AB 226, R. WAYNE ESTOPINAL COLLEGE OF ARCHITECTURE AND PLANNING
BALL STATE UNIVERSITY
765-285-1971

Minimum Performance-Based Specification for Student Computer Purchases

* First Year CAP students are *not* **required to purchase a computer**

Laptop Recommendations - PC / Windows

Screen	16" Full HD+
CPU (processor)	Intel or AMD w/ CPUMark of 2,600 or higher
Memory (RAM)	32GB or more
Graphics Card (GPU	Dedicated GPU scoring G3DMark of 14,000 or higher
Graphics Memory	10GB or more
Hard Drive	1TB Solid State Hard Drive (SATA3 or NVME m.2) or more
Operating System	Windows 11 Pro (or most current), 64-bit
Ethernet	10/100/1000 Ethernet (optional, if applicable/available)
Wireless	Wi-Fi 6E (802.11ax), Bluetooth 5.3

Laptop Recommendations - Apple / macOS

Screen	MacBook Pro 16", M4 Pro
Processor	14-core CPU or better
Memory (RAM)	48GB or better
System Graphics	20-core GPU or better
Hard Drive	1TB Solid State Hard Drive (SSD) or more
Operating System	Most Current
Ethernet	10/100/1000 Ethernet (optional, if applicable/available)
Wireless	Wi-Fi 6E (802.11ax), Bluetooth 5.3

Hardware and Software Recommendations*

Microsoft Office (Word, Excel, PowerPoint, etc.)
ESRI ArcGIS Pro (most current version/update)***
Adobe Creative Cloud (InDesign, Photoshop, Illustrator, AcrobatPro, etc.), latest versions
CAD software: **Autodesk AutoCAD, latest version
3D Modeling (Autodesk Revit, Civil 3D; SketchUp; Rhino; 3ds Max, etc.), latest versions**
Internet Search Engines: Google Chrome, Bing, Mozilla Firefox, Microsoft Edge, etc.
Virus Protection: (consult Tech Center for advice)
20' CAT6 RJ45 or better Ethernet/network cable (for faster wired internet connections)
Cable lock (Targus Defcon or similar; to secure your hardware when stationary)

*Software applications are basic to the LA program, much like traditional course textbooks. Computers and software are available through the BSU Technology Store at significant discounts to students; please contact them for more information (Tech Center BL 103, https://www.bsu.edu/about/administrativeoffices/technology-store, techstore@bsu.edu, 765-285-4104). You may also contact BSU Unified Technology Support Tech Center (765-285-8324) for other technology-related inquiries. Computer manufacturers may offer good deals to students (e.g., discounts, financing, lease options). The following PC brands are and have been relatively common among our students and faculty: Dell, HP, Asus, Lenovo, Acer, MSi, Alienware. Please note that the Apple Macbook Pro will generally run most software emphasized in our program but some applications (e.g., ESRI ArcGIS, Autodesk Revit) only run on the Windows OS; this requires the installation & use of Bootcamp, Parallels Desktop, etc. to run those applications on the Mac OS.

Notes:

Suggested upgrades and other considerations:

• Highly recommended: Pen-enabled tablet (e.g., Apple iPad, Microsoft Surface, or similar); a high-end 2-in-1 convertible touchscreen laptop could be a good all-in-one alternative to a regular PC laptop

• GPUs recommended: NVIDIA GeForce RTX 3060, NVIDIA Quadro RTX 2000 ADA, AMD Radeon RX 6700 XT or better

• CPU (processor) recommended: AMD Ryzen 5 3600, Intel Core i5-8600 or better

• 17" screen for improved visibility & multi-tasking

• USB 3.0 flash drive (256GB or larger)

• External hard drive (1TB+ SSD, USB pocket size)

• Webcam (integrated or external)

• External monitor to maximize productivity (24"+)

• External DVD writer (CDs/DVDs less common now)

• Extra laptop battery

• Integrated mobile broadband (AT&T, Verizon, etc.)

• Extended (3-4 years) warranty/service/support + accidental damage protection for your hardware.

• Mac users should consider purchasing Parallels Desktop (or similar) to run PC-only applications.

• Printer (a convenience, not a necessity)

• Extra power cord/adapter (for home and school)

Software available at the BSU Technology Store:

Windows OS and Microsoft Office

Adobe Creative Cloud

Parallels Desktop for Mac

Security/Antivirus software

Call or visit them online for titles and current pricing.

CAD and GIS options:

**Autodesk AutoCAD, Revit, Civil 3D, and 3ds Max are available free to students @ https://www.autodesk.com/education/edu-software/

**A variety of CAD options are available, each with differing 2D & 3D characteristics. AutoCAD, Revit, Rhino, and SketchUp are taught in our curriculum. Students are welcome to explore and apply additional CAD, representation, and modeling tools which might best support their own design methods/interests.

***ESRI ArcGIS software available free through Bracken Library (GIS Research and Map Collection, 765-285-1097)

Note: PC hardware specifications noted above align with Lumion Pro visualization software recommended requirements.