

Items To learn for All exams. Emphasis is on Important, Practical, & Useful. HOW TO GET A GOOD GRADE: **PUT YOUR NAME SIGN UP EVERY CLASS. LISTEN, MAKE NOTES, STUDY daily, REVIEW OFTEN** Learn everything in bold in these notes as it will be on tests more than once. Set time aside daily for study. This is a college level class. You are expected to spend at least 1 hour in preparation for each hour in class.

1 Learn how to learn. Find what works for you like review, recite, quizzing self. Flash cards

2 Learn how to take quick notes. When time is short use abbreviations for subject words. Example if lecture is on computers make a note c=computer. Leave out vowels and abbreviate when time is short. Later rewrite the notes while the lecture is still fresh in your head. Review often. Repetition works.

3 To help learn do the following: find causality, connections, importance, use.

4 Think and Ask the 6 learning Questions What, Who, Where, When, How and Why.

5 Computers and humans require accurate, factual information.

6 If garbage data goes in garbage information comes out. GIGO

7 How do you get good information ask enough questions to get all of the needed facts

8 What sources should you avoid? Hearsay, Obsolete books, Unverifiable information

9 Beware of Untruths and half truths the world is full of them that and insufficient fact gathering, thinking and caring are the major causes of deaths & suffering.

10 Use scientific method. Science applied with wisdom has done more for mankind than anything else.

11 Go after the truth? Don't take anyone's word for it require proof.

12 What else should you consider? Ask is it actual and is it factual?

13 If in doubt ask really? Tell them to prove it.

14 What is the **Best Insurance to not lose your data? is many good copies in many safe places.**

15 What are three good ways to protect your data from snoopers? **Keep out of sight, lock it up, password it.**

The requirements to pass this class are on the first day handout. Myitlab is required. The teacher has office hours sat Hometown Heroes Internet Pub on Vandyke at NW corner of 10 Mile 2-4PM Tues & Thurs.

To find out how to do a task in MS Office view short videos showing you how to do tasks in the Myitlab simulation for that chapter. (Learning Aids, Watch Video) And you can see them as many times as you want to. Use ear buds to hear directions.

Be advised the penalty for cheating if a grade of 0. No forgiveness. Some schools throw you out and demand payback of financial aid.

Please shut off computer and monitor before you leave (required). Clean up any mess. What is the best insurance to not lose your data

16 Maximum capacity of **USB flash drives** 512 Gb. storage life 10,000 saves. but have limited life, can fail.

17 BD DVDS 50 Gb. storage life 3-30 years.

18 Hard drives TB. storage life 10 years

19 What storage method lasts longest? Millennial DVD. Lasts if stored properly hundreds of years.

20 The most important rule of netiquette Bring no harm to another by your actions or your inaction and of human relations is Always do as you would want to be done to. (AKA The Golden Rule)

also. Humans must be Humane. You are responsible for treating the equipment and fellow students with respect and care. Treat the equipment as if it were yours because it is (your taxes) No spillable cups in lab. Copy of all work and notes on two flash drives. (put fone# on them

In case of Fire alarm: go out nearest safe exit. There are free tutors available in Word, Excel Power Point. MS Office **not** required on your home PC. Bring pen, paper, set of ear sound buds, two USB flash drives. Do not over rely on computers. Computers fail & get hacked. Flash drives fail. Cloud storage is useful but not always available. Academic discussion is an important part of the college experience. Our graduates are to learn how to think competently, identify problems approach them systematically, explore viable solutions evaluate reasoning, arguments, evidence and communicate competently. We will have just a few minutes of academic discussion at the start of each class in which you may raise any issues of importance. Your **personal security depends on you being informed of what is happening** in the world around you including understanding of multicultural factors and societal significance. So pay attention and learn for your future success.

Print Screen demo-activity. Open word blank page, set to Landscape. Go to class website **easiestlanguage.info** Go to bottom of main page. Place the word International at the top of the page and the word Helps at the bottom. If necessary do a Ctrl – or Ctrl+ to adjust size. Tap PrtScn key. Click on your word page, then hold down the Ctrl key and hit the v key. Adjust size to fit on page. Type your name on the bottom of the page. Later click Technology link for class notes, scholarships, job leads, and other useful info. What is **Esperanto**? Scroll to top of class website. Put colorful Humans Must Be Humane picture in view. Click on Windows start icon, scroll down to Windows Accessories, then click on Snipping Tool. Click on New then hold down left mouse button and form a rectangle around the colorful picture. Then click on file, save as and type in Humans Must Be Humane. Save it in the pictures folder. Then copy it to your USB drive. Paste it into your word document. Turn in for credit.

20 **definition of computer**: 5 parts Is an **Electronic** device that **Accepts** Data, **Processes** it by its own **program**, Provides **output**, **Stores** it. Know Parts of computer system: The system unit is the case either a vertical tower, or horizontally oriented desk top unit. Keyboard what you type on. Monitor is screen.

21 **Old big CRT vacuum tube 150-500 Watts has High Dangerous voltage** even year after being unplugged, & gives out electro magnetic radiation **EMR** when it is plugged in.

22 **LCD** about 15 Watts no high voltage, runs cooler,

23 **LED** uses even less power & thinner.

24 **OLED** (Organic)uses **even less power** and thinner, is **flexible**.

25 **Pixel** =picture element a dot. 26 **Mouse** is pointing device. **two kinds** mechanical, &

27 **optical** has a light and is **more reliable** easier to clean.

28 Printer quality is measured in dots per inch **dpi**, speed in **ppm** pages per minute. 29 Plotters draw on bigger paper. 30 **Laser** has **cheapest ink** usually better quality & built for high volume,31 **Ink Jet** sprays,

32 **Thermal** heats paper, 33 **Diesub** melts color may last 100 years.

34 **storage mediums** magnetic is faster but optical is more rugged, **flash chips smaller even more rugged**. 35 **Smallest is MicroSD**,

36 **Compact Disk is optical media** device maximum **capacities**: mini 8cm CD 200 Mb mini DVD 1 side 1.4GB 1 side 2 layer 2.66GB, 2 side 2.8 GB, **2 side 2 layer 5.2GB is most**, fullsize **12cm** CD-R or CD-RW 700 MB but **DVD 4.7 GB**, dual layer DVD DL 8.5 GB, blue ray **BD 25 GB**, dual **layer 50 GB is most**.

37 **FDD** Floppy Disk Drive a **magnetic media** storage device capacity 1.44 MB,

38 **SSD solid state drive .5-16T** or

39 **HDD** Hard Disk Drive **magnetic media** storage device in system case or external capacity several TB

40 **Blinking object on screen showing place is a cursor**. 41 **USB** Universal Serial Bus socket can automatically quick connect up to **127 devices**. Above is storage is used by programs is usually on disks

42 but **RAM** Random Access Memory is on chips is **volatile** memory & 43 **ROM** Read Only Memory nonvolatile memory both used by **CPU**. See page 51 in Technology in Action.

44 Desktop is main screen of a 45 **GUI** (Microsoft's **Windows** is Graphical User Interface) operating system containing icons & menus. Another GUI if the Free Linux Operating System on CD or flash drive can be very useful. Sets up on most PCs with or without working Windows in about 4 minutes. 46 **Allows surfing of Internet without fear of getting virus**. **Linux Mint** is one of the easiest to install and run **operating**

systems. It comes with the 47 **Free equivalent of Microsoft Office (Open Libre Office)** word processor, spreadsheet, slide show creator and database, 48 plus free equivalent of photo shop (**GIMP**), a CD player, a CD and DVD burner, Firefox browser, and access to virus free 40,000 programs & games all free.

49 Old **command line interface** was **DOS** with cursor. Had to **type** in all commands.

50 **How to avoid repetitive stress injury**? Use **rolled up towel** under wrist. **Fold keyboard legs**, **switch hands**. The mouse wheel is used for **scrolling**. 51 Trackball is like an upside down mouse with ball on top. 52 Upload sent to server on Internet. 53 Download from Internet. 54 **How to avoid viruses** and spy

programs (**malware**). **Install up to date anti malware**. 55 Or Use Linux

56 Digital computers count digits. 57 The other kind is analogue like a gas needle in car.

58 **ESD** Electro Static Discharge spark can kill your computer.

59 Know about: **RFID, mu-chip, Radio Frequency ID chip, VeriChip**,

60 **RFID** powder on class website. Important for the future.

61 **QR code**

62 Nanometer, Nanoscience, Nano technology,

63 **NFC, WiFi Direct, FireChat** Communication when cell towers are down.

64 **nano** one billionth

65 **milli** one thousandth

66 **Kilo** = 1000

67 **Mega** = million 1,000,000, **MB** megabyte

68 **Giga** = billion **GB** gigabyte

69 **Tera** = Trillion

70 **Peta** = Quadrillion

71 **Exa** = Quintillion

72 **Zetta**= sextillion

73 **Yotta** = septillion

74 **micro** or **mu** = one millionth, [micrometer](#). the millionth part of a meter. As in mu chip.

18k bacteria on keyboard and between 25 and 500 million individual bacterial cells per square inch on your body. They are typically a few micrometres in length.

75 USB OTG on the go cable or adapter allows use of USB on fones.

76 Lowercase b is for **bit** which is a binary digit which is a 1 or 0 or an on or off, or higher/lower voltage

77 the **capitol B is Byte** usually contains 8 bits

78 **head crash is caused** by bumping or moving computer.

Computer security and privacy both corporate and personal is a big issue now and promising job field. In the US there are new laws but first you need to know the basics. **79** The basic law of our land is the US Constitution which purpose is to establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity. The Bill of Rights is first 10 amendments. **80 First Amendment** guarantees the freedom **of religion, of speech, of the press, of assembly, and of petition to the government for redress of grievances.** **Second Amendment** The right to bear arms openly, **Third Amendment** freedom from quartering soldiers in a house without owner's consent

81 Fourth Amendment protects people against **unreasonable search and seizure**. No searches without warrant or probable cause. And this about privacy. **Fifth Amendment** no person shall be held for "a capital or otherwise infamous crime" without indictment, be twice put in "jeopardy of life or limb" for the same offense, be compelled to testify against himself, or "**be deprived of life, liberty, or property without due process of law.**" It also prohibits government from taking private property without "just compensation," **Sixth Amendment** guarantees the right of speedy and public trial by an impartial jury in all criminal proceedings and the right to have legal counsel for the accused and guarantees that the accused may require witnesses to attend the trial and testify in the presence of the accused. It also guarantees the accused a right to know the charges against him.

82 The **Universal Declaration of Human Rights** lists our most important human rights. Please read it. **The American Way of Life** promotes: Life, Liberty, Justice and the pursuit of Happiness for all through individual Responsibility and Integrity. With rule of law under our U.S. Constitution. With each person supporting themselves, family and their community to best of their ability. Promotes: use of scientific knowledge, research and discussion for solving problems rather than violence. Promotes: Love, Kindness, consideration for all with the expectation and code of conduct that No one should bring harm to another by their actions or inaction and Actions should be based on Factual Truth, not hearsay or uneducated opinion from obsolete past? Ask does it pass the test of Truth based on all of the facts? Is it how you would want to be treated?

83 Humans Must be Humane and cause no harm by their actions or inaction.

84 Apply the test of Truth in all learning. Really? Is it a fact?

85 Privacy is important, otherwise risk of identity theft, they can get your money, People govt and corporations are collecting info about you, can have wrong info, cost you jobs, or could use against you empty your bank account or run up charges on your credit. Beware of Untruths. Surveillance: employers & Govt, can & do spy on your email, personal calls, Internet usage, banking, credit, locations, your Google searches, Facebook and more.

86 **Programs in Public Domain are called Open Source.**

87 **Automation Bots and robots will replace 60% of workers in near future.** You must prepare for future jobs not just jobs that exist now. There will be competition for good jobs See Did you Know, Future of Work & Humans Need Not Apply on YouTube. collaborative consumption, digital divide, forensics, hardware (physical parts), haptics. See p 14 modern theory of motivation states Autonomy, Mastery and Purpose motivate people.

88 If a terrorist enters throw things at him strike him behind knee take him down pile on top of him and get gun away. Keep him down use all force necessary to keep him down.

89 **Information technology IT** a field of study focused on the management and processing of information and the automatic retrieval of information. P15 Careers in IT are in demand. Many pay very well. P4, 7

90 **Web 2** features **social networking**. Facebook etc. see p 80 Skype The more you understand technology the more productive and protected you will be and the better chance you will have of getting a good job. Literacy is knowing how to use Computer Technology that also **includes avoiding hackers & viruses & protecting your privacy**. You should understand the risks. You should know **how to use the web wisely**.

91 **Data mining** p15 searching Big data for pattern, Free books Craigs List and openstaxCollege.org or cheap dealoz.com

92 **Cognitive surplus** time and tools to be creative by numbers of people. Trillion hours of free time to do good p7

93 **Augmented reality AR** is the addition of digital information directly into your reality p19

94 **VR virtual reality appears to be real but isn't.** p19 A lot of folks are living in fantasy land.

95 **affective computing.** systems that can recognize and simulate human emotions. p20

96 The **Language of Computers binary** to make **programs Bit Binary digit 0 or 1**

97 **Program** is a step by step set of instructions

98 **Software** is made of programs.

99 There are two main kinds: **application software** which does the task for you

100 and **Operating System Software OS** which runs the computer such as Linux, Windows, OS10, Android

101 Be able to List **common types of computers**, and discuss their main features. smartphones, watches, tablets, often called mobile computers, laptop or notebook, chromebook, net book, desktop, tower, all of these are called **PCs. Mainframe and Super are very big. Embedded** Self-contained inside devices.

102 To affect it, you must select it

103 **Shortcuts Ctrl b bold, c copy, p paste, x cut, z undo, n new, I Italic, a select all**

104 **In Excel Ctrl ` shows formulas, AltEnter new line Access Ctrl ' copy cell above**

105 **NFC** Near Field Communication very close proximity p40 receive or send files, fotos, make payments How they work see 38 & 41

106 **pixel** smallest dot on screen,

107 resolution is hpw many dots are on a screen

108 **WiFi** is wireless networking using radio waves up to 1000 ft and faster then

109 **Bluetooth short range radio standard using radio waves range 100 Meters 2 Mbits/s** p 44

110 **Processing** and Memory are on the Motherboard

111 Central Processing Unit **CPU** is "Brains"

Primary device for permanent storage, Nonvolatile storage devices is **Hard Drive HDD lasts longer**

Internal drive or External hard drive HDD or **Solid-state Drive (SSD)** is faster

112 GPU Graphical Processing Unit on video card the more RAM the better video.

Portable and Optical Storage Options External hard drives p 54 Flash Storage

Optical Storage Options Compact discs (**CDs**) Digital video discs (**DVDs**) **Store more data than CDs** Blu-ray discs (**Bds**) store the most **KNOW Storage capacities** p 55

113 **Ethical Guidelines TIA p53 Cause no harm Now there are enforceable laws**

114 see page 43 for Printers 59 ergonomics **3D printing** 64

Transferring data by hand on USB stick or portable hard drive used USB technology.

115 Universal serial bus (USB) **USB2** most common In older cs 4 pins hot pluggable UP TO 480 Mbs

116 USB 3 up to 5 Gbs, New USB 3.1 standard port 10 Gbps and charges faster will use USB C has reversible plug Wireless USB 7 Gps with 802.11ad (802.11ac wired does 13Gps)

Thunderbolt 3 40 Gb/s Transfer speeds up to 20 Gbps

Connectivity port gives access to networks and the Internet, Ethernet port

HDMI 1 High Definition Multimedia Interface HDMI 2 allows 4K at 60fpd

121 Taking notes. The old way still works. Cursive is faster than printing. Tape and digital recorders are used professionally. If you need to make a document it is now faster to use Google Voice on your fone (modern spelling. Yes language changes let's improve it.) or Speech Recognition on the PC or Mac. The best is supposed to be Dragon Dictate. But these still need to be proofread. If you need to write a paper consider using speech recognition to save time.

122 Another useful tool is OCR Optical Character recognition. Use an OCR program to take output of a scanner or picture and convert it to text. Cameras are faster than scanners. If you don't have a scanner or OCR program you can upload a picture to Google drive then open it as a Google Doc. It will automatically OCR it, separate the pictures and convert the picture of words to text if the picture is high enough quality. Otherwise it just opens it as a picture.

123 A student computer should have at minimum: at least a hard drive over 20G, processor with speed of more than 600 MB/min, at least 500 MB RAM but 2GB ram or more much better, but for use of videos 4 GB or RAM is often needed. several USB ports, a network connection and WiFi, and operating system (OS) such as Windows or Linux such as Ubuntu or Mint. Be aware of price deals. Referbs are often bargains found at Micro Center and Silicon Alley Recyclers 10/Ryan (have lowest prices)

124 Keys, which 6 can usually be safely held down? Ctrl, Alt, Shift, Num Lock, Caps Lock, Scroll Lock.

125 Privacy is almost gone. Do not put any of information into a cell fone, computer, or cloud drive you do not want the world to know. That also includes talking in a car or within range of a microphone or cell fone. Surveillance is all over and business owners, corporations, Big Brothers, and foreign operatives are all spying on us.

126 A few old sayings may be useful to you. Want to be a success. Then Think Success. Think, Make a plan then work the plan, then evaluate it.

If it is to be it's up to me. When the going gets tough the tough get going

Beware of Untruths and half truths they abound almost everywhere. Verify from several reliable sources.

129 **Insufficient facts always invite danger.**

Seek the Truth. Ask really? Is that actual and factual?

131 TIA Page 14 ethics needed code of conduct **Silver Rule Don't do to others what you would not want done to yourself. Humans should be Humane.**

132 Beware. What you do goes around and later comes around. Your actions eventually come back to you.

133 Nothing is as important as this day and the Love and Life in it. Life is rare in the Universe.

134 Science gives us accurate knowledge, engineering applies that knowledge into Technology which can give us wonderful tools but applying technology without love, kindness and wisdom is dangerous.

135 Internet world wide network of servers, cable & devices. Has several services such as email and WWW World Wide Web Billions of files. Millions of videos are on youtube.com

136 **Client** (your machine) **Server** computer on other end on Internet. Is a Client Server Network

137 **Internet Protocol (IP) Address** 123.45.244.89

138 **URL = name like yahoo.com** Uniform Resource Locator

139 parts of URL http:// is Protocol, nytimes is domain name, .com is top level domain name, the rest is the path

140 Wiki user collaborative web sites wikipedia.org, wikiversity, wikiquote, wikibooks, wikihow

141 HTTP is the protocol that enables files to be transferred fro the Internet server to the client.

142 Safeguards **SSL** uses encryption shown by https:// makes much safer. Use credit card or gift card

143 podcast, RSS.

144 FTP File Transfer Protocol allows files of any kind to be transferred between computers.

145 **BitTorrent** is a protocol to transfer files directly from client to client.

146 e-mail 2 kinds web based like Gmail or client from your Internet service provider like Comcast.

147 VoIP To make fone calls over Internet needs VoIP 85.

148 E-Commerce B2C B2B C2C social commerce uses W2

149 Cloud drive uses an Internet server for a hard drive Example Google drive, One drive

150 **Application software** programs that do tasks for users Word, Excel. **Proprietary** (commercial copyright)

151 or **Open Source** (Copyleft few restrictions) usually has a public community of helpers.

152 **System Software runs computer.** Windows, Linux, Unix, Android, IOSD

153 device driver a special program that runs a device such as a printer.

154 PnP plug and play automatically installing of devices such as a USB drive
155 Know the Boot Process. Activate BIOS, POST, find & Load OS, check registry for more configs, user authentication. If does not boot well, reboot or try F8 or Reset this PC in Win10
156 File Explorer. File path. What is seen in Details view? File Name, Date modified, Size, type, path
157 types of file extensions. .txt.doc.docx.jpg.gif.png.xls.xlsx,acddb.pptx,html.zip
158 deleting files, recovering them file compression p192 file history
159 Recover entire system using **System Restore**.
160 Privacy. implanted data chips p216 Censorship p218 Hacktivism
161 **MSCONFIG** Allows turning off of unnecessary programs.
162 **IPCONFIG** allows reset of Internet port
163 **How to speed up slow computer: stop all unnecessary programs. Delete all unnecessary programs and files, run fewer programs at one time, add more memory, run Disk Cleanup, run error check**
164 Utilities are little programs that so a maintenance task for you such as Disk Cleanup, Error check, Defrag,
165 **Task Manager CtrlAltDel** to start. allows forcing stopping of programs and more
166 Name the **four parts of the machine cycle** Fetch, Decode, execute, store
167 Name **three things that speed up the CPU** faster clock speed, # of cores, more cache memory
168 Executing more than one instruction at a time is hyperthreading
169 Which is faster HDD or **SSD**? **SSD**. What is the advantage of a solid state Hybrid drive. Boots up faster also more rugged. But they can rear out faster also.
170 What is **RAID1**? Backs up files on new drive when you save them on your main drive.
171 Name **three things to keep your system more reliable** run up to date anti malware, remove spyware and adware, clear out unnecessary files.
172 **System restore** can set a restore point and put your system back to a date when it was working
173 What to do if you get an error code? Check MS knowledge base at support.microsoft.com or Linux forum
174 See videos about near future jobs Humans need not Appy <https://www.youtube.com/watch?v=7Pq-S557XQU>
Here is a more detailed one that includes the one above and adds a hour's worth of video examples The Singularity 2016.
<https://www.youtube.com/watch?v=kfKa9mPbpP4>
175 **Network** collection of computers and other equipment for sharing data and resources, printers
176 **LAN** Local area network which is a network covering a small area
177 **WAN** Wide Area Network example the Internet is a Client-Server Network
178 **Intranet** Internal private network; sometimes called an enterprise network.
179 **Kinds of networks P2P** Peer to peer just one machine hooked up to another with crossover cable
180 Ethernet protocol that allows PCs to contend for access to the network. 10-100 Mbps or Gigabit
181 **wireless networking** is using electronic waves rather than wires. **WiFi wireless 802.11** standard radio waves 150-1000 ft outside WiFi-n 270 Mbps. 802.11ac runs at 5 GHz frequency is better, but coming 802.11ad aka WiGig is upcoming speeds up to 7Gbps at 60 Ghz frequency also coming 802.11ah low power WiFi for wireless devices for the Internet of things IoT 268 has dangers not as secure.
182 Internet of things IoT machines talking to each other. This is going to be a big thing.
183 **Bandwidth** the speed of a connection. is measured in bits per second
184 **Throughput** is the actual speed of data transfer that is achieved. Usually in **Mbps** megabits per second.
185 **Transmission media** = radio waves, Micro waves, cable.
186 **Coax** coaxial cable consists of a single copper wire surrounded by three layers.
187 **Wired Cable** fastest affordable connection for most people. Max run length w 328'
188 **twisted-pair** (TP) cable is the most commonly used networking method. U=unshielded
189 **Cat 6 UTP best to use** as is designed for gigabyte connections. But Cat 5 was for 100Mbps.
190 **DSL** what is significant about it? probably best price bargain for higher speed
191 network adapter, modem router
192 NOS network operating system
193 **Broadband high speed (over 200Kbps)** Internet connection usually from following in order of speed
194 **Fiber-optic cable fastest 10-40 Gbps, static free, smaller, more secure, Lighter** Made of glass/plastic fibers. Data can only travel in one direction. Max run length 62 miles. less interference but higher cost.

195 **satellite** slower and may fail in snow or rain storms.

196 **WiFi from** router or **hotspot**: area within range of a WiFi network speeds vary **0-50 Mbits**,

197 Cellular networks **3g 4g** from cell fone networks speed and service varies 3g 0-3Mbps, 4g 0-100 moving, 0-1Gps still

198 **Dial up** 56Kbps not broadband

199 To Test Internet connection speed at SpeedOf.Me speedtest.net or broadband.gov

200 **Piggybacking** connecting to a wireless network without permission of the owner

201 **How to make a wireless set up more secure?** Disable broadcasting of network SSID, Change the network name to a name differently from that of the factory name, use new password, turn on security protocols to WPA, Create a passphrase, Implement media access control so it only accepts to certain computers, Limit the signal range, apply firmware upgrades.

202 **Binary system** is the only language the machine understands what is it 512 256 128 64 32 16 8 4 2 1

203 **ASCII** The most common 256 8 digit codes used in coding.

204 **Unicode** uses 16 bits to represent 96,000 unique symbols. The first 128 characters are same as ASCII

205 Pipelining a technique that allows working on more than one stage of processing at a time

206 parallel processing multiple processing paths in CPUs

207 Ch 8 p310 digital devices **digital convergence** using 1 device to many things

208 **GPS** global positioning system a satellite system for finding location

209 How to transfer data from fone to computer. Email, USB card, USB cable, syncing to a network.

210 SMS Short Message Service for text messaging up to 160 characters.

211 MMS Multimedia message may include text, sound and video

212 Speed of 3G 0-3.8 Mbps on cell fone

213 WiFi on Cell fone 0-5 Mbps

214 speed of 4 G 0-13 Mbps on cell fone

215 **Tethering** using a fone to provide a WiFo hotspot

216 Keep fone number private use tossabledigits.com to set up a virtual fone number

217 Tablets and 2 in 1 has a tablet and physical keyboard

218 Ultrabooks high end, full featured notebook computers usually thin.

219 creating & publishing a movie 326 Digital publishing 328 Creating Digital Music

210 **.BMP** Bit Mapped Picture a graphics format in which every dot is mapped, very big file

211 **.PNG** replaces **JPEG** the most common foto compression method PNG is better as is LOSSLESS has more features

212 **GIF** Graphics Interchange Format is for graphics not jphotos is lossless and tiny only 256 colors can use several to create an animation

213 Irfanview a very good free foto viewing program and more

214 **MIDI** interface for musical instruments

215 **podcast** is a **MP3** audio file less than 10% of original size or with video **MP4** to make just record, edit export to MP3 RSS is really simple Youtube RSS video

216 see Chapter 9 for Digital Security p 346

217 **Hacker** one who breaks in to a system,

218 **Cracker** a criminal hacker who may gather info on you to steal your identity to get your money or use your credit. Millions are victims yearly.

219 **Packet sniffer** a computer program that looks at packets as they travel in a network to get your passwords and other information. Use a firewall and encryption to fight them.

220 **Trojan Horse** a program that poses as a good program but actually is a hostile virus

221 **Zombie** a computer under remote control of a malicious program or hacker

222 **botnet** a large group of programs running autonomously on zombies.

223 **Denial of Service Attack** zombies flooding a site with large number of requests which prevents ligitimate users from being able to get service.

224 **Malware** the name for all malicious intent programs such as **viruses** that can cause harm.

225 use **Windows Defender** and **install an antivirus software** program such as AVG Free

Get one for your fone also.

226 **virus** a hostile program that attaches itself to another computer program and attempts to spread to other computers. When files are exchanged. Viruses may damage your files, software or computer.

227 Kinds of Viruses Boot Sector, Logic Bombs, Time Bombs, script & Macro, e-mail, polymorphic, multipartite, stealth. See 355

228 Also keep your system updated to fix security flaws.

229 **worm** a program that actively self replicates itself without being opened

210 **logic bomb** hostile program triggered by logical event such as employee fired or opening file # of times

211 **time bomb** a hostile program that is triggered by a time Michaelangelo

212 **adware** is software that secretly spys on you & collects info for advertising purposes

213 **spyware** software allowing malicious monitoring or control of your computer

214 boot-sector virus replicates itself into a master boot record.

215 Script viruses hidden in form of scripts

216 macro viruses attaches itself to a document that uses macros

217 email virus Like Melissa uses the address book to distribute the virus.

218 Encryption virus encrypts our files making them useless to you and demands money to fix.

219 Polymorphic virus changes its own code to avoid detection

220 Use a firewall, don't store sensitive data on HDD or don't use that machine on network or Internet.

221 **bot** an automated program. Some now use AI artificial intelligence to mimic human intelligence.

222 Corporations are paying software engineers to make bots to replace thousands of human workers.

223 **Can Linux help? Yes you can surf the Web without fear of viruses** or spyware see pendrivelinux.com Countries and organizations do sponsor hackers to steal information this is called espionage. It is happening big time right now. Our country has lost much information to China and others in this way.

224 **Cookies** little files placed on your computer by websites. They are harmless and sometimes useful.

225 **spam** = junk email How to reduce spam delete unknown emails, do not subscribe to offers, do not give them permission to send you offers or pass on anything to you.. Use an e-mail forwarding service that will screen your e-mails like versafoward.com or Sneakemail.com

226 **phishing scam involving spoofed email** and websites to acquire your personal information

227 **pharming** scam of hijacking web sites to steal personal information

228 361 Scareware is malware that tries to get you to go to a website or pay them money to fix a problem.

229 Test your security go to grc.com and select ShieldsUP!

230 **firewall** is hardware and or software to stop unsafe traffic in and out of your computer

231 **What makes a better password?** longer with numbers no common words. Saying letters wysiwyg

232 **biometric identifier uses** face recognition, voice, finger, retina, hand recognition. Cameras are being placed all over. If a face scanner is hooked up to it it can scan hundreds of faces an hour and pass identity info on to whoever is running it. You will soon be video taped in public places. This would be great for catching wanted individuals, dissidents or protesters the government doesn't like. See the movie Enemy of the State. Cameras and listen devices are now so small they can easily be hidden almost anywhere.

233 **YOU MUST** must read 1984 by George Orwell. If you don't have time read a summary of it.

234 key logger a program that records your keystrokes often to obtain your passwords

235 **EULA** User License Agreement you agree to by using software

236 **surge protector** is an electronic device that renders surges harmless

237 **UPS** uninterruptible power supply has a battery protects from power surges, low voltages and outages

238 **Encryption** making data unreadable except to intended recipient. Why is Encryption important? It stops others from seeing your information. But government can break it. Privacy is almost dead.

239 **How to protect your privacy:** don't give out your date of birth, social security number address phone and other correct personal information. Use an email without your name. Also make up a phony one with a different year and month and day and continually use that one. Use a phony name and address and keep using that. Make sure that it is to a vacant lot or property. Make up a phony set of data. phone number address. Look up your deceased relative on the Social Security Death Index and give out that social security number. If someone who is not entitled wants your social security number give them that one. No one is entitled to your social security number except You, IRS, your bank, your employer. No one else. Just give them the dead one.

These numbers are not reused and raise a D (deceased) flag causing those who try to use it for credit cards to be caught. Same with drivers license number. Offer then some other photo ID. This often works. Tell then you lost it, or if they insist tell them you will just take your business elsewhere.

241 **How To keep your information private** on shared computers use Linux Mint OS from a flash drive or DVD. Mac users can use Linux Luna for a close approximation of OS X.

242 If you regularly send sensitive information you can buy software to create a VPN Virtual Private Network. Uses the public Internet to build a secure, private network among various locations. Uses tunneling data packets placed inside other data packets encrypted. Providers are PRIVATE Internte Sccess and Nord VPV

243 ironkey Personal Flash Drives from ironkey.com allow you to save sensitive files which can be encrypted and passworded.

244 Use privacy tools and private browsing feature of browsers

245 Use a password to sign in to your computer. It stops others from using it. And password sensitive files.

246 To have more privacy use PGP Pretty Good Privacy from download.com also hushmail.com and comodo.com have encrypted mail

247 **information privacy** The right to keep your personal information private.
electronic profiles Information about you used by organizations to sell you things.

248 Privacy on social networks and backups Image backups

249 Instant messaging is ripe for viruses especially if used on public computers.

250 **piracy** illegal copying & distribution of digital intellectual property

251 **forensics** looking for evidence of illegal activities in equipment.

252 **war driving** cruising neighborhoods looking for open WiFi networks

253 **CAPTCHA** completely automated public turing test to tell computers and humans apart. P 352

254 see Careers in IT in Myitlab under chapter 10 in Technology in Action

255 **CAD** computer aided design used by engineers and designers

256 **TCP/IP** Communications protocol used to define packet switching on the internet.

257 Packet is an organized collection of data that is transmitted over a network .

258 **WIMAX** 802.16 next generation wireless broadband which is faster than WiFi and has 31 mile range

259 ViFi vehicle WiFi allows a moving device to connect to more than one access point at the same time

260 OSI Model see book for details. Network adapters Switches, Bridges, Routers

261 **MAC addresses** media access control address for Network security, Authentication, access privileges
It is a very long 48-512 bit unique address which is a unique identifier assigned to network interfaces.

262 Users connect to an ISP thru a POP point of presence. Could be bank of routers, modems, servers. Most done on client/server model but BitTorrent uses peer-to-peer

263 **TCP/IP** is the main suite of protocols Transmission Control Protocol and Internet Protocol

264 DNS domain name server stores the ip addresses of each top level domain

265 HTTP is the protocol used by a browser to transfer documents across the internet.

266 **SSL** secure socket layer and **TLS** are network security protocols

HTML and XHTML are scripting languages to mark up text for use as a web page

267 XML extensible mark up scripting language describes the content in terms of what data is being described rather than how it is to be displayed.

268 CGI common gateway interface provides a methodology by which your browser can request that a program file be executed instead of just being delivered to the browser. CGI scripts are placed in a directory called cgi-bin. This holds scripts to be run by the server. Called a server-side-program.

269 Dynamic HTML is used to create web pages that change after being loaded.

270 **JavaScript** is the most commonly used scripting language for creating DHTML effects.

271 WIMAX faster WiFi with microwave access. Range 31 miles speed of up to 72Mbps faster than DSL

272 **IR** Port that transmits data from wireless devices using infrared light waves

273 **W3** Evolving extension of WWW in which info is defined to make it more easily readable by computers

274 **CMOS** chip where the computer settings are held

275 **MicroSD** smallest flash memory form available

276 **POS** Point of Sale terminal such as a store checkout

277 **RAM** readable writable memory used by the CPU

278 **Design** In what view do you modify Access queries

279 **NPEMDAS order of operations in spreadsheets**

280 **\$ icon** How to set LEFT ALIGNED CURRENCY in Excel

281 **currency format** How to set RIGHT ALIGNED CURRENCY in Excel

282 **Double click top right sizing handle** How to autofit column width USING MOUSE in Excel

283 **Alphanumeric counts names** What does **COUNTA** do that COUNT does not

284 **use Ctrl** To print noncontiguous ranges use _____ in Excel

285 **To use autocalculate** do this in Excel select range. look at bottom of screen

286 **\$ or F4** Absolute references are made by

What is **best insurance?** Many good copies in many safe places

What is **the best Security?** Password it, lock it up

Humans should be Humane and bring no harm to another by their actions or inaction.

A needed code of conduct Golden Rule

Best Universal Ethics Bring no Harm (by actions or inaction)

Beware of Untruths and Partial Truths they abound almost everywhere.

How to get good information? Ask Questions. Ask the right questions. Get All of the Facts. Verify from several reliable sources. Insufficient facts always invite danger.

Seek the Truth. Ask really? Is that actual and factual? Or is it obsolete or hearsay?

We are often given outdated info, fabricated untruths and obsolete wrong information because others want us to follow their agenda usually to please them.

Six learning friends What, Who, When, Where, How, Why. **Seek the Truth.**

Nothing is as important as this day and the Love and Life in it. **Protect both.**

Do The Most Good For All. The greatest good for the greatest Number.

The needs of the many outweigh the greed of the few.

To affect it, you must select it. If it is to be it's up to me.