NDSU Interior Design Program
2021-2022
Minimum Laptop Specifications

For the Fall 2021 semester, all first-year students, transfer students and students minoring in interior design are required to have a laptop that meets the specifications outlined below and have the required design software installed prior to the first day of class in the fall semester. All computers purchased for use in the interior design program MUST have a PC Windows based operating system.

The NDSU Interior Design program has provided options for laptops that meet this specification on our website. Laptops may also be purchased from Dell, HP, MSI or other vendors if the hardware meets the minimum specifications and you are comfortable with the warranty and pricing they offer. You will be using this laptop for the next four years with very intense design software and complex files, so plan accordingly.

If you have any questions about the laptop specifications or purchasing, please contact:

> Ben Bernard
> Design Technologist
> Ben.bernard@ndsu.edu
> 701-793-9525

Purchasing your Laptop

Most big-box stores **do NOT** sell a system that meets these requirements 'on the shelf' so make sure you **ORDER DIRECTLY** from the manufacturer or NDSU Bookstore so they can build to suit. Let them know you are a student for any discounts that may be available.

Remember, the promotional deal does not matter if your system cannot run the software required.

Minimum Laptop Specifications

The following are the system requirements based on Autodesk Revit 2022, Autodesk AutoCAD 2022, SketchUp and Enscape the primary modeling programs you will be using.

Operating System
- Microsoft® Windows® 10, 64-bit, English
  - **No Mac's for the Interior Design program** will be allowed as some software does not have the same interface as a PC. Industry standard is a PC and that is what we teach. Please do not purchase a Mac and run a dual OS on it – stick to the specifications provided.

Processor
- Intel Core i7 Processor 10[1] generation[1] -OR- AMD Ryzen 7 / 9
  - Highest affordable CPU speed rating recommended.

Memory and Hard Drive
- 16 GB RAM (32 GB preferred) [2]
- 512 TB Solid State Drive (SSD)[3]

Video Display
- 15" or 17" monitor size[4]
- 1920 x 1200 with true color, maximum Ultra-High (4k) definition monitor

Video Card (Dedicated only)[5]
- **Dedicated** video card (NVIDIA® GeForce RTX™ 2060 6GB or better)
  - *Graphics card must be dedicated, NOT integrated, to run industry standard modeling programs. You WILL NOT be able to install/open/run certain required programs if you do not have the appropriate required graphics card.*
  - Intel-based graphics cards WILL NOT WORK.
  - Compare graphics cards [here](#)

Webcam
- Either integrated with laptop or purchase an external webcam to support HyFlex instruction as needed.

Web Browser & Connectivity
- Microsoft® Internet Explorer® 10 or higher
- Wireless and Bluetooth

Warranty
- We strongly recommend purchasing a warranty that will last the duration of your academic career and features 'in home' support. Consider accidental coverage as well.

Accessories
- Ergonomic three-button USB Optical Scroll Wheel Mouse. Please look for a "silent" mouse to reduce clicking.
  - Consider the [Logitech M330](#)
  - Consider the [Logitech MX Master 2s](#)
  - Consider the [Logitech G620 Lag Free Wireless Mouse](#)
- USB Flash Drive (qty. 2)
  - No 'micro' USB's. Make sure you can clearly label with your name.
- Earphones/ear buds with microphone
- Computer case/bag

Software Installed Prior to the First Day of Classes

Students are responsible for ensuring the below software is installed and properly operating prior to the first day of class. Any issues with installation should be directed to NDSU IT Help Desk.

NDSU Wireless Access
- Instructions are found [here](#)

Web Browser & Cloud File Storage
- Google Chrome
- NDSU [One Drive](#)
- NDSU [Google Drive](#)

Productivity Software
- [Microsoft Office](#) Home and Student (Word, Excel, PowerPoint, Publisher) Free

Illustration Software
- [Adobe Creative Cloud](#) (Photoshop and Acrobat DC)

SketchUp Studio Software
- Annual [student license](#) of latest version of software

Software Installed as Instructed at Later Date

Students are responsible for installing the below software is installed when directed by course instructors. Please do not download until you are enrolled in the required course. Any issues with installation should be directed to NDSU IT Help Desk.

Autodesk AutoCAD Software
- AutoCAD (latest version) [FREE student version](#)

Autodesk Revit Software
- Revit (latest version) [FREE student version](#)

Enscape Software
- Enscape (latest version) [FREE student version](#)

CET Designer Software
- CET Designer (latest version) FREE. Faculty member will provide resources when needed.

If you are having difficulty downloading software or need assistance setting up your laptop go to the **ITS Help Desk,** Quentin Burdick Building - Room 150

NDSU Interior Design program is not responsible for any issues that arise for students failing to purchase a laptop using these specifications as a guide.

Notes

[1] Gen 9 or 10 Core i7 processors from Intel are the speedy processors with the least number of flaws. Chips that do not meet these spec's become Core i5 and i3 processors

[2] 16GB of RAM is required so you can have more than one program running at once. Windows alone can take up to 8GB of RAM on startup. Open Chrome, Revit and Photoshop and you will quickly approach the 16 GB mark.

[3] Should you get a SSD or HDD? Generally, students will get an SSD main drive for quickly loading programs and a secondary HDD for storing their files on. HDD or Hard Disk Drives are slower, and their spinning disks can be damaged if the laptop is accidentally dropped while running.

[4] 17" laptops offer more display and battery life at the cost of adding a few additional pounds of weight.

[5] For the dedicated graphics card, we require a Nvidia card because most design software is optimized for Nvidia cards. We require a higher spec graphic card due to the demanding architectural rendering software and Adobe products. Rendering is challenging on your laptop, especially when trying to work on other coursework. The faster it can render, the better. We recommend the Nvidia GeForce RTX graphics card because the cost of enterprise (Quadro) cards is higher for similar performance.