

Hardware and Software Recommendations for Computers Used on Campus

This document contains the following sections:

- [Introduction](#)
- [Windows Recommendations](#)
- [Mac Recommendations](#)
- [Unix Recommendations](#)

For information related to this topic refer to:

- [Connecting to the Campus Network \[PDF\]](#)
(<http://www.cmu.edu/computing/doc/network/connect/index.html>)
- [Connecting to the Network](#)
(<http://www.cmu.edu/computing/network/wire/index.html>)
- [University Store Computer Sales Web Site](#) (<http://www.cmu.edu/stores/computer/>)

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Introduction

Bringing a computer to campus? Whether you are buying a new computer or bringing one that you already own, you'll want a computer that meets your needs and works well in the Carnegie Mellon environment. A lower-powered computer may suffice for writing papers, but if you need to use more specialized software, that same machine will most likely be ineffective. If you're buying a computer, be sure to purchase one that is powerful enough to last through your four year tenure here.

Recommendations included below were developed by Computing Services. Some academic departments develop their own requirements. Before you purchase, **check with your department for information specific to your area of study**. If they don't set computer requirements, refer to those set in this document.

Windows vs Mac, Laptop vs Desktop

If you're unsure of whether to purchase a Windows machine or Mac, laptop or desktop, past computing trends may help you to make an informed decision. An excerpt of last year's first year student survey is included below.

Survey of fall 2005 incoming freshman

- 87% of surveyed students brought a computer to campus
- 12% purchased a computer within their first month here
- 86% brought Windows computers
- 14% brought Macintosh computers
- 83% brought laptop computers
- 17% brought desktop computers

Public Computing Clusters

Many of the public computing "Clusters" are equipped with the software necessary to complete course work. For example, the CFA MultiMedia Cluster is equipped with computers that are powerful enough to handle high-end graphic design work. For a list of clusters and the equipment / software that they offer, visit the [Cluster web site \(https://www.cmu.edu/computing/clusters/\)](https://www.cmu.edu/computing/clusters/).

University Store Computer Sales

Computer Sales in the University Store offers academic pricing on computer hardware and software. Before you purchase a computer elsewhere, contact Computer Sales at 412-268-2636 or visit the [University Store: Computer Sales \(http://www.cmu.edu/stores/computer/\)](http://www.cmu.edu/stores/computer/) web site. Carnegie Mellon faculty and staff can also take advantage of low pricing on Dell computers through [Procurement Services \(https://www.cmu.edu/procurement/services/FacultyStaffWebISO/InternetPurchasingWebISOFS/Dell/Dell.htm\)](https://www.cmu.edu/procurement/services/FacultyStaffWebISO/InternetPurchasingWebISOFS/Dell/Dell.htm).

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Windows Recommendations

The Minimum Specifications listed below reflect the BARE MINIMUM system configuration needed to install the operating system; these are direct from the manufacturer (e.g. Microsoft). The Recommended Specifications were developed by Computing Services and should be followed when purchasing a new computer.

Hardware and software recommendations listed here were developed by Computing Services. **Students should check with their college or graduate school to be sure that their computer complies with any requirements they have established.**

Note: For storing or transferring files, we recommend using your [MyFiles space](http://www.cmu.edu/computing/doc/clusters/faq.html) (<http://www.cmu.edu/computing/doc/clusters/faq.html>) or a USB keychain storage device.

Windows Vista: Important Information!

The consumer edition of Microsoft's Vista operating system is scheduled for release in late January 2007. This document includes hardware recommendations for Microsoft's Vista operating system; however, Vista is **NOT currently supported** for use on campus. The information included here is offered as a courtesy to those who are considering purchasing a new computer. For additional information on our Vista support plan, visit the [Microsoft Vista Status](http://www.cmu.edu/computing/news/status/vista.html) (<http://www.cmu.edu/computing/news/status/vista.html>) web page.

Once the Vista operating system is released, we strongly encourage you to do the following before you upgrade:

- Check with your computer manufacturer to ensure that your hardware is supported under Vista - OR -
- Download and run the [Windows Vista Upgrade Advisor](http://www.microsoft.com/windowsvista/getready/upgradeadvisor/) (<http://www.microsoft.com/windowsvista/getready/upgradeadvisor/>). This small software tool will scan your computer and create an easy to understand report of all known system, device and program compatibility issues and will recommend ways to resolve them.

Desktop	RECOMMENDED Specifications:	MINIMUM Specifications:
Windows Vista Desktop (see Windows Vista: Important Information before you upgrade)		
Processor	Intel Core 2 Duo -or- AMD Athlon 64 X2	Modern Processor (at least 800MHz)
Memory	2 GB RAM	512 MB RAM
Hard Drive	250 GB	20 GB (free space = 15 GB)
Graphics Card	256 MB RAM on card, DirectX 9 capable	32 MB Ram; DirectX 9 capable
Networking	10/100 Ethernet	10/100 Ethernet
Additional Hardware	16x DVD RW Burner	DVD-ROM

Windows Vista Laptop (see <i>Windows Vista: Important Information</i> before you upgrade)		
Processor	Intel Core Duo or Core 2 Duo -or- AMD Turion 64 X2	Modern Processor (at least 800MHz)
Memory	2 GB RAM	512 MB RAM
Hard Drive	120 GB	20 GB (free space = 15 GB)
Graphics Card	256 MB RAM on card, DirectX 9 capable	32 MB RAM; DirectX 9 capable
Networking	10/100 Ethernet Integrated Wireless Card	10/100 Ethernet
Additional Hardware	16x DVD RW Burner	DVD-ROM
Windows XP Desktop		
Processor	Intel Pentium 4 OR AMD Athlon 64 OR AMD Duron family OR 2.8 GHz equivalent	Intel Pentium OR Intel Celeron family OR 1.4 GHz equivalent
Memory	1 GB	256 MB
Hard Drive	80 GB	40 GB
Networking	10/100 Ethernet	10/100 Ethernet
Additional Hardware	DVD-ROM + CD-RW	CD-ROM or DVD drive
Windows XP Laptop		
Processor	Intel Pentium M OR Pentium 4M OR Intel Duo OR AMD Athlon/Athlon 64 OR AMD Duron family OR 1.8 GHz equivalent	Intel Pentium OR Intel Celeron family OR Intel Duo OR AMD Athlon/AMD Duron family OR 1 GHz equivalent
Memory	1 GB	256 MB
Hard Drive	40 GB	20 GB
Networking	10/100 Ethernet Wireless capability (built-in or PC Card)	10/100 Ethernet Wireless capability (built-in or PC Card)
Additional Hardware	DVD-ROM + CD-RW	CD-ROM

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Mac Recommendations

The Minimum Specifications listed below reflect the BARE MINIMUM system configuration needed to install the operating system; these are direct from the manufacturer (e.g. Microsoft). The Recommended Specifications were developed by Computing Services and should be followed when purchasing a new computer.

Hardware and software recommendations listed here were developed by Computing Services. **Students should check with their college or graduate school to be sure that their computer complies with any requirements they have established.**

Note: For storing or transferring files, we recommend using your [MyFiles space \(http://www.cmu.edu/computing/doc/clusters/faq.html\)](http://www.cmu.edu/computing/doc/clusters/faq.html) or a USB keychain storage device.

Macintosh - Desktops/Laptops

Macintosh	RECOMMENDED Specifications:	MINIMUM Specifications:
Processor	1.83 MHz or higher OR any Intel Core Duo model	G4, G5 or Intel Core Duo
Memory	512 MB or higher	256 MB
Hard Drive	80.0 GB	30.0 GB
Operating Systems	Mac OS X 10.4.10	Mac OS X 10.4 or later
Networking	All Macs ship with at least 10/100 Mbps Ethernet. If you need a modem, you will need to order it specifically.	10-baseT Ethernet
Additional Hardware	All new Macs ship with either a DVD-ROM/CD-RW, or a DVD-R/CD-RW drive	DVD-ROM drive

For more information on wireless cards for Mac, see [AirPort Card Compatible Mac computers \(http://docs.info.apple.com/article.html?artnum=106777\)](http://docs.info.apple.com/article.html?artnum=106777) or [Airport Extreme Compatible Mac computers \(http://docs.info.apple.com/article.html?artnum=107440\)](http://docs.info.apple.com/article.html?artnum=107440).

NOTE: The Computing Services Help Center supports Macintosh OS X **10.4 or later** as of November 14, 2007.

Mac OS X 10.4 or later System Requirements

- Macintosh computer with a PowerPC G3, G4, or G5 processor
- Built-in FireWire
- DVD drive for installation (Note: You can order CD media from Apple for an additional \$9.95)
- 256 MB of RAM (512 MB is recommended)
- 3 GB of available hard drive disk space (4 GB if you install the developer tools)

Mac OS X 10.5 or later System Requirements

- Mac computer with an Intel, PowerPC G5, or PowerPC G4 (867MHz or faster) processor
- DVD drive for installation
- 512MB of RAM (memory)
- 9GB of available hard drive disk space

For more information on Mac OS X Requirements, visit <http://www.apple.com/macosx/>
(<http://www.apple.com/macosx/>)

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Unix Recommendations

All UNIX operating systems are supported only when running in the Andrew environment. (<mailto:softlib@andrew.cmu.edu>) Email questions to [UNIX OS](#) (<mailto:softlib@andrew.cmu.edu>).

UNIX	RECOMMENDED Specifications:	MINIMUM Specifications:
Processor	Celeron/Pentium III class and above (Pentium 4, AMD Athlon, AMD Sempron, also AMD64 but running in 32-bit mode)	Pentium II / Celeron/Pentium III
Memory	512 MB or higher	256 MB
Hard Drive	20 GB and higher (8GB for AFS cache)	3.0 GB
Networking	100 Base-T Ethernet Note: Modem and wireless networking are not supported	10 Base-T Ethernet Note: Modem and wireless networking are not supported

* A network card of one of the following types is recommended: 3com 3c905, Intel eepr100B, Realtek 8139, Digital/Intel 2114x (tulip) or compatible. National Semiconductor 83820 or compatible.

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