

# College of Architecture Laptop Policy

## 2023 – 2024 Academic Year

### Laptop Requirement

Laptops are required for all undergraduate and graduate students in the College of Architecture at the beginning of their first year. Software requirements vary by division (see below).

### Support Infrastructure

Information Technology and the College of Architecture have partnered to provide a support infrastructure for the laptop policy. This includes wireless coverage, repair services and network file storage.

**Wireless:** The Gibbs College of Architecture (Gould Hall) has wireless coverage throughout. To connect, simply choose the network called “WIFI@OU”. If you need assistance with connecting to wireless, please call 405-325-HELP.

**Available Software and Storage Solutions:** The University offers Office 365 free for all students. Installer can be found at [portal.office.com](https://portal.office.com). Students also have access to 1TB of storage space through OneDrive. This drive can be accessed through the portal website. For more information regarding available resources please call 405-325-HELP or visit [ou.edu/ouit](https://ou.edu/ouit)

**Repair Services:** The nearest IT Service Centers is available at OU Bizzell Library basement LL1, provides College of Architecture students support for all their computing needs. The IT Service Center is a Dell and Apple certified warranty repair center, but repairs all brands of computers. This service is free of charge, but students must pay for any parts or additional software required. There are two IT Service Centers on campus, one located in the Engineering Laboratory room 201 and Bizzell Library room 125. All Service Centers are open Monday through Friday 8:30 AM to 5:30 PM.

**Network Storage:** All students will have access to their Microsoft OneDrive, which provides up to 1TB of storage space.

**Financial Aid Help:** To help aid in the purchase of a new laptop, students may apply for the [Robert B. Lewis Computer Loan](#).

OU Institutional Loan Form: <https://lforms.ou.edu/Forms/instloanapp>

Students can also get up to a 12% discount by purchasing a Dell laptop at [itstore.ou.edu](https://itstore.ou.edu) or [www.dell.com/ou](https://www.dell.com/ou).

# Recommended system\*

\* Additional specifications for each division below.

We recommend PC as the primary platform for work in the college. For those choosing to use a MAC, students will be required to run Windows 10 for software required in respective departments to be available for use in class. Students are responsible for finding the best method to install Windows on non-PC computers.

Students should expect to allocate at least 100GB of space to Windows on a Mac. Software versions installed on student laptops need to be the same versions installed in the GCA computer lab unless noted otherwise.

## Division of Architecture Guidelines:

Recommended Minimum Laptop Configuration:

We recommend PC as the primary platform for work in the college. Architecture students are warned that some software will run unacceptably slow or not at all on a MAC and as such a MAC is not recommended.

Recommended Minimum Laptop Configuration:

Processor	Intel ® Core ™ i7-7560U Processor (4M Cache, up to 3.80 GHz) or better
Memory	16GB of RAM or better
Hard Drive	128 GB HDD minimum
Graphics Card	2 GB Graphics Card (DirectX 11 Compatible)
Miscellaneous:	-802.11G/N wireless or better -USB-A Ports -Built-in Speakers -1920 x 1080 resolution display -Windows 10 64-bit -Webcam

*\*Note on Hardware Lifespan:*

*Considering the five-year length of the architecture degree, it is suggested that students will experience the normal technological life span of computers and should plan on upgrading to a more up-to-date model as usage increases in the upper-level studios.*

Architecture Software Requirements:

- Microsoft Office
- AutoCAD

- Autodesk Revit
- 3ds Max Design
- Adobe CS Suite
- Rhinoceros (includes Grasshopper)
- SketchUp Pro
- Lumion (suggested/class specific)

## Division of Interior Design Guidelines:

Students in the Interior Design Division use laptops and iPads starting in their freshman year for an array of daily functions that include email, internet research, paper writing, and posting of course assignments and projects. iPads are required during the Fall semester of the freshman year for digital sketching, rendering, and other design and graphics studio-related projects. Laptops are required during the Spring semester of the freshman year as the use of computers increases with applications in computer-aided drafting, modeling, rendering, and animation. Students will be required to use their iPads and laptops during studio and lecture classes from the second semester of the freshman year continuing through the end of the senior year. **Students will also be required to have a three-terabyte external hard drive or equivalent cloud storage and a wireless mouse (left and right click buttons and scrolling wheel) at the beginning of the second semester of their freshman year.** It is suggested that undergraduate students will be required to enter the program with a laptop that meets the College of Architecture system specifications. Graduate students will be required to enter the first semester of their first year with a laptop meeting the system specifications above. Students should expect to upgrade memory or speed over the recommended system specifications as usage increases in the upper-level studios.

### iPad Requirements:

#### Recommended iPad Configuration:

iPad Pro 11" - \$799 (Best)	iPad 10.9" - \$549 (Meets)
11" Screen Size	10.9" Screen Size
128 GB Storage Space	258 GB Storage Space
8 GB System Memory (RAM)	A14 Bionic chip
Apple M2 chip w 8-core CPU	Apple Pencil (1 <sup>st</sup> Gen) - \$99
Apple Pencil (1 <sup>st</sup> or 2 <sup>nd</sup> Gen) - \$99/\$129	

#### Interior Design iPad App Requirements:

- Procreate
- Concepts
- Color Wheel
- Adobe Acrobat

- Microsoft Office

### Laptop Requirements:

#### Recommended Minimum Laptop Configuration:

The Division of Interior Design has created a three-tiered system for students to be able to choose their preferred level of computer performance. These tiers are to provide students with expectations of performance for the software that will be used. We highly recommended that you only look at Windows-based computers and do not recommend Apple/macOS. Please see the following pages with additional information and recommendations:

OU INTERIOR DESIGN LAPTOP COMPUTER REQUIREMENTS Windows Only, Pre-Built Computers				
Important note concerning current or future Apple/macOS users: if you have already invested in an Apple laptop/computer, you might run into some issues with some software that requires a specific type of GPUs or CPUs. Some software applications utilized in the program are not compatible with macOS and will require you to install either Bootcamp or Parallels to be able to run Windows. If you're looking into investing in a new machine, we highly recommended that you only look at Windows-based computers, so you won't need to worry about installing Bootcamp/Parallels and overwork your computer or run into constant issues. We also recommend avoiding tablet-laptop hybrids at all costs, no matter what operating system they have.				
Tier I (Minimum)- <b>WE DO NOT RECOMMEND THIS TYPE OF COMPUTER - Below requirements needed to run software</b>			Tier I Compatible Software & Loads	Price Range***
Specs	Processor/ CPU	AMD Ryzen 5 1500X, Intel Core i7-3770K equivalents (Intel or AMD processor scoring a single thread CPUMark of 2000 or higher.)*	<ul style="list-style-type: none"> <li>- Microsoft Office (should run with ease.)</li> <li>- Adobe Products (might be a bit slow to run some Adobe software such as After Effects.)</li> <li>- Autodesk AutoCAD (should run with ease.)</li> <li>- Autodesk Revit (might be a bit slow)</li> </ul>	\$900-\$1,200 or more.

		to run large projects.)	
		- SketchUp (should run with ease.)	
		- Lumion (16 GB RAM preferred to run small projects, might not handle complex files.)	
	<b>Graphic Card/GPU</b>	Nvidia GeForce RTX 1650, AMD Radeon RX 470 equivalents, with 4 GB memory.**	- Enscape (should run with ease, might not handle complex projects.)
	<b>Memory/RAM</b>	8 GB or 16 GB (16 GB preferred to run a small project in Lumion.)	- ElumTools (might be a bit slow to run.)
	<b>Internal Hard Drive</b>	512 GB SATA3 SSD or HDD.	
	<b>Miscellaneous</b>	- Operating system: Windows 10 64-bit.	Notes: render times might be slow and computer might crash a few times when attempting to create large or complex scenes. Multitasking might be doable but not recommended to avoid crashes.

		<ul style="list-style-type: none"> <li>- Screen resolution: 1920 x 1080 pixels or higher.</li> <li>- USB Ports.</li> <li>- Built-in Speakers.</li> <li>- Bluetooth and wireless internet connection.</li> <li>- 1 TB or 2 TB external hard disk for backups and system image.</li> </ul>		
Tier II (Moderate)- <b>Minimum</b>			Tier II Compatible Software & Loads	Price Range
Specs	Processor/CPU	AMD Ryzen 5 2600, Intel Core i7-4790 equivalents (Intel or AMD Processor scoring a single thread CPUMark of 2,200 or higher.)*	<ul style="list-style-type: none"> <li>- Microsoft Office (should run with ease.)</li> <li>- Adobe Products (should run with ease.)</li> <li>- Autodesk AutoCAD (should run with ease.)</li> <li>- Autodesk Revit (should run with ease.)</li> <li>- SketchUp (should run <b>small projects</b> with ease).</li> <li>- Lumion (should run <b>small projects</b> with ease.) <b>It is not able to run Lumion liveSync.</b></li> <li>- Enscape (should run <b>small projects</b> with ease.)</li> </ul>	\$1,500 - \$2,000 or more.

			- ElumTools (should run with ease.) <b>- It is not able to handle two or three software at the same time.</b>	
	Graphic Card/GPU	Nvidia GeForce RTX 2070, AMD Radeon RX 5700XT equivalents, with 8 GB memory.**		
	Memory/RAM	16 GB or 32 GB (Lumion might require 32 GB for better performance.)		
	Internal Hard Drive	1 TB SATA3 SSD or HDD.		
	Miscellaneous	- Operating system: Windows 10 64-bit.  - Screen resolution: 1920 x 1080 pixels or higher.  - USB Ports.  - Built-in Speakers.  - Bluetooth and wireless internet connection.  - 2 TB or 4 TB external hard disk for backups and system image.	Notes: render times should be decent and computer might crash less when creating large or complex scenes. Some multitasking should be doable with such specs.	
Tier III ***-Recommended			Tier III Compatible Software & Loads	Price Range

Specs	Processor/CPU	AMD Ryzen 7 3700X, Intel Core i7-7700K equivalents (Intel or AMD Processor scoring a single thread CPUMark of 2,600 or higher.)*	<ul style="list-style-type: none"> <li>- Microsoft Office (should run with ease.)</li> <li>- Adobe Products (should run with ease.)</li> <li>- Autodesk AutoCAD (should run with ease.)</li> <li>- Autodesk Revit (should run with ease.)</li> <li>- SketchUp (should run <b>medium projects</b> with ease.)</li> <li>- Lumion (should run <b>medium projects</b> with ease.) <b>It is able to run Lumion liveSync.</b></li> </ul>	\$2,500 - \$3,000 or more.
	Graphic Card/GPU	Nvidia GeForce RTX 3080 equivalents, with 11 GB memory or more. **	<ul style="list-style-type: none"> <li>- Enscape (should run <b>medium projects</b> with ease.)</li> </ul>	
	Memory/RAM	32 GB or 64 GB (64 GB preferred to run a complex project in Lumion.)	<ul style="list-style-type: none"> <li>- ElumTools (should run with ease.)</li> </ul>	
	Internal Hard Drive	1 TB, 2 TB, or 4 TB SATA3 SSD or HDD.	<ul style="list-style-type: none"> <li>- <b>It is able to handle two or three software at the same time.</b></li> </ul>	



	Miscellaneous	<ul style="list-style-type: none"> <li>- Operating system: Windows 10 64-bit.</li> <li>- Screen resolution: 1920 x 1080 pixels or higher.</li> <li>- USB Ports.</li> <li>- Built-in Speakers.</li> <li>- Bluetooth and wireless internet connection.</li> <li>- 2 TB, 6 TB or 8 TB external hard disk for backups and system image.</li> </ul>	Notes: render times should be decent depending on how complex the scene is and computer crashes might be non-existent or minimum depending on how many software are operating at a given point. Multitasking with such specs should be doable.	
Tier IV (Maximum)***-High-end requirement			Tier IV Compatible Software & Loads	Price Range
Specs	Processor/CPU	10th Generation Intel® Core™ i9-10980HK (8-Core, 16MB Cache, up to 5.3GHz Max Turbo Frequency)	<ul style="list-style-type: none"> <li>- Microsoft Office (should run with ease.)</li> <li>- Adobe Products (should run with ease.)</li> </ul>	\$4,000 - \$8,000 or more.

		<ul style="list-style-type: none"> <li>- Autodesk AutoCAD (should run with ease.)</li> <li>- Autodesk Revit (should run with ease.)</li> <li>- SketchUp (should run with ease.)</li> <li>- Lumion (should run large to complex projects with ease.)</li> <li>- Enscape (should run large to complex with ease.)</li> </ul>
Graphic Card/GPU	NVIDIA® GeForce RTX™ 3080 or 3090	<ul style="list-style-type: none"> <li>- ElumTools (should run with ease.)</li> </ul>
Memory/RAM	64 GB or 128 GB	<ul style="list-style-type: none"> <li>- LiveSync of Lumion with various software such as AutoCAD, Revit, and SketchUp .</li> </ul>
Internal Hard Drive	2 TB SATA3 HDD+ 2TB SSD.	<ul style="list-style-type: none"> <li>- It is able to handle two or three software at the same time.</li> </ul>

	<b>Miscellaneous</b>	<ul style="list-style-type: none"> <li>- Operating system: Windows 10 64-bit.</li> <li>- Screen resolution: 1920 x 1080 pixels or higher.</li> <li>- USB Ports.</li> <li>- Built-in Speakers.</li> <li>- Bluetooth and wireless internet connection.</li> <li>- 2 TB, 6 TB or 8 TB external hard disk for backups and system image.</li> </ul>	<p>Notes: render times should be decent depending on how complex the scene is and computer crashes might be non-existent or minimum depending on how many software are operating at a given point. Multitasking with such specs should be doable.</p>	
<p> <a href="https://www.cpubenchmark.net/singleThread.html">*Check CPU/CPUMark benchmarks here to see similar options:</a>  <a href="https://www.cpubenchmark.net/singleThread.html">https://www.cpubenchmark.net/singleThread.html</a>  <a href="https://www.videocardbenchmark.net/high_end_gpus.html">** Check GPU/G3D benchmarks here to see similar options:</a>  <a href="https://www.videocardbenchmark.net/high_end_gpus.html">https://www.videocardbenchmark.net/high_end_gpus.html</a>            *** You can go higher than tier III requirements if you'd like, but keep in mind that your computer might not use the full capacity of your specs. You can stay within tier III and still manage to work without minimum issues, but having a machine with tier III specs has it perks when it comes to operating multiple software at once, or rendering complex projects faster and with ease.            **** The price ranges set are purely estimates. Prices vary depending on specs and brand.         </p> <p><b>General notes:</b></p>				

- Internal hard drives capacity is a critical detail. The lowest you can go is 512 GB due to today's software requiring decent amount of space to install, files are becoming heavy, and last thing one would need to worry about is what to delete in order to make space for other files. 1 TB is a happy medium, 2 TB or more is for peace of mind.

- As for external hard drives, you can either get a single hard drive or multiple ones, it depends on how you prefer to organize and access your files. Pro tip: get three, two for backups and system images, and one that contains a copy of your asset library and completed project files that you no longer need on your computer's internal hard drive. Don't forget to backup your computer and update your system image at least once a week. Also, invest in DropBox's Plus plan to get a 2 TB worth of cloud storage for those extra important files.

- Gaming laptops/PCs are great for architectural/interior projects. Just make sure the specs are somewhat similar to the tier you're aiming for. You can check lists similar to this one: <https://www.pcgamer.com/best-gaming-laptop/> to check/compare different specs and brands.

- You might see M.2 and NVMe SSD mentioned as internal hard drives in some laptops/PCs. These are just hard drives with new technology that makes them operate faster.

**\*\*Many of our students find it beneficial to have a tablet or iPad to create digital sketches and markups of digital drawings throughout the design process. These devices are not required and do not replace the laptop requirements listed above.**

#### Interior Design Software Requirements:

- Microsoft Office
- AutoCAD Architecture
- Autodesk Revit
- Adobe CS Suite
- ComCheck
- Lumion
- Enscape
- SketchUp (free version)
- AGi32
- ElumTools

*\* Software versions installed on student laptops need to be the same versions installed in the GCA computer lab unless noted otherwise*

## Division of Landscape Architecture

## Guidelines:

Students are required to use their laptops, with software below, the first semester of the Landscape Architecture program.

### Recommended Minimum Laptop Configuration:

Processor	4 <sup>th</sup> Gen Intel Core i5 2.6GHz or better
Memory	8GB of RAM or better
Hard Drive	128GB HDD minimum
Graphics Card	1GB GPU or better
Miscellaneous:	-802.11G/N wireless or better -USB-A Ports -Built-in Speakers -1920 x 1080 resolution display -Windows 10 64-bit -Webcam

### Landscape Architecture Software Requirements:

- Microsoft Office
- AutoCAD Architecture
- Adobe CS Suite
- SketchUp Pro
- Google Earth
- Student license ArcGIS 10.0 or later (instructions for mac users <http://edcommunity.esri.com/software/mac/> )
- Esri City Engine
- Land F/X

## Division of Regional and City Planning Guidelines:

Students are required to use their laptops for basic word processing and data analysis the first semester of the Regional & City Planning program. Students are required to use their laptops with GIS and related supporting software during their first semester. Some software may be provided free of cost by the instructor when possible. Software listed below is Microsoft Windows compatible only.

#### Recommended Minimum Laptop Configuration:

Processor	4 <sup>th</sup> Gen Intel Core i5 2.6GHz or better
Memory	8GB of RAM or better
Hard Drive	128GB HDD minimum
Graphics Card	1GB GPU or better
Miscellaneous:	-802.11G/N wireless or better -USB-A Ports -Built-in Speakers -1920 x 1080 resolution display -Windows 10 64-bit -Webcam

#### Regional & City Planning Software Requirements:

- Microsoft Office
- Student license ArcGIS 10.2.2 or later (first semester of program)
- SketchUp Pro (first semester of program)
- Google Earth

## Haskell and Irene Lemon Construction Science Division Guidelines:

Students in the Construction Science Division use laptops starting in the first semester of their freshman year for an array of daily functions that include email, internet research and paper writing. The use of computers increases in the freshmen second semester with the Computers in Construction course in which students learn CAD and 3D modeling, along with traditional spreadsheet software.

Additional software with intense processing and memory requirements will be utilized as students advance through the program. It is suggested that undergraduate students enter the program with a minimally equipped laptop with the GCA system specifications required in the second semester. Laptops meeting the system specifications above will be required second semester of the freshmen year. Graduate students however will be required to enter the first semester of their first year with a laptop meeting the system specifications above. Students may discover a need to increase memory or speed over the recommended system specifications and should be considered with the initial laptop purchase.

Construction Science Hardware Requirements: Students should have a PC, it is imperative that

student computers can run Windows. Please note that many of the programs used in construction are not Mac compatible. Students who chose to use Mac computers nearly always have technical difficulties which cause them to fall behind in classes.

Also, certain courses may require the use of a webcam, please consider laptops with a built-in webcam, otherwise, you may be asked to purchase an additional webcam.

Recommended Minimum Laptop Configuration:

Processor	Intel ® Core ™ i7-3840QM CPU @ 2.80GHz or better
Memory	16GB of RAM or better
Hard Drive	128 GB HDD minimum or better
Graphics Card	1 GB Graphics Card (DirectX Compatible) or better
Miscellaneous:	-802.11G/N wireless or better -USB-A Ports -Built-in Speakers -1920 x 1080 resolution display -Windows 10 64-bit -Webcam

Construction Science Software Requirements:

- Autodesk Revit
- Autodesk Navisworks Manage
- Bluebeam Revu eXtreme
- Microsoft Office
- Microsoft Project
- Primavera P6
- SketchUp Pro
- Synchro Pro