

Recommendations from ENG-CS for students wanting to purchase a Computer.

Trying to purchase a computer, laptop or tablet is an area that is constantly changing. Many times a specific retail configuration is out of date a month after you purchase it. The systems that we recommend are models from manufacturers that have proven track records and most have components that are typically ***not*** Beta or test items, rather they have components that are continually included in system configurations because they are established.



Within the College of Engineering and Computer Science, we have a mix of public teaching labs most with PCs systems, some with MAC systems. These labs contain all of the licensed engineering software our students require. Most of the licensing for software we use, ***does not permit students*** to load it on their personal systems, although this changes from time to time with a limited number of software applications.

Most of our public labs are PC systems with 156 seats, and we have a 30 seat MAC lab. All of these are open 24 hours a day, 7 days a week for use as teaching facilities and free use computer labs for you to do their research and/or assignments.

Now that you have some idea of how our computer labs are set up, let us offer some recommendations outside of what your individual college department may suggest. We are providing a recommendation for both workstations, ***(either a desktop or mid-tower, which would be kept and used in their room)*** and laptops which offer portability and will allow you to take the system to class and the library, etc.

WORKSTATIONS:

- A minimum **workstation** PC system-
 - Core i-5 with at least a 3.2 GHz processor, 8GB of RAM memory, 500GB at 7500RPM minimum of disk storage, CD/DVD drive and some USB ports so a flash drive or stick can be used for backup and file transfer.
- A more powerful **workstation** PC option and the one most often used in our college is:
 - Core i7-4790 3.6 GHz processor, 8-16GB of RAM memory, 500GB at 7500RPM minimum of disk storage, (optional SSD- Solid State Drive, increases productivity by volumes). CD/DVD drive and some USB ports so a flash drive or stick can be used for backup and file transfer.
- For a **MAC workstation** we suggest the iMAC.
 - 2.7GHz Quad-core Intel Core i5, Turbo Boost up to 3.2GHz, 8GB 1600MHz DDR3 SDRAM - 2X4GB, 1TB Serial ATA Drive @ 5400 rpm, Intel Iris Pro Graphics, Apple Magic Mouse, Apple Wireless Keyboard (English) & User's Guide, Accessory Kit
 - One of the nice things about the iMac is that they are an all-in-one computer. In practice, the iMac only takes up only a little more space than a monitor. This can be helpful since in most dorm rooms, where space is at a premium.
 - If you decide to acquire a MAC you may need to purchase and install VMWare or Parallels and a Windows OS to run some of the E&CS software they may need.

LAPTOPS:

- In a **PC Laptop** configuration, consider the mobility of the unit and the care you will exhibit for that unit. We tend to recommend either Lenovo (*used to be IBM*) or DELL, with similar configurations to the full systems, however because of their size the laptop may not be able to contain everything expected like a DVD drive. Since the ultra slim models are so thin and lightweight, these components are left off the laptop and it is up to you to purchase something of a docking station that may include them. However, a Core i-7 processor over a Core i-5 and as much RAM memory as you can afford. RAM is the horsepower to your processor and the video output shares in this RAM.
 - So consideration of weight, size of screen, number of USB ports, touchpad or toggle buttons, are all part of the convenience factor. You may also want to investigate a touch screen that can be used for easier manipulation of applications.
- For **MAC Laptops** at the lower performance end of the spectrum there is the MacBook Air, 13-inch MacBook Air, 1.6GHz Dual-Core Intel Core i5, Turbo Boost up to 2.7GHz, Intel HD Graphics 6000, 8GB 1600MHz LPDDR3 SDRAM, 256GB PCIe-based Flash Storage, Backlit Keyboard (English) & User's Guide. On the upper end, we would suggest a **MacBook Pro**, 13-inch MacBook Pro with Retina display, 2.7GHz Dual-core Intel Core i5, Turbo Boost up to 3.1GHz, 8GB 1866MHz LPDDR3 SDRAM, 256GB PCIe-based Flash Storage, Intel Iris Graphics 6100, Force Touch trackpad, Backlit Keyboard (English) & User's Guide
 - If you decide to acquire a MAC you may need to purchase and install VMWare or Parallels and a Windows OS to run some of the E&CS software they may need.

Whatever PC Laptop you buy, please spend just a bit more and purchase the 3 year **or more** warranty, and if you decide to acquire a PC laptop, purchase the **accidental warranty** which protects the unit even if the damage is your fault. For Macs, a 4 year (**including accidents**) warranty is available at the bookstore. This is one year longer than AppleCare, and AppleCare does not cover accidents. Believe us when we say that it will pay for itself!

You also should plan on using one or more USB flash drives. These are great for quick backups and data transfers. You can find many brands and styles. We prefer the Kingston traveler. We have had the most reliability with them. You can find an 8GB flash drive for between \$8.00 and \$12.00 and a 16GB for under \$25.00.

We are aware that this cannot possibly answer all your questions, but hopefully we have provided some guidance that may help. If you wish to discuss this further we are available by phone. Have a great summer and the best of luck to you!

Thank you,

ENG-CS IT Group