to look:

Clearly, you have the whole World Wide Web to browse (apart from any sections your network manager may have blocked!)…

General terminology

This is a subject area where Wikipedia can actually be quite useful as a first resort.

Hardware

On the hardware side, both for checking out the latest cutting-edge technology, and for finding more general "how to fix" answers, Tom's Hardware [www.tomshardware.com] is a favourite of many professional technicians as well as geeky hobbyists.

Individual hardware and software manufacturers

Most manufacturers want to sell their products (!). Many also want to keep their customers happy with technical support, updates, replacement copies of manuals and so on. Manufacturers' Web sites can often be a great place to dig out useful information, either to help you understand something, or to present an idea.

Books

Even in the age of personal computers, the Internet, the World Wide Web and so on, books can often prove a valuable resource (not least because you can read them at times when you don't have a computer handy, or lack access to the Internet!).

Check texts for more general computing courses – it may not be specifically labelled for your course, but it may well contain bags of useful information and knowledge.

Computing texts by **P M Heathcote** and **RSU Heathcote** are generally worth looking-out for.
The latest edition of **PCs for Dummies** [2015] is pretty basic in places, but if you're struggling to get this part of the course, it might help.

Other books: Especially when you're looking at the hardware side of things, try to get something recent (published within the last 3 years) – standards change, technology changes. On the software side things don't change so fast. There are still a few jobs to be had using programming languages I first learnt almost 40 years ago. (… and yes, I have learnt many more since then!)