

Empire State College Standard Laptop Specifications

The following are the standard hardware specifications for Empire State College laptop systems. All laptop units purchased by the college are purchased with these specifications unless otherwise ordered. Also included is a brief explanation of the meanings of these specifications for the main components of the laptop.

Base Unit: Dell Latitude E6430

Processor: 3rd Gen Intel Core i5-3320M Processor (2.6GHz, 3M cache)

Memory (RAM): 6.0GB, DDR3-1600MHz SDRAM, 2 DIMMS

Video Card: NVIDIA NVS 5200M (GDDR5 1GB) Discrete Graphic with Optimus

Hard Drive: 320GB 7200rpm Hard Drive 9.5mm

Operating System: Windows 7 Home Premium, 64-bit, with Media

NIC (Network Interface Card): Dell Wireless 380 Bluetooth 4.0 LE Module

CD-ROM or DVD-ROM Drive: 8X DVD+/-RW

Sound Card: Light Sensitive Webcam and Noise Cancelling Digital Array Mic

Base Unit: Dell Latitude E6430

-This is the standard issue computer, purchased from Dell, upon which are subsequent specifications/modifications are based.

Processor: 3rd Gen Intel Core i5-3320M Processor (2.6GHz, 3M cache)

-The system's processor (CPU), responsible for almost all of the computations your system performs. A faster processing speed (higher gigahertz) increases the speed at which the system can perform calculations (ie. Run programs). A processor with multiple cores can also divide calculations among its cores, also generally leading to an increase in processing speed.

Memory (RAM): 6.0GB, DDR3-1600MHz SDRAM, 2 DIMMS

-Ram (Random Access Memory) is the "working memory" of your computer. Any program that is running on your system is loaded into the RAM, because it is much faster to read data from the RAM than from the hard drive. The more RAM your computer has, the more data can be loaded there, which effectively speeds up your computer's performance.

Video Card: NVIDIA NVS 5200M (GDDR5 1GB) Discrete Graphic with Optimus

-The video card (also called the GPU) is a specially adapted processor, similar to the CPU, that assists the CPU rendering both 2D and 3D images. A better video card allows for faster image rendering speeds and also dictates what level of detail (resolution) your system is capable of handling.

Hard Drive: 320GB 7200rpm Hard Drive 9.5mm

-The hard drive (HDD, also called the Hard Disk) stores the bulk of information that is saved to your system, including all files and programs. This particular hard drive is capable of storing up to 320 Gigabytes of Data. A higher RPM speed results in an HDD that is able to load data from memory faster. Solid State Drives (SSD) are another type of hard drive that utilizes a different method of data storage/retrieval. SSD's are generally faster but much more expensive and are unable to store as much information as a basic HDD. This system does not have an SSD.

Operating System: Windows 7 Professional, 64-bit, with Media

-The operating system (OS) is software (a program) which communicates with the system's hardware (the physical parts of the computer) and allows other programs to run. This is the "User Interface" that dictates the layout of your system and how you interact with it. The OS also determines what programs your machine will be able to run – if a program isn't designed to work with your operating system you will be unable to run it.

NIC (Network Interface Card): Dell Wireless 380 Bluetooth 4.0 LE Module

-This card physically makes the connection between the computer and the network cable.

CD-ROM or DVD-ROM Drive: 8X DVD+/-RW

-The DVD-ROM Drive is the hardware that is responsible for reading and writing external data to or from CD's or DVD's. A DVD with a faster write speed (8X in this case) is capable of burning (copying data) onto a disc at a faster rate. DVD-ROMS are generally capable of reading and writing both DVD's and CD's (as is the case for this drive) whereas a CD-ROM is capable of only reading and (maybe) writing to CD's. Not all disc drives are capable of writing to CD's/DVD's- some can only read the data from them.

Sound Card: Light Sensitive Webcam and Noise Cancelling Digital Array Mic

-The sound card for this system is integrated into the motherboard itself and so was not directly designated a name. These systems come standard with a built in webcam and microphone.