Computer Hardware

COMPUTATIONAL POWER

Architecture requires specific software and computers with strong graphic/3D capability. While the Rice School of Architecture has a computer lab to support instruction, every student will need a computer of their own. Rice University's general "Purchase Guidelines for Students" provided by the IT department are insufficient for architecture students. You should instead follow these guidelines provided by the Rice School of Architecture, meeting the minimum specifications outlined below. You will use the computer extensively to complete complex graphic work—a more powerful computer and larger screen facilitate such tasks. A decent webcam and microphone (in a laptop built in is fine) will be essential, along with a mouse as trackpads are not designed for complex modeling tasks. Computer costs can often be added into loans as part of financial aid packages, amortizing the cost. Check with financial aid for details.

FAQ ON COMPUTER HARDWARE

— Where will the computer be?
Students will be expected to have a computer for use in the studio. The Rice School of Architecture has a computer lab for instruction and student use but it is important that students are able to work during class at their dedicated space in the design studio and with their colleagues outside of regular studio hours. Given that instruction is increasingly making use of computers outside the studio, a portable computer might be preferable.

— When to buy a computer and how often?
Students are not expected to have an appropriate computer on the first day of their freshmen year, so you can wait until you arrive at Rice to purchase the hardware. However you should expect to buy it in the first weeks of school. You may find it desirable or necessary to upgrade or purchase a new computer after three to four years.

— Desktop or Laptop?
Either is possible. While a desktop computer might be more cost-effective, a powerful laptop with an external monitor could give you more flexibility in terms of use (for other classes, or during semester breaks).

— Apple or PC?
You can use either an Apple or Windows PC. Much of the design software you will use works for both Windows and Mac. However, please be advised that some apps work only in Windows. ArcGIS, VRay (rendering), Revit (BIM) and Grasshopper (parametric modeling, structural and environmental analysis) work only in Windows, and Rhino (3D modeling) has reduced features in Mac OS. Additionally, Windows no longer runs natively (via Boocamp) on M chip Macs, and virtual Windows (via Parallels) has declined in performance. If using a Mac, you may need to make use of the school computer lab to use these programs occaionsally. A Windows laptop is the simplest solution.

— Are there student discounts and are refurbished computers okay?
College students typically are eligible for a significant discounts from manufacturers. Inquire when you buy your computer. Factory refurbished computers can be a great way to save money as well. Make sure there is some warranty included.

RECOMMENDED COMPUTER SPECIFICATIONS

	Minimum	Recommended
CPU	Intel Core 7 AMD Ryzen 7 M4 or M5	Intel Core 9 AMD Ryzen 9 M4 Pro or M5 Pro
RAM	16GB	32GB
GPU	NVIDIA RTX 4060/5060	4070/5070 or better
	Note: Dedicated GPU is necessary for windows only	
HD	512 GB SSD	1 TB SSD
Display	15 inch laptop	

OTHER REQUIRED HARDWARE

— Display: 15 inch display for laptop is a practical minimum, along with 1920x1080 resolution. An external 27 inch, 4K, stand alone monitor is highly recommended.

— Mouse: 2-button with scroll (track pads are inadequate).

— Lock: a cable lock or other means of securing their laptop or desktop is strongly encouraged. Theft is rare at Rice but you always want to use precaution.

CLOUD-BASED STORAGE

Cloud-based backup of your work will be essential. Rice provides you with some online storage through Box and Google Drive. Backups should be regular (at least daily) and automatically scheduled.

Computer Software

The Rice School of Architecture requires you to work with licensed software. Any software that you need can generally be obtained as academic versions that are either free or far less expensive than commercial versions. Thanks to a generous endowment, the School of Architecture provides you with individual licenses for Rhino3D and Adobe Creative Suite. Additional software, such as VRay, are made available via a license server while you are at Rice. In some instances, you may need to purchase course-specific software that instructors specify at the beginning of the semester. Therefore, you should wait to purchase/obtain software until you arrive.

SOFTWARE

Operating System:	Microsoft Windows 11
3D Modeling:	Rhino3D for Windows (note: Rhino3D for Mac has reduced functionality)
Graphics:	Adobe Cloud (Illustrator, InDesign, Photoshop, Acrobat, etc)
Rendering:	VRay
Drafting/BIM:	Autodesk Autocad, Revit