What features should my PC have?

Personal Purchasing

This an extremely difficult question to address as with each and every individual and each and every vendor there are many variables. However, I have found that several items should be considered. These are ever changing targets so please consider them in that light.

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- **Speed** - Generally the faster (in Giga-Hertz) the computer the better, however, speed of the computer is a total combination of all components not just the processor. Price/performance recommendation is 3.0 GHz or higher for a desktop unit (2.0 GHz or higher for laptops). Multiple Core processors can also improve performance.
- **Memory** - Sufficient RAM (Random Access Memory) is a big factor as even adding memory to an older system can often improve performance and extend the life of the system. Recommendation minimum 2.0 GB with 4.0 GB (better for Windows 7) or more preferred.
- **Operating System** - to utilize more than 3.0GB of RAM you must have a corresponding operating system that can utilize higher than 32-bit addressing, therefore, for a Windows based system you need Windows 64-bit operating system.
- **Hard Disk** - You'll need enough storage space for the operating system, application software, and document storage. Minimum here 200 GB (Giga-Bytes), however, 300 GB to 1 TB (1,000 GB) may be very cost effective so check pricing. If you will plan to store lots of audio, pictures or movies etc. then 500 GB or more is a good plan.
- **Display** - The color display should have the ability to display 1024 x 768 pixels (or better) with a refresh rate of 60 Hertz (or faster). "Viewable" screen sizes of 14-19 inches (measured diagonally) or larger are common. Consideration of a flat panel monitor (not CRT) since desk space will likely be an issue such as in residense hall rooms. If you purchase a Wide format panel remember the measurement is still the diagonal.
- **Video Card** - Video cards commonly have at least 32 MB of VRAM. If "competitive gaming" is the desire, increase this to 256 MB or higher. Digital Video Cards should also be considered.
- **Web Cam** - Web cameras are very common and very useful for college students. The student's UNI Google Apps account provides video chatting much like Skype does but without the need to setup a separate account, however, the both parties must be using Google accounts.
- **CDROM/CDRW/DVD/DVDRW Drive** - With the large size of system and application files today, most software is now distributed on CDROMs. Therefore, a CDROM is a necessity these days even on laptop computers. Speed in general is not a big factor for loading software unless you are using the CD continuously (i.e. playing games, video or audio). Some find they want to have a combination CDROM/DVD Burner (CDRW/DVD) to make their own CDROMs and read/play DVD movies. This can provide a good file backup method (also see Memory Stick below). The question of should you purchase DVDRW capability to burn DVDs is left to the needs of the purchaser, if you are planning on making DVD movies then, yes.
- **Network Cards** - are recommended as all residence hall rooms on the UNI campus come with a standard Ethernet connection (for wired access) and there are some Ethernet connections available in the library. Most system come

with this standard.

- **Wireless Cards -** are recommended for laptops as wireless network is available across much of campus (but not in the residence hall rooms themselves due to environmental challenges). Almost all laptops are now coming with both wired and wireless network included but check to be sure. For more information on wireless, see [1] /its/support/article/584 [2].
- **USB Memory Sticks / Jump Drives/ Flash Drives -** These devices are the preferred alternative to the floppy disk in our environment as it also provides inexpensive and very flexible capability to transport a document from machine to machine. Students commonly use these in our computer labs. The biggest issue is users must learn to eject them correctly with the software before physically pulling them out of the computer. Making backup copies of files from your computer's hard drive to a memory stick is an excellent practice though an external USB drive made be necessary to handle the volumes required. These devices are also called USB Flash Disk, Thumb Drive, Pen Drive, Memory Key, Micro Vault, Pocket Drive, KeyChain, Pico Drive, etc. Remember, make two copies for backup purposes!
- **External Portable Disk Drives -** USB connected portable drives are very popular for backing up and transporting large volumes of information. These drive are very good for large storage situations such as movies and photographs.
- **Speakers and Sound Card -** With more information being provided with audio and video capability plus the ability to play music CDs or video DVDs, sound cards and speakers has become a standard need. Speakers can range from inexpensive (usually very adequate) to expensive and depends strictly upon quality desired. If you plan to regularly view DVD movies from a laptop computer you may want a set of external speakers.
- **Locks -** security of the computer is critical, particularly for laptop computers on college campuses. College campuses have become attractive targets for professional electronics thieves. Kensington? and other locks (very similar to bicycle locks) are recommended for laptop computers. Consider whether a combination or key based lock is best for your use.

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[1] http://www.uni.edu/its/us/faqs/wireless
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