

# COMPUTER REQUIREMENTS

## Interior Design Program 2018-2019

The Interior Design Program is proud to make use of the latest technology to more fully prepare students for the professional design world. In order to facilitate this process, all students will need a laptop computer. The software we use require more RAM and specific graphics cards that out-of-the-box laptops may not be equipped with, especially for upper level courses. The complex, advanced software that we use changes annually and requires more computing power, RAM, and graphics capabilities.

Because of this, students need to be prepared to invest in a quality laptop. Since computers are used in the classroom environment, a laptop is the required platform. There are two approaches (Option 1 and Option 2 below) to meeting this need.

The first is to purchase the highest level of computer power available when you begin your freshman year and try to make the computer last all four years. Currently that price would be about \$2,500.

### OPTION 1

Below are the minimum system requirements for a laptop computer intended to be used for the duration of an academic career in the Interior Design Program. The specifications listed below are the ideal system configurations. Each component is typically a separate specification, therefore allowing for more customization on the consumer's end. Variations to these specifications will be acceptable, but optimal performance will be achieved with the listed specifications. For example, the specified operating system is Microsoft Windows 10 64-bit: enterprise or pro; however, you may choose to purchase a laptop that has Windows 10 Home Addition or even Windows 8.1. Each of these operating systems will work with the software but may not perform as well as the listed operating system and may not be supported through the full four year duration.

PERFORMANCE LEVEL CONFIGURATION	
<b>Operating System</b>	<b>Microsoft® Windows® 10 64-bit:</b> Enterprise or Pro
<b>CPU Type</b>	Multi-Core Xeon or i-Series processor or AMD equivalent with SSE2 technology.  We recommend a Dual Core Processor at minimum. Multiple cores (i.e. 16 cores) will result in better computing power. Budget permitting, we recommend the purchase of the highest number of cores available.  The higher the CPU speed, gigahertz (GHz), the better.
<b>Memory</b>	16 GB RAM (recommended: with expansion slots)
<b>Video Display</b>	1680 x 1050 with true color or Ultra-High Definition Monitor
<b>Video Adapter</b>	<b>Basic Graphics:</b> Display adapter capable of 24-bit color  <b>Advanced Graphics:</b> DirectX® 11 capable graphics card with Shader Model 5. Visit

<b>PERFORMANCE LEVEL CONFIGURATION</b>	
	<a href="https://knowledge.autodesk.com/certified-graphics-hardware?_ga=2.203427350.786860443.1527783380-1239923439.1527783380">https://knowledge.autodesk.com/certified-graphics-hardware?_ga=2.203427350.786860443.1527783380-1239923439.1527783380</a> for graphics cards approved by the software developer. (more dedicated RAM on the card is better)
<b>Pointing Device</b>	MS-Mouse or 3Dconnexion compliant device (an optical mouse is required; either wired, wireless, or Bluetooth)
<b>Hard Drive</b>	500 GB Hard Drive (Solid State (SSD) is not required but recommended because it enables less power usage, faster data access, and higher reliability)
<b>Wireless Capabilities</b>	IEEE 802.11ac wireless capability
<b>Screen Size</b>	We recommend a 13-15 inch video display. If a student gets a bigger computer, it is cumbersome to carry to and from class. Always look for the lightest computer to meet your needs. For better visibility for long term use, a separate monitor may be purchased to connect the laptop to.

\*The software required for the Interior Design Program upgrades each year. Note that the system requirements have the possibility of changing over a four year period.

The alternative, **which is what we recommend**, is that students plan to purchase two computers at lesser costs while in the Interior Design program. It is our experience that the amount of money spent today for the higher computing power is often significantly more than buying two computers at lesser costs. The MSU Information Technology Services group also recommends this purchasing method for faculty and staff computers.

Students who try and purchase one computer for their freshman year to last until their senior year are often very frustrated by the delayed computer response and ultimately decide to purchase an additional computer only after they suffer for several months. Additionally, we find that the following are very likely to occur with student laptops-no matter how much care the student takes. Computers will be dropped, get viruses, have drinks spilled on them, etc. This leads to more rationale behind the multiple computer option. The Interior Design Program does not recommend a particular brand or vendor, however, we do not recommend spending more than \$1,000 for a first year student computer. It is common for students who have planned for two computers to make their second investment following Portfolio Review or in the fall of their junior year.

**OPTION 2  
PART 1**

Below are the minimum system requirements for a laptop computer purchased for freshman and sophomore years.

<b>BASIC LEVEL CONFIGURATION</b>	
<b>Operating System</b>	<b>Microsoft® Windows® 10 64-bit:</b> Pro or Home
<b>CPU Type</b>	Single or Multi-Core Intel Pentium, Xeon, or i-Series processor or AMD equivalent with SSE2 technology.  1 gigahertz (GHz) or faster 64-bit (x64) processor at minimum.
<b>Memory</b>	<b>64-bit:</b> 4 GB (8 GB recommended) RAM
<b>Video Display</b>	1360 x 768 (1920 x 1080 recommended) with True Color

<b>BASIC LEVEL CONFIGURATION</b>	
<b>Resolution</b>	High Resolution & 4K Display: Resolutions up to 3840 x 2160 supported on Windows 10, 64 bit systems (with capable display card)
<b>Video Adapter (Display Card)</b>	Windows display adapter capable of 1360 x 768 with True Color capabilities and DirectX 9. DirectX 11 compliant card recommended.  Visit <a href="https://knowledge.autodesk.com/certified-graphics-hardware?_ga=2.203427350.786860443.1527783380-1239923439.1527783380">https://knowledge.autodesk.com/certified-graphics-hardware?_ga=2.203427350.786860443.1527783380-1239923439.1527783380</a> for graphics cards approved by the software developer. (more dedicated RAM on the card is better)
<b>Hard Drive</b>	500 GB Hard Drive
<b>Wireless Capabilities</b>	IEEE 802.11ac wireless capability
<b>Screen Size</b>	We recommend a 13-15 inch video display. If a student gets a bigger computer, it is cumbersome to carry to and from class. Always look for the lightest computer to meet your needs. For better visibility for long term use, a separate monitor may be purchased to connect the laptop to.

**OPTION 2  
PART 2**

Below are the minimum system requirements for a second laptop computer purchased following Portfolio Review.

<b>BALANCED PRICE AND PERFORMANCE CONFIGURATION</b>	
<b>Operating System</b>	<b>Microsoft® Windows® 10:</b> Pro or Enterprise
<b>CPU Type</b>	Dual or Multi-Core Xeon or i-Series Processor. Multiple cores will result in better computing power. Budget permitting, we recommend the purchase of the highest number of cores available.  The higher the CPU speed, gigahertz (GHz), the better.
<b>Memory</b>	8 GB RAM (recommended: 16GB with expansion slots)
<b>Video Display</b>	1680 x 1050 with true color
<b>Video Adapter</b>	DirectX 11 capable graphics card with Shader Model 5.  Visit <a href="https://knowledge.autodesk.com/certified-graphics-hardware?_ga=2.203427350.786860443.1527783380-1239923439.1527783380">https://knowledge.autodesk.com/certified-graphics-hardware?_ga=2.203427350.786860443.1527783380-1239923439.1527783380</a> for graphics cards approved by the software developer. (more dedicated RAM on the card is better)

	For the software that we use in the junior and senior years, a good graphics card is highly recommended. There are several (specifically some in the GeForce line) that will not work with the software so refer to the website above for approved graphics cards to ensure that all software functions normally.
<b>Hard Drive</b>	500 GB Hard Drive (Solid State (SSD) is not required but recommended because it enables less power usage, faster data access, and higher reliability)
<b>Wireless Capabilities</b>	IEEE 802.11ac wireless capability
<b>Screen Size</b>	We recommend a 13-15 inch video display. If a student gets a bigger computer, it is cumbersome to carry to and from class. Always look for the lightest computer to meet your needs. For better visibility for long term use, a separate monitor may be purchased to connect the laptop to.

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Required Operating System (dictated by Mississippi State ITS): **Windows 10**

Recommended Optional Equipment:

External Hard Drive or Online Cloud Storage	Students are strongly encouraged to purchase an external, portable hard drive that can be used for computer back-ups and storage of large files. These are reasonably priced and available with varying amounts of storage space. We cannot over-emphasize the importance of performing regular backups of important documents and keeping backups in a separate location from the laptop. Should a laptop be lost or damaged, the backup will allow for file retrieval from another computer. Lost or damaged laptops are not acceptable excuses for missed assignments. Currently, many external hard drives come equipped with additional CLOUD storage that enables automatic backup of hard drive information. This setup is most ideal so that there are 2 forms of backup and files are accessible from anywhere. Students can also access free web-storage via services such as Google Drive, Dropbox, etc.
Flash Drive	Two 1GB Minimum USB Flash Drives; flash drives are used in the Interior Design program to allow file transfers between computers, for submission of assignments, etc.
External Mouse	Wireless, Bluetooth, or Wired are acceptable
Printer	Although the Interior Design Program has standard and large format printers available, it is suggested that an additional printing source be available outside of the studio environment. An ideal printing format would be 11 x 17, as many of our assignments are printed to that size. However, the on campus library and our printer room both have these size printers.

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Required Software:

Most software is not purchased until directed by the instructor. The exception is Microsoft Office which students need upon entering the program. An educational version can be purchased through the MSU Bookstore's website at [msstate.bncollege.com](http://thinkedu.com/bn/bn2/) or through their secondary source <http://thinkedu.com/bn/bn2/>

Additional software we use are listed below with their current prices and specific semesters.

	Price	Semester
Microsoft Office 2016 Pro Plus Should Include Word, Excel, and PowerPoint. (Microsoft Works is NOT an acceptable substitute)	\$39.95	First Year (Fall)
AutoCAD	Free	First Year (Fall)
Autodesk Revit	Free	Second Year (Spring)
Adobe Creative Cloud MONTHLY LICENSE	\$19.99/MONTH	Second Year (Spring)
YEARLY LICENSE	\$239.88/YEAR	
Rhinoceros (Rhino)	\$195 (students)	Fourth Year (Fall or Spring)
Google Sketchup 2018 Free version	Free	Second Year (Fall)
Pro 2018	\$49/1 year license	

\*Given that technology/software change rapidly, there is a strong possibility that software requirements beyond those listed above may be required.

#### Use of Macs:

Some of the software used in Interior Design is incompatible with the Apple Macintosh Operating System and Mac versions of the software are not available. Should a student choose to use a Mac they will need to ensure it has the appropriate microprocessor, will need to purchase a dual booting software (such as BootCamp or Parallels), the Windows 10 Pro Operating System, and need additional versions of any software they wish to operate in both Mac and Windows 10 operating systems. Due to the additional costs involved, the lack of Mac support in the college, and the potential for software incompatibilities, we DO NOT recommend the use of Macs as the primary laptop computer. Students who choose to purchase one should have no expectation of support and will assume full responsibility for ensuring they are compatible with Windows 10 counterparts. We are also unable to provide any recommendations on the purchase of Macs.