



Tech Clinic - Windows 10 Computer

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Instructor bio



- **BS in Electrical Engineering, MS in Computer Science**
- **8 yrs in defense industry developing hardware & software to test satellite communications equipment**
- **20 yrs in computer network industry advising hardware design, & developing software for testing new products**
- **Developed and taught numerous training classes**

Updated class agenda

- Address some new topics related to all computers
- Proceed with traditional “Tech Clinic: Windows 10” topics. Many of these have parallels on other OS, but our examples are Windows 10

Three Types of Personal Computers (PCs)



Laptop; portable, peripherals (e.g camera, microphone) built in, least powerful but no slouch. Can run on battery power or plugged in

All-in-one; some or all peripherals built in, bigger screen than laptop, potentially more powerful per \$ spent than laptop

Desktop; most potential power in terms of main processor, memory, graphics, sound etc. External peripherals allow for more power and customization. Extras like camera & microphone not built in

Three Major Operating Systems



Windows (by Microsoft); almost all non-Apple PCs run Windows, the latest flavor is Windows 10. Earlier versions are still in use but Microsoft does not support them like Windows 10

MacOS (by Apple); standard on all Apple computers

Linux (various companies); there are many varieties of which some (but not all) are free. More used for business, especially engineering development

What to do when ***selling/donating/scrapping*** a computer

- Backup files you want to keep. Make **absolutely** sure you have!
- Log off and close all windows
- Log off any cloud services that may be running in the background ★
- Unpair wireless (e.g. bluetooth) devices ★
- Perform a complete erasure and re-install of the OS (e.g. Windows “factory reset” as described in upcoming slides)
- Alternative (to be absolutely sure); install a new drive and install the OS on it. Physically destroy the old drive (e.g. shoot it)

When *receiving* a used computer




Unless you really seriously trust the person you're getting it from, consider doing the "factory reset" if it doesn't look like they did it. The video I include for this describes how to tell if the seller/giver did it and explains why it's usually a good idea. The example I give is Windows 10, if you have a MAC you can google something like "what to do when selling a mac" or "mac prepare for sale" and find similar suggestions for MAC

Clearing/resetting a Windows 10 computer

- How to safely prepare a computer for sale or donation
 - <https://www.youtube.com/watch?v=lz1IFjUectM>
- Safely set up a used computer you bought or received as a gift. Similar to the process above. Plus this video also shows how to make a bootable thumb drive which can be useful if your computer is behaving badly
 - <https://www.youtube.com/watch?v=eHktdf3je44>

Tech clinic (Windows 10) traditional outline

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- **Go over some basic definitions & history**
 - **First things to do on a new computer**
 - **Sermon on surge protection, backups**
 - **Voice commands; Cortana on Windows 10, Siri on Apple/Mac**
 - **Frequently asked questions (FAQ)**
 - **These slides cover topics that were asked in previous clinics, if you have different questions please ask away!**

What is Windows 10?



- **Windows 10; latest Microsoft Operating System (OS). The software framework that all other programs (aka apps) use to run on your computer.**
- **The OS is the interface between the other programs (apps) and the computer's hardware; microprocessor chips, keyboard, mouse, display screen etc.**

Windows 10 basics; History of Windows



- [Windows 10 overview & history slideshow](#)
- [Windows timeline](#)
- [GCF Learn Free website](#) has a lot of good little tutorials and Question and Answer (Q&A) articles
- If if you prefer video tutorials stay tuned

Quick quiz



- What 2 games came built in to early versions of Windows and why were they included?
- Solitaire & Minesweeper - to train people to use the mouse
 - Solitaire featured left-clicking (clicking the left mouse button) & dragging (hover cursor over an item, press & hold left button, then move the item around the screen)
 - Minesweeper required right-clicking

Common first things to do when new

- [Laptopmag.com article 10 settings to change](#)

The settings I like to change (will demo in class)

- Change icon size
- Change font size
- Change (mouse) pointer size and color
- Change default browser & maybe other key apps

Some handy tips & features in Windows 10



- **Window snap ; Half-screen, Quarter-screen**
- **Multiple desktops (aka workspaces)**
- **Keyboard shortcuts**
 - **Ctrl-Win-LeftArrow & Ctrl-Win-RightArrow - change workspace**
 - **Ctrl-Win-UpArrow - maximize regular window or raise minimized window**
 - **Ctrl-Win-DownArrow - lower maximized window or minimize regular window**

Physical protection



- **Surge protection, battery backup, un-interruptable power supply (UPS).**
 - **Make sure all cables that connect to the computer go through a surge protector. Including phone, cable TV, and computer network cables etc**
- **Whole house surge protection is a good option in areas with frequent intense storms like Florida. These can be installed inside at the electrical panel or outside at the meter.**
- **Backups**

Backups, sharing, syncing



- Why back up?
 - ZZZap (i.e. Florida is the thunderstorm capital of the US)
 - Hard drives can fail
 - Losing photos, important files can be painful
- The Cloud - easy option but some security risks
- Automatic local backup - demo in class
- Manual local backup - to external device. Easiest but prone to human error (i.e. humans forget to do it)

The Cloud (web storage services)



- These days when people talk about “the cloud” they most often are referring to “web storage” or “cloud storage”. A company offers you storage space on their computers (aka servers). Some amount for free & pay if you need more
- OneDrive; comes with a Windows 10 PC, iCloud with a MAC
- PC makers often have one too, e.g. Asus gives me WebStorage

The Cloud (part 2)

- Dropbox; popular; good on multiple platforms (PC, MAC, Android & iOS)
- Google Drive; very popular
- Most cloud storage services are;
 - Accessible via browser or using apps you can install
 - Designed to look like a folder on your computer, but the files are not stored on your computer they are in the cloud. Think carefully about storing critical personal information in the cloud, maybe safer to make manual backups for those

Other backup options



- **Automatic or manual backup to physical devices; external drives, thumb drives etc. Does everyone know what I mean by manual backup?**
- **I'll demo in class how to create a backup drive on Windows 10**
- **Sample tutorial on use of Windows 10 backup features**
 - **[Howtogeek article](#)**
- **Numerous similar tutorials can be found by searching “windows 10 backup and recovery”. The results will include 3rd party apps in addition to the built in features.**

Backups again



- Reminder, make 2 copies when you back files up, especially critical files
- Good newer article at PC Mag website
 - The Beginner's Guide to PC Backup
 - [https://www.pcmag.com/article/250364/the-beginners-guide-to-pc-back up](https://www.pcmag.com/article/250364/the-beginners-guide-to-pc-back-up)

Video tutorials on youtube for Windows 10



- **Good basics tutorial video (38 minutes). Couple years old but I think it's still best place to start**
 - [JAGtutorials Beginner's Guide](#)
- **Good newer video (17 minutes). Has some additional stuff the previous video did not, but he moves faster. Includes using the app store, more in-depth review of windows settings etc**
 - [TechGumbo Beginners Guide](#)

Microsoft Office Alternatives



- **Microsoft Office is the set of standard Microsoft productivity apps**
 - Word (word processor), Excel (spreadsheet), Powerpoint (slides) etc
- **Free Alternatives**
 - **Google Apps/Google suite**
 - **LibreOffice** (<https://www.libreoffice.org/>)
 - Spring 2020 SLI has tech clinics on these apps (by Dan Buerke)
 - [Article at Digital Trends](#)

Cortana



- **Cortana is Windows 10's voiced digital assistant (Apple's is Siri). She can be accessed using voice commands or by mouse/keyboard/touchscreen.**
 - A microphone is required for voice commands. Laptops, tablets, phones & all-in-ones have them built in. Desktops often do not
- **CNET How To - Cortana setup tips and commands**
 - [How to setup Cortana](#)

Cortana part deux

- 12 Windows10 Tips&Tricks for Cortana (4:00)
 - [Tips and tricks video](#)
- A “complete” guide to Cortana commands
 - [Article at the-ambient.com](#)
- Example; link Cortana with Google calendar
 - Ask Cortana “What’s on my google calendar” & she’ll help you link your gmail account to Windows

Other basic suggestions

- Keep **Desktop** clean; cluttered desktop slows down the computer
- Keep your files in the basic folders provided by default;
 - **Documents**; everything not covered below. Make a set of folders to best organize your stuff, but make them inside the “Documents” folder. This also makes it easier to setup/execute your backups.
 - **Downloads**; newly downloaded files (from the web). Files you want to keep should be moved to the Documents folder.
 - **Music, Pictures, Videos**; <self explanatory>

Screenshots

- Detailed article at [HowToGeek](#)
- Most common use (take pic of whole screen & automatically save to file)
 - Press 'windows+prt scr' or 'windows+Print'
 - The picture should be placed in the folder Pictures\Screenshots
 - The new picture's name should be Screenshot(n).png, where n is a number that counts up every time a new screenshot is created. Best to rename pix soon after taking them to avoid confusion and/or move them to another folder

Screenshots (single window)



- Second most common use is to take a pic of one window, but you need to manually save it to a file
 - Press 'alt+prt scr' or alt+Print
 - The picture will be in temporary storage called the clipboard
 - Open a document with a picture editing app (e.g. Paint) or word processor app (e.g. Word) & do a 'paste' command & the pic should be pasted into the document. Save the document.

Changing default browser & search engine

- Change default browser (and other primary apps) from Settings\Apps\Default apps
- Change default search engine in browser settings
 - Edge
 - Chrome
 - Firefox

Anti-virus & Malware



- Article at [Tom's Guide](#). Of listed products I'd personally recommend;
 - **Windows Defender** (built in to Windows). Unlike previous versions of Windows, the built in program is fine for most users.
 - **Bitdefender, Avast** (free versions) - slightly better than Defender. May try to sell you a paid version which can be annoying. Replaces Defender (or previously installed anti-virus).

Anti-virus & Malware 2



Malwarebytes - complements your anti-virus (rather than replacing it), better at removing some types of annoying malware (malware is a catch-all term for many types of bad software like viruses etc). I use the free version of the app because it does what I need and the paid version would be overkill. If you have a problem and your main anti-virus doesn't clear it up install and run the free version of this.

Slideshow distribution



- I will no longer be emailing copies of my slideshows to students.
- My new website techRH.net is coming online soon (sometime in March 2020) and all my slideshows will be accessible from the website.