

VCH 603: COMPUTER APPLICATION IN VETERINARY MEDICINE (2UNITS)

Course Synopses

- ***Basic Terminologies and Concepts in the Usage of Computers***
- ***Literature Search from Journals and Encyclopaedia, CD-ROM, Internet***
- ***Epidemiological and Statistical Programs; Epizoo, SAS***
- ***Veterinary Information System***
- ***Disease Modelling for Impact Assessment of Disease Outbreaks***
- ***Data base Applications in Keeping of Diagnostic and Clinical Records***
- ***Management of Accounts by Use of Spread sheets***

Basic Terminologies and Concepts in the Usage of Computers

- Computer is an electronic machine that is made-up of devices used of input, processing, storage and output.
- Computers are preferred to other processing tools because they are fast, accurate, diligent, versatile, have large data storage capacity and execute instructions automatically with minimal human intervention.
- Computers have two parts; hardware and software.

Hardware

This is the physical part of the computer. The devices include the following:

Keyboard: this is used to type instructions. It is the direct line of communication between the user and the computer. The keyboard is divided into the following five areas

- i) *Typewriter keys*: These keys are layout of letters, numbers and symbols with two shift keys to convert letters to uppercase.
- ii) *Computer keys*: These are special keys which when used in conjunction with letters, send special instructions to the programme. These include Control keys, ALT keys and window keys. The Ctry and ALT keys are not used by themselves instead they give new meaning to a second key.
- iii) *ALT*: The ALT key for example can be pressed along with F4 key (one of the function keys) to close a window on the desktop. Press and hold the ALT key, tap the F4 key (one of the function keys) to close a window on the desktop. Press and hold the ALT key, tap the F4 key and then release both keys.
- iv) *CTRL*: The control key abbreviated as control. In most window programs, if the Ctrl key is held down and S is pressed, i.e. Ctrl + S, the document at hand is saved, Ctrl + P is print. Also Ctrl + Esc will pop up the start menu. Always remember to press and

hold the shift keys first and then tap the letter key. It is important to note that in some programmes, you can press the Alt and Ctrl keys by themselves. For example, the Alt key can be pressed to activate the menu bar in a windows programme, and Ctrl key to switch off the window screen saver.

Windows key and the short cut menu key sit between the control and the Alt keys on either side of the space bar.

The windows key serves the same purpose as pressing Ctrl + Esc, this pops up the start menu. The short cut menu key displays the short cut menu for whatever item is currently selected on the screen. This is the same as right clicking the mouse on something.

Function Keys

These keys are positioned on the top row of the keyboard. They are labelled F1 – F12 and are used to give specific commands to the computers. Just before the F1 key is the Esc key which when pressed cancels the current operation.

Cursor control keys

These are often called arrow keys there are 4 keys that move the text cursor in the direction of their arrows. Above them are more cursor control keys – the six pack of Insert, Delete, Home, End, Page Up and Page Dn.

Numeric keypad

To the right of the keyboard is the numeric keypad. The keypad has two modes; numeric mode and cursor control mode. When the NUM LOCK light is lit, the keypad is in the numeric mode. The keys are arranged like a calculator which makes them more convenient to use than the number on the typewriter key area. To enter the cursor control mode, press NUM LOCK to turn the NUM LOCK light off. The enter key is functionally the same as the RETURN KEY.

Enter key

Most PC have enter key instead of return key (Machintosh computers have both), they are essentially the same and performs similar functions. Pressing the enter key is the same as clicking OK in a dialog box. In word processing, pressing enter signifies the end of paragraph.

Tab

Like on a typewriter, pressing Tab moves the cursor over the next tab stop. The computer treats a tab as a single, separate character. When you back space over a tab in a word processing program, the tab disappears completely in one chunk not space by space.

Mouse

This is a handheld controller whose movements on a pad alter the position of the pointer on the monitor. The buttons on its top allow the user to issue command relating to what is being pointed at. The mouse is an essential piece of hardware for the use of Windows Operating System-based package.

Common Windows Editing Keys

Key	Windows Editing Key Commands
←	Moves the text cursor left (back) one character
→	Moves the text cursor right (forward) one character
Ctrl + ←	Moves the text cursor left one word
Ctrl + →	Moves the text cursor right one word
Home	Moves the text cursor to the start of the line
End	Moves the text cursor to the end of the line
Delete	Deletes current character
Backspace	Deletes preceding character
↑	Moves the text cursor up one line
↓	Moves the text cursor down one line
PgUp	Moves the text cursor up to the preceding page (screen)
PgDn	Moves the text cursor up to the next page (screen)
Ctrl + ↑	Moves the text cursor up to the preceding paragraph
Ctrl + ↓	Moves the text cursor up to the next paragraph
Ctrl + Backspace	Deletes current word (or Ctrl + Delete)

Processor

The microprocessor is contained in a thin rectangular circuit board known as the motherboard. The microprocessor is the computer's brain. This is also called the Central Processing Unit (CPU). They are available in 8bits, 16bits, 32bits and 64bits (Pentium), based on the number of commands it can perform per second.

Random Access Memory (RAM)

This is the main CPU's memory or workspace. The basic size of the RAM is 512k and can be expanded as seen in the new computer models beyond 262MB, most computers now come in GB. When the computer is being operated, the software being used is loaded from the hard drive into the RAM while the data generated are stored temporarily in RAM. RAM is volatile and information stored in it would be lost when the computer is turned off or when there is a power outage with no back-up system to the computer.

Software

This is the intelligence part of the computer. It tells the hardware what to do and how to work. Without the software directing things, the hardware would just sit around and look formidable. ***You must have software to make the computer go.***

The most important piece of software is the Operating System. The Operating System typically comes with the computer upon purchase; although this can be updated and improved upon from time to time. The most popular Operating System used to be the Disk Operating System (DOS). Today however it is Windows.

The Operating System is merely in charge of the computer and by itself it really does nothing, instead to get the work done, application programmes are needed. These include word processors, spreadsheets, databases etc.

Other types of programmes include; utilities, games, educational (e.g. typing tutor) and programming software.