COMPUTERS

Laptops in the School of Architecture are essential tools for students from day one—they're not just accessories, but critical extensions of their work. These devices are significant investments, expected to last up to four or even five years while withstanding daily use, frequent transport, and demanding software performance. Below is a general guide to help you make an informed purchase, along with brief explanations for each recommendation.

- **Focus on performance over brand names.** The brand of a laptop or desktop is less important than the components inside. Always consider **gaming laptops**, they're specifically built for high performance, making them ideal for architecture students working with demanding software.
- **Trusted brands to consider include MSI, ASUS, Alienware, Dell, and Lenovo.** These manufacturers consistently produce high-performance machines that can handle architectural design programs efficiently and reliably.
- **Expect to invest between $1,300 and $4,000 for a high-quality laptop.** The price will depend on the configuration, but in this case, you truly get what you pay for. A solid investment now can last you 4–5 years of heavy use.
- **Processor (CPU) is key.** Look for the latest **Intel i7** (12th or 13th generation). If your budget allows, go for the **Intel i9** for even more power. AMD Ryzen processors are also a strong option—just be sure to choose the **Ryzen 7 or 9 Series**. ***If possible, avoid Intel i3 or i5 processors, as they will struggle to keep up with demanding software.***
- **Graphics Card (GPU) is critical for rendering and performance.** While **GTX** cards are more affordable, the **RTX series** (especially the 4050 through 4090) offers significantly better performance for design work. Note that GPU prices vary widely by series—sometimes by several hundred dollars. The newer **5000 series** RTX cards are beginning to roll out and may influence pricing soon.
- **Memory (RAM) matters.** The minimum you should consider is **16GB of DDR5 RAM**, but **32GB DDR5** is ideal. If you find a system with **more RAM installed or expandable to 64GB**, that's even better. DDR5 is the latest memory standard, allowing for smoother multitasking and faster performance across multiple programs.
- **Storage (Hard Drive) is important, but flexible.** Aim for at least a **512GB SSD (Solid State Drive)**, though **1TB SSD** is ideal, since this is where all your software will be installed. You can always add an **external SSD or HDD** for extra storage. SSDs are faster, more stable, and typically last up to 10 years, though this can vary.
- **Once the core specs are covered, check for essential ports and features.** Ideally, your laptop should have **4 to 6 USB ports**, an **HDMI port**, and a **Mini HDMI** or **USB-C** video port—these will allow you to connect additional monitors for more screen space. An **integrated webcam** is also important and usually standard on higher-quality laptops.
- **Screen size matters.** Most laptops come with a **15.6" screen**, which is sufficient, but a **17.3" screen** provides more real estate—helpful for design and multitasking. Keep in mind, larger laptops tend to be heavier, so if you go that route, be sure to invest in a **padded backpack or protective carrying case** to safeguard your device.

- **Back up your work with an external hard drive.** A **2TB to 4TB external SSD or HDD** is ideal for storing project files and keeping your work safe. Avoid saving files only to your laptop—if the system crashes, your work could be lost. Reliable brands include **Western Digital, Seagate, and SanDisk**, with **Samsung and Toshiba** also offering strong options.
- **Avoid underpowered devices.** If possible, **steer clear of MacBooks, budget laptops under $700, and Chromebooks**. While MacBooks are excellent machines overall, they are often incompatible with key architecture and design software, leading to major frustrations. Budget-friendly laptops often lack the power and specifications required for demanding software, and Chromebooks are designed for basic computing—not for the intensive work required in the School of Architecture.

OPTIONS

I will include links to **five tiers of laptops** in this email, each meeting the specifications outlined above and organized by price range. (Many of these linked options may be out of stock, discontinued or no longer available.)

These recommendations come from a well-known and reliable computer store in the Houston area, known for having items in stock and knowledgeable, helpful staff. If you are preparing to make a purchase and would like someone to review the specifications before you buy, please don't hesitate to email **Professor Curtis** for guidance.

No, you don't need to purchase the most expensive, top-of-the-line computer—but do keep in mind that this is a **long-term investment**. Ideally, this machine will support your work throughout your time in the program until graduation.

"A good tool improves the way you work. A great tool improves the way you think." – Jeff Duntemann

Tier 1: https://www.microcenter.com/product/662671/msi-katana-15-b12vfk-291us-156-gaming-laptop-computer-black

MSI Katana 15 B12VFK-291US 15.6" Gaming Laptop Computer - Black; Intel Core i7 12th Gen 12650H 1.7GHz Processor; NVIDIA - Micro Center

Get it now! Protect your honor and defeat all enemies. Awaken your inner power and inherit the will of the Dragon. In your hands is the Dragon's Blade, flowing with ancient power, and engraved with runes of wind. Strike down any foe that stands in your way with the legendary blade Katana 15.

www.microcenter.com

This is a good computer, and while it's the most budget-friendly option, it will have limitations over time. It's capable of running all the essential software typically used at the first-year level, making it a solid choice for students with tighter budgets. However, higher-tier computers—though more expensive—offer significant upgrades such as faster processors, more memory (RAM), larger storage capacity, and more powerful graphics cards. These enhancements lead to noticeably better performance, especially when multitasking or running demanding design programs. If your budget allows, investing in a higher-tier option will provide smoother and more efficient user experience in the long run.

Tier 2:https://www.microcenter.com/product/677546/hp-omen-16-ae0001nr-161-gaming-laptop-computer-platinum-collection-meteor-silver

HP OMEN 16-ae0001nr 16.1" Gaming Laptop Computer Platinum Collection - Meteor Silver; Intel Core i7 14th Gen 14700HX - Micro Center

Get it now! Stop throttling your gaming potential and give your games the max graphics settings they yearn for with the new Intel Core processor and NVIDIA graphics.

www.microcenter.com

Tier 3:https://www.microcenter.com/product/663213/msi-raider-ge78hx-13vg-020us-173-gaming-laptop-computer-platinum-collection-dark-grey

[MSI Raider GE78HX 13VG-020US 17.3" Gaming Laptop Computer Platinum Collection - Dark Grey; Intel Core i9 13th Gen - Micro Center]
Get it now! The sky is the limit. Inspired by the discovery of black hole Sagittarius A, Raider GE78 HX once again makes the impossible possible. With cutting-edge technologies and matrix lighting aesthetics, the Raider GE series will catch everyone's eye immediately.
www.microcenter.com

Tier 4: https://www.microcenter.com/product/679175/hp-omen-17-ck2089nr-173-gaming-laptop-computer-shadow-black

Tier 5: https://www.microcenter.com/product/678428/lenovo-legion-9-16irx9-16-gaming-laptop-computer-carbon-black

Of course, there are faster and more expensive computers available on the market, but the selections provided here represent a range—from affordable to high-end—that will more than meet your needs. Each option includes the key specifications you should be looking for.
That said, don't just take my word for it. I encourage you to visit the store in person, speak with the experts, and compare their insights with the guidance I've provided. If you come across a computer you're considering and want a second opinion, feel free to email me—I'll be happy to review the specs before you make your purchase.

S O F T W A R E

1. **SketchUp**
    a. Student License - **$55/year**
    b. SketchUp Trial - **7 days**
        1. Getting Started
    c. Online SketchUp – **Free**
        1. Online Tutorial
    d. SketchUp Tutorials
    e. SketchUp Free Tutorial
2. **Adobe Creative Suite:** - **$19.99/month for Students and Teachers for the first year (most cost-effective option and you'll get access to the entire Adobe Suite)**

Rendering Software: *To access free or discounted licenses for these programs, you will need to verify your student status—so be sure to use your **school email address** when registering. Allow some time for verification, and don't forget to check all folders in your email account, including your **"Other" or spam folders**, in case the confirmation email gets filtered.*

*You are not required to download or buy multiple rendering software programs unless you choose to explore them personally. In our studio, we primarily use **Enscape**, and it will be briefly introduced as part of your coursework. It is possible to purchase both SketchUp and Enscape as a packaged deal, which is a good choice.*

1. **Enscape**
    a. Student License **(discounted student price of $149/year.)**
    b. Software Demo
    c. Tutorial Video
    d. Project Demo
2. **Lumion**
    a. Student License **(free for one year)**
    b. Software Demo
    c. Tutorial Demo
    d. Project Demo
3. **V-Ray**
    a. 30-Day
    b. Student License **(discounted student price of $149/year.)**
    c. Software Demo
    d. Tutorial Demo
    e. Project Demo
4. **TwinMotion**
    a. Educational License **(free for one year)**
    b. Software Demo
    c. Tutorial Demo

5. **D5 Render**
    a. Download
    b. D5 Learning
    c. D5 Beginner Tutorial
    d. D5 Full Course

SUPPLY LIST

- #11 X-Acto Knife
- #11 X-Acto Blades
- 18" Steel Straight Edge/Ruler
- Architectural Scale
- Pencil Set - 6 to 12
- Eraser
- Bristol Paper
- 12" x 20yd Tracing Paper Roll
- Sketchbook
- Cutting Mat 12x18 (minimum)
- Glue 1 or Glue 2

All of the suggested supplies can be purchased online through Amazon or locally from stores like Hobby Lobby, Texas Art Supply, Michaels, and, in some cases, Walmart. The brands listed are simply recommendations and can be substituted with alternatives based on personal preference or availability.