

Software and Hardware Minimal Recommendations

The following outlines current Eller College of Management recommended software and hardware configurations. Technology advancements move quickly, and therefore recommendations herein should be viewed as the recommended minimum.

Intel / Microsoft Systems

Software

The software environment at the Eller College of Management is based on a Microsoft Windows 7 Professional environment. The Microsoft Office suite (Word, Excel, PowerPoint, and Access) is also used extensively throughout the Eller Graduate and Undergraduate programs. Below are minimum software standards you should look for in a desktop or notebook.

Operating System	<ul style="list-style-type: none"> Windows 7 Professional
Office Product¹	<ul style="list-style-type: none"> Microsoft Office Professional 2013 Obtain from UA Bookstore
Anti-Virus	<p>You only need one of the following:</p> <ul style="list-style-type: none"> Sophos Anti-Virus (Free to UA students) AVG Free Anti-Virus Software
Anti-Spyware	<ul style="list-style-type: none"> SpyBot Search and Destroy (Freeware) Malwarebytes (Freeware)
Registry & File Cleaning	<ul style="list-style-type: none"> CCleaner (Freeware)
VPN Client	<ul style="list-style-type: none"> Cisco VPN Client (Free to UA Students) Or use the web-based SSL VPN at: <ul style="list-style-type: none"> http://vpn.arizona.edu
SSH Software (includes SFTP)	<ul style="list-style-type: none"> PuTTY or WinSCP (Free to UA Students)
PDF Reader Adobe Flash Player	<ul style="list-style-type: none"> Download both from Adobe

¹ Students can purchase the academic version at the [UA Bookstore](#).

Hardware

Eller College faculty and staff may contact Eller IT for purchase and specification assistance at support@eller.arizona.edu. While specific desktop and notebook models may vary at any point in time, the minimal specifications listed below will serve as a guideline for selecting a computer system. Eller IT can assist you in customizing a computer specification and in placing the equipment order.

All of these guidelines should be viewed as “get at least this”. For example, we recommend that **you get at least** 8 GBytes of memory. In some cases, a selected unit may not meet a minimal recommendation due to the actual model design. For example, you may choose a small notebook that only has a 12” display or you may choose a larger notebook that only offers a 17” display.

	Desktop	Notebook
Processor Speed	<ul style="list-style-type: none"> Intel® i5 or i7 processor 	<ul style="list-style-type: none"> Intel® i5 or i7 processor
Memory	<ul style="list-style-type: none"> 8 GBytes 1066MHz DDR3 SDRAM 	<ul style="list-style-type: none"> 8 GBytes 1066MHz DDR3 SDRAM
Hard Drive	<ul style="list-style-type: none"> 500 GB or greater SATA Hard Drive with 7200 RPM or greater 	<ul style="list-style-type: none"> 256 GB or greater SATA Hard Drive with 7200 RPM or greater
Display²	<ul style="list-style-type: none"> 17 or 19 inch flat panel 1280x1024 	<ul style="list-style-type: none"> 14-17 inch wide screen WXGA or better preferred
Video³	<ul style="list-style-type: none"> PCI-E Graphics Accelerator w/256 MB Video Memory 	<ul style="list-style-type: none"> Integrated Graphics Media Accelerator
Optical Device	<ul style="list-style-type: none"> DVD / CD-RW Drive 	<ul style="list-style-type: none"> DVD / CD-RW Drive
Expansion Slots	<ul style="list-style-type: none"> 2 or more available PCI expansion slots 2 USB ports and 1 USB 3.0 port 	<ul style="list-style-type: none"> Media card slots 2 USB ports and 1 USB 3.0 port
Networking	<ul style="list-style-type: none"> Integrated 10/100/1000 Mbps Network Card 	<ul style="list-style-type: none"> Integrated 10/100/1000 Mbps Network Card
Wireless Networking	Not Applicable	<ul style="list-style-type: none"> Integrated wireless networking <ul style="list-style-type: none"> 802.11 g or tri-mode 802.11 a/b/g/n Must be capable of WPA or WPA2 Must be Capable of at least 128-Bit key encryption.

² Display size will depend on unit chosen. Some units only offer 12” screens. Others offer 17” screens. 14-15 inches is typical for most notebook and convertible units.

³ Units generally come equipped with a default integrated graphics media accelerator. These are good graphics chips however you will truly enjoy the capabilities provided by the more expensive graphics options. This is especially true as you migrate from Windows 7 to Windows 8 or Windows 10 in the future. More memory on your video chipset means greater performance of your video.

Battery Life	Not Applicable	<ul style="list-style-type: none"> • 4 hours (or 3 classes in a row)
Warranty	<ul style="list-style-type: none"> • 3 or 4 year extended service plan & limited warranty 	<ul style="list-style-type: none"> • 3 or 4 year extended service plan & limited warranty
Accidental Damage Protection⁴	Not Applicable	<ul style="list-style-type: none"> • 3 or 4 year ADP Plan
Theft Protection⁵	Not Applicable	<ul style="list-style-type: none"> • 1 or more year Theft Protection
Other Options to Consider	<ul style="list-style-type: none"> • 8 GByte Flash Drive • External USB hard disk 	<ul style="list-style-type: none"> • 8 GByte Flash Drive • External USB hard disk • Additional Battery

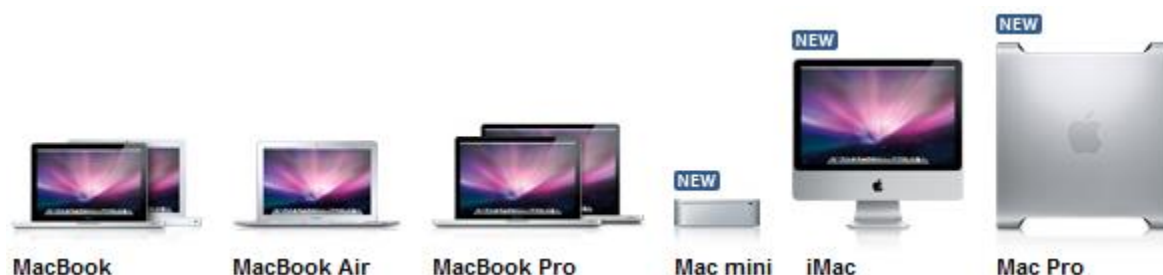
Apple / Mac Systems

Eller Students with Macs

The Eller College's internal technology environment is closely aligned with the use of the Microsoft Windows based systems. This is especially true with regards to many forms of instructional delivery. While technology continues to improve the integration of both Windows and Mac environments, there are still significant hurdles and differences between them. However, if you have a Mac there are options to ease these differences.

Hardware

All the latest models of MacBook, MacBook Pro, Mac mini, iMac and Mac Pro will work well. The University Bookstore has educational discounts for most if not all models of Apple computers.



[U of A Bookstore's Apple for Education](#)

Operating System and Software

For an operating system the Apple computer should be running the most recent edition of **OS X**. For software the computer should have **Boot Camp** or **Parallel** installed in order to run Windows only programs. While a variety of compatible and comparable software is available for OS X, we recommend

⁴ Accidental Damage Protection is highly recommended for notebook users.

⁵ Theft protection is highly recommended for student purchases. Unfortunately, items get stolen in University environments. Eller College Faculty and Staff systems are covered through UA Risk Management and do not require the purchase of theft protection.

the software listed under the Intel / Microsoft Software section for use on the Windows side of your Mac (using Boot Camp or Parallel).

Running Microsoft Windows on a Mac

Eller students will want to be able to run Windows on their Mac computers to facilitate the courses where Windows only software is required. There are several options available to students to facilitate this. Students can get this installed on their computers through the OSCAR labs (plan on 3 hours, you must be there the entire time) or students taking MIS 111 can get help through special class seminars. The three main alternatives for running Windows on a Mac include Bootcamp (free), Parallels (available at the UofA Bookstore), and VMware Fusion (12 month licenses free to students taking MIS courses, otherwise available for purchase).

Boot Camp

Boot Camp allows the student to install the Microsoft Windows operating system on a special section of the Mac's disk drive. However, in order to use the Microsoft Windows operating system, the student will be required to exit the Mac environment and "boot" into the Windows environment.

Most Macs now come with Boot Camp. Boot Camp is seen as the "safest" way to have the best of both worlds. Be aware, however, that using Boot Camp (and installing the Microsoft Windows operating system) will consume a fair amount of your hard disk space. Thus, the larger the disk drive you get in your Mac, the better, for this purpose.

Parallels

Students purchasing Mac systems can also purchase a software package called "Parallels Desktop for Mac." This allows the student to install and run the Microsoft Windows operating system in parallel with the Mac without requiring the student to exit the Mac environment and boot into the Microsoft Windows environment. Files can be seamlessly shared between the two environments. Keep in mind that this solution also requires disk space since you will have two different operating systems running on your Mac. Thus, the larger the disk drives the better. For more information on Parallels Desktop for Mac, please see:

<http://www.parallels.com/products/desktop/>.

SPECIAL NOTE FOR MACBOOK AIR

We do not recommend the Parallels Desktop for Mac product for Macbook Air systems for two reasons:

- 1. Macbook Air systems use a solid state disk drive which is limited in space. As a bar minimum, we recommend obtaining a 256 GByte solid state disk drive with your Macbook Air.**
- 2. Parallels has been known to cause the Macbook Air to run exceptionally hot and often overheat because of the demand it places on the systems processor and components.**

VMware Fusion

Students purchasing Mac systems can also purchase a software package called “VMware Fusion” This allows the student to install and run the Microsoft Windows operating system in parallel with the Mac without requiring the student to exit the Mac environment and boot into the Microsoft Windows environment. Files can be seamlessly shared between the two environments. Keep in mind that this solution also requires disk space since you will have two different operating systems running on your Mac. Thus, the larger the disk drives the better. 12 month VMware fusion licenses are available at no cost to students enrolled in MIS courses, such as the first semester MIS 111, but this license won’t last 2 years until all Eller students are taking the next general MIS course, MIS 304. VMware Fusion is preferred by the UofA OSCR labs over Parallels, but also costs more to purchase.

Microsoft Office

Students may obtain a free copy of Microsoft Office for both the Mac and the PC-side of the Mac (using Boot Camp or Parallels Desktop for Mac) from the UA bookstore:

<http://uabookstore.arizona.edu/technology/campuslicensing/default.asp>

It is possible to install Microsoft Office on both the Mac and Microsoft “sides” without conflict.

Mac Support on Campus

University Information Technology Services

The University Information Technology Services 24x7 helpdesk is a good source for students with Mac issues. They can help guide students with both hardware and software issues related to the Mac:

<http://uits.arizona.edu/departments/the247>

If the support issue is beyond the scope or capability of the 24x7 support unit, you may be required to seek support from the local Mac Store.

Office of Student Computing Resources (OSCR)

An additional resource for some Mac support issues (such as tips for running Adobe Flash based applications on your Mac and other compatibility issues) is the Office of Student Computing Resources:

<http://www.uits.arizona.edu/departments/oscr/we-have>

University of Arizona Bookstores – Service Center (Apple Authorized Service Provider)

They are conveniently located on the 1F of the main bookstore on campus. Technicians are able to help with warranty repairs, hardware repair/replacement, data retrieval, hardware upgrades and much more.

<http://uabookstore.arizona.edu/technology/service/>