College of Engineering and Applied Science

Minimum Laptop Specifications 2024 – 2025

(Last Updated 2024-June)

NOTES:

1. CEAS OCC does not support Mac OS X for student laptop computing. Apple is moving to its own ARM-based processors and will not support Windows in Boot Camp mode. **Since some of our engineering applications do not run on Mac OS, Macs should not be purchased for any of the engineering programs.**

The following laptop configuration was developed by the Office of College Computing (OCC) for CEAS. These are **recommended minimum** configurations.

Students with laptops that do not meet these minimum requirements will not be prohibited from enrolling in courses, but their ability to participate in classroom activities and to complete assignments may be severely hampered. Workstation class video cards are strongly recommended due to engineering software being designed to support or require workstation video card acceleration. Support for students with laptops that do not meet these requirements will not be provided.

CEAS Minimum Recommended Laptop Specifications

- Intel 13th or 14th Gen i7 Processor
- 16GB DDR4 (32GB recommended)
- Dedicated video card with minimum 4GB of video memory
- HDMI port for external monitor/projector
- HDMI cable
- 512GB M.2 NVMe / SSD Drive
- Audio, Webcam and Mic (required)
- 10/100/1000 Network interface
- Wireless 802.11ax Wi-Fi 6 or Wi-Fi 6E recommended (Intel recommended; Killer Wi-Fi not supported)
- USB 3.1 and Gen 2 (Type-C) ports
- OS: Windows 11 Professional or higher, 64-bit

The CEAS Civil and Architectural Engineering and Construction Management (CAECM) academic programs require different configurations that have additional requirements.

(CAECM) Minimum Recommended Laptop Specifications

- 6 Core / 8 thread processor minimum (Intel 13th or 14th Gen i7; AMD Ryzen series processors)
- 32GB RAM or higher
- HDMI port and cable for external monitor/projector
- 512GB SSD
- Webcam and mic (required)
- Gigabit Ethernet (internal or external) recommended
- Wireless 802.11ax Wi-Fi 6 or Wi-Fi 6E recommended (Intel recommended; Killer Wi-Fi not supported)
- Dedicated **WORKSTATION** class video card required (nVidia Quadro or AMD FirePro/Pro)
    - **Construction Management** - nVidia RTX 500 – 4GB GDDR6 graphics card or higher
    - **Architectural Engineering and Civil Engineering** - nVidia RTX A1000 – 4GB GDDR6 graphics card or higher (nVidia RTX 2000 – 8GB GDDR6 recommended)

Negotiated Student Pricing - The following Dell portal site offers a 5% coupon for Precision laptop purchases. You can then utilize the discount after browsing the online store to locate a laptop that meets the college's minimum specifications.

Dell Models - www.dell.com/mpp/student

(Note: This Dell site will list specifications lower than the required specifications listed above. Please be cautious not to select specifications lower than what is required above. Also, do not forget to obtain the coupon on the Dell page prior to adding a machine to your cart.)

Additional Considerations

- Students are expected to use their laptops over the course of several years. Due to the nature of how laptops are used, an extended warranty may be an option to consider.
- A Mini DisplayPort to HDMI adapter will be needed, if applicable.
- Students may also want to consider a 1TB or larger USB external hard drive for backing up their computer system.