

## Engineering Recommendations for Computer Purchases

**Dean's Note:** Traditionally, engineering software has been developed for WinTel (Windows/Intel) systems. New releases often build upon prior software versions that grew out of these roots over the past 40-50 years. While many engineering software packages are compatible on both WinTel AND MacBook PCs, students may still encounter *occasional software compatibility* issues on Apple OS.

Engineering software is increasingly being made available through cloud-based, browser options *in addition to* natively installed applications on PCs. While these options are available, browser-based packages have limitations and may be slower in practice. Further, while these software programs can be run on tablet computers, tablets (Android, SurfacePro, etc) use mobile processors and may have insufficient memory to adequately run engineering software which often require advanced computational power and high resolution visualization and graphics. As such, **tablet style computer systems are not recommended for primary engineering use.**

Below are some recommendations for minimum PC requirements for WinTel based PC's and laptops. In general, it is recommended that students invest in the most powerful computer they can afford to ensure long-term

	Minimum Requirement	Recommendation
<b>OS:</b>	Windows 11 (MacOS <sup>1</sup> )	
<b>Processor:</b>	Intel i5 or i7, 10th Gen or newer; AMD Ryzen 5 (w/ min 4 core/8 thread processor)	Intel i7, 12th Gen or newer; AMD Ryzen 7 or higher (min 4 core/8 thread processor)
<b>Memory:</b>	16 GB RAM	32-64 GB RAM (more is better)
<b>Hard Drive:</b>	256 SSD or higher	500 GB SSD or higher
<b>Warranty:</b>	<b>3 Year w/accident protection</b>	<b>4 Year w/accident protection</b>
<b>Graphics Card:</b>	Integrated video card w/ 2-4 GB video memory	Discrete/dedicated w/4-8 GB video memory (NVIDIA or AMD)
<b>Video Conferencing Tools:</b>	Built-in Mic, Speakers, & Camera	Built-in Mic, Speakers, & Camera Add a Headset with mic
<b>Battery Life</b>	8-10 hrs per charge	10-12 hrs per charge
<b>Screen Size</b>	15.6", 1920x1080 (FHD), 120 Hz	15.6" (1920x1080 or higher), 120 Hz
<b>Networking</b>	802.11 g/n	802.11 g/n

**Note for Apple users:** <sup>1</sup>Engineering students are increasingly adopting Apple PCs. Apple Mac users may need to install Windows virtualization software to run engineering applications not available on MacOS. While most students do not experience issues, occasionally students will report compatibility issues accessing some engineering software products. Also, as a caution, most university IT departments have limited capabilities to support devices running on AppleOS.

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