

Computer Purchase Tips

Windows PC or Mac?

It depends... Here are some things to consider:

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 run Windows.

What makes you happy? Some folks strongly prefer Macs over Windows (or vice versa). Since you're the one who's going to be using the thing, 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. And while CBE Computing does not have the resources to provide extensive support for personally-owned computers, 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 much more useful. Being able to carry the thing 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 dual-core processor with a speed of at least 2.6GHz. An Intel Core i7 processor would be best, although an i5 would likely be adequate. The i3, while less expensive, probably does not have sufficient performance for applications you're likely to use. The i7 models have larger caches and better support for hyperthreading, both of which can be helpful. However, unless you really feel you need it, don't buy the fastest one offered - you'll pay a significant premium for it. Buy the second- or third-fastest.

Memory (RAM) - Be sure to get at least 8GB, and to run the 64-bit version of Windows (if you choose to use Windows). More RAM is better, although you probably won't see much improvement beyond 16GB.

Disk - A disk in the 500GB range will be fine for most work. If possible, get a solid state drive (SSD) – SSD performance is much better than that of a spinning disk. If not, get a disk with a 7200 RPM rotation rate.

Video - If you're planning to do any significant graphics or video work, be sure to get a video accelerator / video card with at least 1GB of video memory (RAM). More video RAM is better, since it will improve

rendering and 3D operations. Video performance will be somewhat better if the video memory is not shared with the computer's system memory, so if you have a choice, choose separate video and system memory.

Screen - If you're buying a desktop, bigger is almost always better - don't get less than around a 22" monitor. With a laptop, it's a tradeoff - large screens are significantly more expensive, and make the laptop much heavier. They also use a lot of 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. Note that nearly all laptops have external monitor connectors, so you can always connect a large monitor if you find that you need one. Please note that if you buy a Mac and intend to use an external monitor or projector, you'll want to buy the appropriate video 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 good idea to ensure that 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 in particular) do not have a built-in RJ-45 connector, but do have an optional adapter that plugs into an available USB port.

DVD - It would be good - but probably not essential - to get a DVD burner, ideally one that can write all the standard DVD formats (DVD+R, DVD-R, DVD+RW, DVD-RW). DVD burners will also be able to write the standard CD formats, CD-R and CD-RW. Blu-ray is nice, particularly if you like to watch movies on your computer, but probably 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 - much easier than burning CDs or DVDs. 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.

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.

If you're doing graphics work, you might find a Wacom tablet to be better (and easier on your hand and wrist) than a mouse.

OK, But What Should I Buy?

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, VMware Fusion, or Bootcamp.

If you're interested in a Mac, special academic pricing is available through the University Bookstore's Apple Computers in Education (ACE) program (<http://www.bookstore.washington.edu/>). The MacBook Pro laptop line is generally more powerful, while the MacBook is generally cheaper and the MacBook Air is generally lighter-weight. The ACE program also offers Apple's iMac and Mac Pro lines of desktop computers.

On the Windows PC side, we've had very good luck in recent years with Dell and Lenovo laptops. The business-oriented Dell Latitude laptops are more rugged, while their consumer-oriented Inspiron laptops are a little cheaper for a given level of performance. Special academic pricing is available for Dell Inspiron laptops through the University Bookstore (<http://www.bookstore.washington.edu/>). Lenovo's ThinkPad business-oriented laptops tend to be better built than their consumer-oriented laptop lines.

If you're looking for a desktop PC, we've lately done well with HP desktops, which tend to be very reasonably priced for a major manufacturer. There are currently no special UW deals in place for personal purchases of HP computers, but they're widely available at good prices from retailers like Best Buy and Costco.

Note that the University Bookstore has great deals on hardware and software for students, faculty, and staff at the UW. If you're a new student starting in the fall, contact the Bookstore about incoming-student discounts.

Note also that 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. Check the relevant UWare page for details: <https://www.washington.edu/itconnect/wares/uware/microsoft/microsoft-office-365-proplus/> (UW NetID login required).