



Engineering Laptop Computer Specifications & Purchasing for 2017-2018

Introduction

Students majoring in Engineering at Campbell University are **REQUIRED** to have a laptop computer. The School of Engineering specifications will typically exceed the general Campbell University specifications. You are **REQUIRED** to adhere to the School of Engineering specifications outlined on **this sheet**. Note that computer labs are not provided for engineering classes – you will use your laptop in class when computer tools are required throughout your undergraduate education. **If it meets School of Engineering specifications, you may use a laptop computer that you already own.**

Purchasing Options

If you wish to purchase a laptop **guaranteed** to meet School of Engineering specifications, two major options are available. It is recommended that you check prices (which can fluctuate) and purchase from the lowest-cost vendor for the model you are interested in.

1) Purchase directly from Dell via this URL:

<https://www.dell.com/sts/passive/commercial/v1/Autologin/Authenticate?id=IjE2ODE1MjU4lg%3d%3d>

This Dell website is configured to only offer our two standard computers, with and without a 3-year all-inclusive warranty with on-site repair services (recommended). After going to the website, click on 'Standard Configurations' to see the computers. The two models offered the XPS 9360 (the Standard model) and the Precision 5520 (the Advanced model). See the FAQ for more information about these models.

2) Purchase from the Campbell University Bookstore using the "Bookstore Pre-Order Form". Note that the Bookstore only guarantees on-time delivery for the beginning of classes on laptop orders placed before 7/15/2017. Laptops purchased from the Bookstore can be picked up on campus.

It may be possible to obtain a better deal on the Standard or Advanced model laptop by finding another vendor or special promotion allowing the purchase of a laptop with identical specifications for a lesser cost. Buyers should be careful to assess the specifications of laptops from other sources carefully prior to purchase to ensure they match those shown through the Dell URL given above if they wish to have a standard model laptop.

If a student wishes to purchase a laptop elsewhere, note that students are eligible for discounted computers through manufacturers shown via this URL: <http://www.campbell.edu/student-services/computing-services/student-helpdesk/technology-purchases/>

General Requirements

You must have a personal laptop computer that meets or exceeds the Minimum Engineering Laptop Specifications (see page 3). A desktop computer is not sufficient, nor is a laptop that does not meet the Minimum Engineering Laptop Specifications. A computer meeting the Recommended Engineering Laptop Specifications may provide a faster user experience that will allow students to complete tasks more quickly.

Your computer must boot directly into Microsoft Windows. The required engineering software is Windows-based. It will not be possible to complete required coursework without Microsoft Windows. **Therefore, we do not recommend the purchase or use of Apple laptops.**

Your computer must not have BitTorrent software installed. Campbell University blocks all BitTorrent activity. Students can permanently lose access to the campus network, which is required for classwork, if BitTorrent activity is repeatedly detected. No BitTorrent software is permitted on laptops.

Software Requirements

Microsoft Office is provided to all Campbell University students free of charge. The School of Engineering requires that all students use Microsoft Office. Go to <http://office.com/getoffice365> and use your Campbell University email address to obtain your free copy of Microsoft Office.

The School of Engineering will provide additional required software free of charge to engineering majors after they arrive on campus. More information about this will be provided during Orientation.

Recommendations

If using an existing laptop, arrive with a fresh Windows installation to assure high performance. A computer service center or a computer savvy friend may be able to help you reinstall Windows if needed. Note that Campbell University provides Windows 10 to students for free with a Campbell email address.

Maintain your computer and don't load your computer down with numerous programs and games. Using the laptop primarily for academic purposes is recommended. Students who install many programs or fill their hard drive with movies may encounter reduced performance in engineering applications.

Don't bring a laptop that is heavy or very large. If you are planning to use an existing computer, consider the size and weight of the laptop. You will need to carry this computer to class on a regular basis.

Use Windows Defender for anti-virus purposes. This software is included free in Windows 8.1 and 10. There is no need to purchase McAfee, Norton, or similar commercial anti-virus products.

A personal printer including scanning functions is strongly recommended. The School of Engineering expects students to have 24/7 access to printing (laser or inkjet). The ability to scan will be necessary for engineering students.

Minimum and Recommended Laptop Specifications

The minimum specifications below set the lower boundary for acceptable laptop computers for engineering majors. Hardware at or near the minimum specifications may provide a mediocre user experience. **Questions about the suitability of a laptop may be directed to the School of Engineering. See our Purchasing Guide for more information on how to buy laptops meeting Engineering specifications.**

| | Minimum Specifications | Recommended Specifications |
|----------------------------|--|--|
| Operating System | Windows 10 (64-bit) | Windows 10 (64-bit) |
| CPU | Intel: <ul style="list-style-type: none"> i5 or i7 w' 2GHz core frequency AMD: <ul style="list-style-type: none"> A12, FX mobile chips | Intel i5 or i7 that is: <ul style="list-style-type: none"> Fourth-generation or newer (model number # is 4XXX or higher) Four cores (two w' Hyperthreading) Base frequency of 2GHz or more AMD r5 or r7 that is: <ul style="list-style-type: none"> Four cores (two w' Hyperthreading) Base frequency of 2GHz or more |
| Graphics | Intel: HD 4200 Nvidia: Geforce GT 730M AMD Integrated: Radeon R5 AMD Discrete: Radeon 8550M | Intel: HD520 or higher <i>Some engineering software benefits from professional graphics products (Nvidia Quadro, AMD Firepro, and Intel Xeon) not available with standard consumer computers. Professional graphics are found in the Advanced standard model laptop but are NOT required. See the FAQ for more information on the Advanced standard model laptop.</i> |
| Memory | 8 GB RAM | 8 GB RAM or more |
| Storage | 256 GB Hard Drive | 256 GB or more, SSD preferred |
| Screen Size | 12 inches | Between 13 and 17 inches, inclusive |
| Screen Resolution | 1366x768 pixels | 1920x1080 pixels (high resolution screens such as 4K are not recommended for use with our software as the controls can be very small) |
| Wireless Networking | Supports 802.11N band networking | Supports 802.11AC band networking |
| Touchscreen | Not required, personal preference only | |