Laptop Requirements for All SEAS Students

All incoming SEAS undergraduate and graduate students are required to have laptops consistent with the specifications below. The specifications will be updated periodically, but students who purchase or already own a laptop consistent with the laptop specifications below at the time they first enroll in a SEAS degree program will not be required to update their laptop hardware if they remain enrolled continuously in a SEAS degree program.

Laptop Minimum Recommended Specifications

Operating System: Windows 11 64-bit, or MAC OS 11 (Big Sur) or above or Mac Book Air or Mac Book Pro or Mac OS Sonoma

- **Processor**: processing power comparable to that of an Intel Core i5 processor or higher.
- **Memory**: at least 16 gigabytes
- Hard drive: at least 500 gigabytes. Solid state hard drive highly recommended.
- **External storage**: an external storage device (e.g., an external USB hard disk drive) with at least 500 gigabytes is recommended for students to back up their laptop. All students have cloud storage OneDrive with their WSU email account.
- **Display**: must support resolution of 1280×800 or higher. An HDMI display output port (for presentations) is highly recommended.
- Graphics: Dedicated video card with hardware support for Microsoft® DirectX® 9 (or later)
- **Networking**: wireless internet connectivity required. <u>View WSU wireless network</u> <u>requirements.</u>
- Standard Software:
 - All students with their WSU account have access to MS Office 365.
 - Adobe reader
- **USB ports:** at least two USB ports. One USB-C port is recommended but not required.

Program or Course-specific Software

- Many SEAS courses use MATLAB. MATLAB is available for free download to WSU students.
- AutoCAD for CE
 - Download a free student version of AutoCAD at this website <u>http://www.autodesk.com/education/home</u>.
- CS will maintain a server for download of Linux OS, for courses that require this. There are a variety of ways to run Linux on a Windows laptop; Information Technology (IT) will provide help where needed.
- Some EE courses use PSPICE circuit simulation software. Freeware versions of PSPICE will be recommended by EE instructors.
- ME students should be able to use a CAD system, like the one linked below.
 - o <u>SolidWorks</u>
 - SolidWorks PC Requirements

- Free Software
 - C++ Embarcadero Dev C+ (Windows) <u>https://www.embarcadero.com/free-tools/dev-cpp</u>
 - C, C++, Python Visual Studio Community 2022 (Windows) <u>https://visualstudio.microsoft.com/vs/community/</u>
 - Python Spyder Integrated Development Environment (IDE) (Windows and Mac) <u>https://www.spyder-ide.org/</u>
- Inexpensive
 - C, C++, Python CodeRunner 4 (Mac) Apple App Store
- CptS 122 (free software)

For Windows

- o Msys2
- Some programmers text editor (notepad++ or VSCode, or vim)
- Visual Studio Professional

For Mac

- o homebrew
- GCC (not clang)
- XCode
- CptS 223 (free software)

For Windows

- VMware, Virtualbox, or WSL2 (Windows Subsystem for Linux 2)
- Linux distro (Ubuntu based)
- GCC

For Mac

- o homebrew
- GCC (not clang)