# Laptop Buying Guide (Students)

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Students should follow the recommendations below when purchasing a laptop to ensure it is optimized for the Wharton computing environment and course requirements.

Faculty purchasing laptops with departmental funds should contact their Academic Representative.

For mobile device recommendations see our Mobile Device Buying Guide as well as ISC's smartphone hardware recommendations.

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### **Laptop Recommendations**

Wharton Computing does not recommend specific laptops for students. These guidelines should help you determine which type of laptop will best suit your needs in our computing environment. Consider Penn Computing's Laptop Purchasing Guide for configuration suggestions.

Purchasing a laptop warranty is highly recommended. Warranties support the repair or replacement of your laptop in the event of accidents or technical problems.

Students are able to purchase at educational discounts using the information at: https://www.business-services.upenn.edu/access-savings-technology

# **Chromebook Considerations**

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While Chromebooks are an affordable alternative, they do not have the same functionality of a laptop running a full operating system such as Windows or MacOS. This means that your experience at Wharton can greatly vary depending on the system or service you are interacting with. For this reason, Wharton **does not recommend** purchasing a Chromebook.

If you're still thinking about purchasing a Chromebook, some things to consider are:

- Microsoft Office is only available via the web interface
- Solstice screen sharing is not supported
- VirtualLab is only accessible via web interface
- Lockdown browser may function in a limited capacity

Respondus Lockdown Browser is required for quizzes and exams by most faculty at Wharton. While Lockdown Browser is available from the Google Play Store, this version does not support the calculator function. If your professor did not enable the calculator directly within the exam itself, it will be unavailable for you to use during your quiz or exam.

# Software Recommendations/Availability

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Windows	MacOS	Chromebook
Windows 10 Pro or Windows 11	MacOS Ventura 13.4	ChromeOS v77+
• Microsoft 365 <sup>1</sup>	• Microsoft 365 <sup>1</sup>	<ul> <li>Office Online<sup>5</sup></li> <li>G Suite Apps</li> </ul>
Windows Defender	Sophos Home	Built-in
<b>~</b>	<b>~</b>	<ul><li>via Email Printing</li><li>via Public Computer</li></ul>
<b>~</b>	<b>~</b>	Web Client Only
<b>✓</b>	<b>~</b>	X
N/A	<ul> <li>Virtual Lab/Vmware</li> <li>Bootcamp<sup>2</sup></li> <li>Parallels<sup>3</sup></li> <li>VM Fusion<sup>4</sup></li> </ul>	×
	Windows 10 Pro or Windows 11  • Microsoft 365¹  Windows Defender	Windows 10 Pro or Windows 11  • Microsoft 365¹  • Microsoft 365¹  Windows Defender  Sophos Home  • Virtual Lab/Vmware • Bootcamp² • Parallels³

<sup>&</sup>lt;sup>1</sup>We recommend using either Microsoft 365 (available for free to all Penn students) or Office 2019 ProPlus.

#### Software Purchases

<sup>&</sup>lt;sup>2</sup>Bootcamp is not supported on Apple Silicon (M1) Macs. On Intel-based Macs, we recommend that you have at least 512GB of storage space if you plan to use Bootcamp.

 $<sup>^3</sup>$ Windows 10 is not supported on Apple Silicon (M1) Macs. On Intel-based Macs, we recommend that you have at least 16GB of RAM if you plan to install Microsoft Windows 10/11 in Parallels. Windows 11 ARM is supported on Apple Silicon (M1) in Parallels.

<sup>&</sup>lt;sup>4</sup>VM Fusion is not supported on Apple Silicon (M1) Macs. On Intel-based Macs, we recommend that you have at least 16GB of RAM if you plan to install Microsoft Windows in VMware Fusion.

<sup>&</sup>lt;sup>5</sup>OneDrive app is available. All other Office products (Word, Excel, PowerPoint, etc.) are only accessible via web interface.

Software needed for "Whartonizing" your computer is free and is available via download using the directions in Whartonizing Your Device.

#### Hardware Recommendations

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When looking to purchase a new laptop, it may be hard to distinguish what makes one model better than another. In cases like these, it is often helpful to compare hardware specifications. See below for some tips on how to determine the difference in hardware specifications.

#### Hard-Drive (a.k.a. Storage)

Your hard-drive is where all your data is stored, from programs to personal files like documents and pictures. It also houses your Operating System (Windows or MacOS) which can sometimes take up to 30GB -- so keep this in mind when looking at storage sizes.

Hard-Drives also come in two types: HDDs and SSDs. SSDs are better with speed, durability, and longevity, but come at a higher cost. Our recommendation is to have at least a 512GB SSD. Use in conjunction with Cloud Storage Options to maximize productivity, performance, and durability of your data!

#### RAM (a.k.a. Memory)

RAM assists your computer's other hardware in order to run programs and especially helps if you plan to have multiple programs (or browser windows/tabs) open at once.

For RAM, the more the better. Our recommendation is to have a minimum of 8GB of RAM, but 16GB is preferable for improved performance.

#### CPU (a.k.a. Processor)

Your CPU handles all calculations your computer has to make, essentially making it the brain of your computer. CPU performance is measured by two factors: number of cores & clock speed (i.e. Dual Core @2.6GHz).

For CPU, the more cores the better. If you choose a CPU with more cores, it's okay if your clock speed is slower.

CPUs may also be listed by brand and model. In general, the higher model numbers are better (i.e. i9 > i7 > i5 or Ryzen 9 >Ryzen 5 >Ryzen 5

### **Remote Work Considerations**

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If you are working at home you might want to consider the following:

- Internet Service Provider: If you are living off campus, speak to your internet service provider for setup and
  installation prior to moving into your new residence. On the day of service installation, allow yourself plenty
  of time to enable the technician to install your networking equipment, configure your settings, and test your
  wireless speeds and stability. On campus students will connect to AirPennNet.
- 2. Additional Equipment: If you will be using video conferencing services (e.g. Zoom) for classes you might want

to consider noise cancelling headphones, whether or not your laptop has a built-in microphone, and whether or not you will need at-home printing. We recommend wired headphones to reduce the chance that you will lose your connection during class. Online courses are setup so that you don't need to print so it is a personal choice whether or not you like to print out course materials at home.

- 3. **Ergonomic Considerations**: If you are spending a lot of time at home, you may want to invest in a desk, chair, and laptop stand that will support your body's own unique needs (e.g., back and neck support).
- 4. **Designated Workspace**: To make the work/life balance easier, you might want to designate a specific workspace for school work that is separate from your home life.
- 5. Consider Best Practices for Video Conferencing:
  - Find a quiet area for video conferencing.
  - Mute your microphone at the start of a meeting.
  - Pay attention to lighting and background in your work area.
  - Speak loud enough for your laptop mic or external mic to pick up sound.
  - If you are using a mobile device instead of a laptop, mount it on something to keep the video steady.

**Note:** All students with concerns about affording technology for remote learning can approach the Emergency and Opportunity Fund or Penn First Plus.

For more information, check out Working and Learning Remotely - Students, and Remote Working Checklist

# Frequently Asked Questions

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- 1. Can I use my company computer?
- 2. Can I use my current computer?
- 3. Which Smartphone will work best at Wharton?

# Need More Purchasing Advice?

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Wharton Computing supports research, instructional, student, and administrative computing at the Wharton School. Student Computing can help advise you.

- Visit: Student Tech Center (114 SH-DH) or https://computing.wharton.upenn.edu
- Call: (215) 898-8600 (support available 24/7)
- Email: support@wharton.upenn.edu