

University of Nebraska College of Architecture  
2020-2021 Computer Policy

All students in the College of Architecture's Architecture, Interior Design and Landscape Architecture programs are required to lease, purchase, or have ready access to a laptop computer that meets or exceeds the specifications listed below. Students can choose between a PC or Mac platform; however, all Mac computers will need to be BootCamped (see page 2.)

Hardware	Windows	15 or 16 inch MacBook Pro
CPU/Processor:	Intel i7 2.6 GHz (minimum)	Intel i7 2.6 GHz (minimum) <b>NOT the "Silicone M1."</b> <b>See page 2 below</b>
Display:	15" Full-HD (1920x1080 minimum resolution)	15" or 16" Retina display
RAM:	16 GB minimum (32 recommended)	16 GB minimum (32 recommended)
Disk Storage:	256 GB minimum (512GB SSD recommended)	512 GB minimum (1TB SSD recommended)
External Mouse:	3-button with scroll wheel required	3-button with scroll wheel required
Graphics Card:	AMD or Nvidia graphics (See page 2 & 3)	AMD Radeon Pro 560x minimum (See page 2 & 3)
OS:	Windows 10x64 – Build 1909 or higher	MacOS X Boot Camped w/ Windows 10 (See page 2 about Boot Camp requirements)
Warranty:	3-year extended recommended	3-year extended recommended
Required Hardware:	Flash Drive (8 GB or larger)	Printing or file transfers
Recommended Hardware:	External USB Drive (500 GB or larger)	for backups

Application Software (items requiring student purchase in bold)

All Students Require:	Graphics: Adobe Creative Cloud* Business: Microsoft Office & Windows 10** Virus: Cortex XDR AV (provided by UNL***)
Architecture Students:	CAD: AutoCAD 2021*** and Revit 2021*** 3D Modeling: Rhino 6**
Interior Design Students:	CAD: AutoCAD 2021*** and Revit 2021*** 3D Modeling: Rhino 6** and EnScene***
Landscape Architecture Students:	CAD: AutoCAD 2021*** 3D Modeling: Rhino 6** and Lumion*** Due to the extreme graphics card requirements the Lumion software requires, <b>Apple MacBook Pro laptops are not recommended</b> for Landscape Architecture majors.

\* Adobe Creative Cloud is free to UNL students: <http://itprocurement.unl.edu/adobe-creative-cloud-full-suite>

\*\*Educational pricing available at the UNL Huskertech Computer Store. <https://its.unl.edu/huskertech/software>

\*\*\*The following software is available for free download:

- Cortex XDR Anti-Virus is available for free download from: <http://antivirus.unl.edu/>
- Autodesk software is available for free download from: <http://students.autodesk.com> - see Software Help Sheet for directions
- Lumion offers its software free to students. <https://lumion.com/educational-licenses-us.html>
- EnScene offers its software free to students. <https://enscape3d.com/educational-license/>

The University of Nebraska prohibits the use of pirated software or digital media. Students may be asked to present proof of software ownership. Students who have pirated software or digital media on their computers will not be serviced and can be reported to Student Judicial Affairs.

The College of Architecture recognizes that some students may already own a computer with comparable specifications, perhaps only falling short on RAM, processor speed, or graphics capability. While such a computer may be suitable in the short term, it will be necessary for you to acquire a computer that meets or exceeds the specifications listed above during, or soon after your first year of school.

For the last several years the UNL Huskertech Computer Shop has offered laptop packages specifically configured for students of the College of Architecture. Because of the positive response, the Computer Shop will again offer packages for students in the College of Architecture. Since 2013, they have worked with Dell to arrange special educational pricing.

Information will be posted on the Huskertech sales website as the terms are finalized. You can also check with the UNL Huskertech Store directly (402-472-5151) for more information on what options are available. They are located in room 7 on the lower level of the city campus Nebraska Union at 1400 R Street. <https://its.unl.edu/huskertech/>

Please be advised that any custom ordered computer takes between a few weeks to over a month from the time an order is placed, to the time the computer is received. All students are expected to have their computer purchased and software installed on or before August 24th, 2021.

# Boot Camp

All MacBook Pro laptops must have a process called "Boot Camp" performed on them in order to run the required Autodesk, Rhino and Lumion software. This process divides the physical hard drive into two logical partitions and installs Windows on the second partition. It is like having two computers. You will have to reboot (while holding down the option key) in order to bring up a menu to switch operating systems. That is why Mac's require a larger hard drive than a PC. We recommend creating a minimum of a 120Gb partition for the Windows operating system (200GB recommended.) A Windows 10 License is available to purchase at the UNL Huskertech computer store. Apple's Boot Camp directions can be found at: <https://support.apple.com/en-us/HT201468>.

If you need assistance with the Boot Camp process, the Computer Help Center located in room 31 Love library south has two options to assist students. You can stop by and an associate will answer any questions and can help you through the process. They can assist in installing other required software packages too. Make sure you have your Windows 10 license with you. Please plan to stay a minimum of 3 hours to complete the process.

The second option is you can drop it off, and for the standard operating system installation fee of \$100, they will complete the process for you, and you can pick it up later. This fee does not include installing other software packages. It is highly recommended that you do this well before the first week of school.

## Intel Processors

In November 2020 Apple launched its proprietary ARM based "Silicone M1" processor to eventually replace Intel processors in their entire lineup of computers. Currently the 16 inch MacBook Pro is only offered with the Intel processor, but that will also transition to the Silicone processor at some point in the future. Maintaining the ability to "Boot Camp" a Mac was not mentioned during the launch event, however we believe Bootcamp will no longer be an option on Mac's with these new processors. We do not yet know if there will be a "virtual machine" software option (runs Windows simultaneously) such as VMware or Parallels, and if any virtual machine software will be able to efficiently run the programs required by the college of Architecture. Until we can be certain this is a viable option, **the college cannot recommend purchasing a Mac that is configured with the Silicone M1 processor.**

## Graphics cards

There are two major manufacturers of high-end graphics cards, often referred to as a "GPU" (Graphics Processing Unit) Nvidia and AMD. Intel does make graphics chips, but they are not made for performance. Nvidia and AMD also make separate lines of cards. Lines marketed for gaming, and lines for industrial applications. Here is a breakdown of each company's current line of cards and a recommended minimum model number of each needed to run the UNL College of Architecture's software programs.

NOTE: What is deemed as a "gaming card" is still very capable of running all the programs used by the college. The difference being that the "industrial cards" have been extensively tested and earned an ISV (Independent Software Vendors) certification for compatibility. Which is why a similarly performing "Industrial card" will cost more than a "gaming card."

### Nvidia:

**GeForce:** These are classified as "Gaming cards." In the fall of 2018 Nvidia released a new generation called "RTX 20xx." The bottom tier of this generation, the GeForce RTX 2060 is great card to go with. You can go up in performance to the RTX 2070 or even the RTX 2080. This spring (2019) they released the new GTX16xx line, any one of these cards are suitable. The previous generation (GeForce GTX10xx) are still quite capable. However, we do not recommend anything below the GeForce GTX 1050Ti.

**Quadro:** These are Nvidia's Industrial applications ISV certified graphics cards. As of April 2019, only the desktop versions of the new Quadro RTX x000 line of cards have been released. Now vendors like Dell, HP and MSI and others are shipping laptops utilizing these new cards too. The previous generation Nvidia Quadro P2000 is the recommended minimum graphics card to shop for in this line of graphics cards. In 2020 the Quadro P2000 was upgraded to the Quadro T2000.

### AMD:

**Radeon RX X70:** This is AMD's mid-tier gaming card line of graphics cards. We do not recommend anything below the

AMD Radeon RX 570: They also make a RX 580 and RX 590.

**Radeon Pro Vega XX:** These are the AMD high performance line of gaming graphics cards. They currently produce four versions of this card. All four of which are only available in PC's. The previous generation 15" MacBook Pro did offer two. If you are buying a current model year 16" MacBook Pro the Radeon Pro 5500M with 8GB of memory is recommended.

**Radeon Pro WX XX00:** This is AMD's current ISV certified line of graphics cards. We do not recommend anything below the Radeon Pro WX 5100 to proficiently run the software used in the College of Architecture.