Purchasing a computer for home or school use can be a confusing and daunting task. Computer jargon and acronyms often make little sense, even to people who are tech savvy. Because of this it is easy to either overpay for features that are not needed, or to purchase a machine that is not optimized for your particular needs.

As you look at the customization options you may want to have this document available for explanation. Also if you choose to purchase from a different vendor you can use these specifications as a guideline.

- **Intel Core i3, Core i5, Core i7** – the processor (CPU). Listed in order of increasing performance. This generally determines the overall speed of the computer. 2.0 to 3.0ghz is a safe range. We recommend 2.4ghz as a good price point. Celeron and Pentium processors are older and slower models.
- **Windows 7, 8, 10 or Mac OSX** – this is the operating system. We support any version of Windows 7, 8, 10, and Mac OSX 10.7 or better (Lion, Mountain Lion, Mavericks and Yosemite).
- **LCD or Screen Size** – Laptops are available with screen sizes ranging from 11” to 17” (netbooks get down to about 9”). 12” will tend to be too small to work with on a regular basis. 17” is nice for viewing, but the laptop will be heavy as a result. 13 or 14” is a good compromise.
- **Touch or Non-Touch** – Touch screens work with Windows 8 and 10 and allow you to swipe control your computer, similar to an iPad or tablet. Touch screen is not needed on regular laptops and may hinder performance.
- **Graphics** – this is the video card. Usually the only reason to upgrade from the built in Intel graphics is to play high end video games.
- **Memory** – this is known as RAM. It generally determines how many programs you can run at the same time, or how large a file you can open. 8gb is recommended.
- **Storage** – the hard drive. Determines how many files you can store on the computer. For a laptop 250gb to 500gb is a good range for Hybrid or standard SATA drives. SSD (solid state drives) are faster and improve battery life, but are more expensive. If purchasing an SSD go for 256gb or larger.
- **Optical device** – normally just called the CD or DVD drive. A drive that burns (records) CDs and can read (play) DVDs is a CD-RW/DVD-ROM. Can be considered optional.
- **Battery** – determines how long the computer will run without outlet power. The more cells a battery has, the longer it will run, but it will also be heavier.
- **AC adapter** – the power cable, it converts AC outlet power to DC that the computer uses. Any AC adapter can work with US 110volts or foreign 220volts (but you may need a plug adapter to fit a particular countries outlet).
• Wireless LAN – the network card that connect to a residential wireless network. 802.11b/g is standard (will work anywhere). 802.11n dual band (2.4ghz and 5ghz) is recommended.
• Touchpad – the trackpad on a laptop. Some laptops use a “pointer stick” located on the keyboard instead.
• Hardware support – the warranty for hardware components. A 3 or 4 year warranty is recommended, with on-site service (a technician will come to campus to do warranty repairs). Not all vendors will offer this, Dell does.
• CompleteCare Accidental damage – covers most hardware problems that are caused by you (liquid spills (although check the specific warranty) drops, accidental breakage). Optional.

Hopefully this guide has helped you understand the choices and options available to you when shopping for a computer. If you have any questions regarding a purchase feel free to contact firstyear.techinfo@williams.edu and one of our professional staff will get back to you.

Regards,
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