

Computer Purchase Tips

Windows PC or Mac?

What do your colleagues use? When you are figuring out how to do something new on the computer, it's helpful to have folks around who have the same kind.

Will your important applications work? Most Autodesk applications, for example, won't run on Macs unless you use software so that the Mac can also run Windows.

Some folks strongly prefer Macs over Windows (or vice versa). Be sure to get something you'll be happy with, assuming it'll run your applications. Both Macs and Windows PCs will work just fine at the UW. CBE Computing does not have the resources to provide extensive support for personally-owned computers, but we do have expertise with both platforms.

Desktop or Laptop?

Unless you have a compelling reason to choose a desktop computer, you'll probably find that a laptop is more useful. Being able to carry it from home to studio to library to coffee shop gives you access to your computing environment wherever you happen to be. Since both wired and wireless networking are widely available on campus, you'll easily be able to get to your network-based resources.

What Features?

CPU - Get at least a 6-core processor with a speed of at least 2.6GHz. An Intel Core i7 or newer processor would be best, although an i5 would likely be adequate and less expensive. The i7/i9 models have larger caches and better support for hyperthreading, both of which can be helpful.

Memory (RAM) – We recommend at least 16gigs of memory (ram).

Disk - A SSHD (Solid State Harddrive) disk of at least 500GB should suffice.

Video –The computer video display adaptor should have a minimum of 4GB of video memory. More video RAM is better, and will improve rendering and 3D operations. Also, video performance will be somewhat better if the video memory is not shared with the computer's system memory. If you have a choice, choose separate video and system memory.

Screen - If you're buying a desktop, we recommend at least a 27" monitor. With a laptop, it's a tradeoff - larger screens are usually more expensive, and make the laptop heavier and require more battery power. But you can't get as much information on small screens. Laptop screens in the 14" - 15" range are generally a good compromise. You can always connect a large external monitor if you find that you need one, but you may need an adapter.

Wireless - If you buy a laptop, be sure it has wireless capability (almost all do, but it's good to check). Be aware that there are different wireless standards: 802.11g is a relatively old (and slow) standard, which you'll see occasionally in older wireless installations or inexpensive laptops. 802.11n and 802.11ac are significantly faster. 802.11n is available everywhere at the UW, while 802.11ac is rapidly becoming available.

LAN (Wired Network) - Whether you buy a laptop or a desktop, it would be a nice addition if it has a wired Ethernet network connection in addition to wireless. The connector for this (type RJ-45) will look like a telephone jack, but bigger. Some laptops (Macs and many thinkpads in particular) do not have a built-in ethernet port, but do have an optional adapter that can be purchased that plugs into an available USB port.

DVD- CD/DVD drives are now optional, hard to find in a laptop, and not essential.

Security Cable - It would be prudent to buy a security cable, particularly for a laptop. That way, you'll be able to secure your computer to a table or desk, reducing the risk of theft.

Accessories - A USB flash drive with a capacity of at least 16GB would be useful for transferring files. Get a larger capacity drive if you expect to have lots of large files. Folks lose these a lot, so you might think about how you'll make sure you don't leave yours in a lab or studio somewhere.

Backup – It's very important to back up your computer's hard drive, it would be prudent to sign up with a backup service (google "backup services" for current reviews). Alternatively, you could buy an external hard disk drive with a capacity that's at least as large as the hard drive on your computer. Be sure to get one that can connect via USB. We also recommend using cloud service for file storage and backup.

Tablet - If you're doing graphics work, you might find tablet functionality or a separate Wacom tablet to be better (and easier on your hand and wrist) than a mouse. Another option is a laptop with a touch screen.

Should I buy a PC or a Mac?

If you want to run Revit, Rhino, or ArcGIS (or some other application that only runs on Windows computers), it's easiest to buy a Windows PC. Although it is possible to run Windows programs on a Macintosh, using Parallels Desktop or VMware Fusion, that is an extra expense and does not work as well as a native Windows computer with similar specs.

If you're interested in a Mac, you can order directly from Apple at <https://www.apple.com/mac/>. The MacBook Pro laptop line is generally more powerful with more hardware options and the MacBook Air is generally lighter-weight.

On the Windows PC side, we've had very good luck in recent years with Lenovo ThinkPad series laptops and HP desktops.

NOTE: UW-IT and the UW Student Technology Fee Committee have funded a program that provides UW students with free access to Microsoft Office 365 Pro Plus software for personal machines.

Check the relevant UWare page for details:

<https://itconnect.uw.edu/uware/microsoft-office-for-desktop/>

(UW NetID login required).

Recommended Hardware Specs Summary:

PC or Mac: Choose based on preference and/or applications to be used.

Hard Drive: 500+gb SSD

CPU: Windows: Intel i5 or newer, Mac: M1 or newer

Memory (RAM): 16+gb

Video: 4+gb video RAM

Laptop Screen Size: 13"-16" (larger is heavier)

External Monitor: 27"+

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