College of Engineering and Applied Science

Minimum Laptop Specifications 2021 – 2022
(Last Updated 2021-May)

NOTE: Due to shortages and supply chain issues, it is taking longer than usual to receive orders for equipment, such as laptops. It is highly recommended that you purchase your student laptop at your earliest convenience.

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® Core™ i7 Processor
- 16GB DDR4
- Dedicated video card with minimum 4GB of video memory
- HDMI port for external monitor/projector
- HDMI cable
- 512GB Solid State Drive or 512GB M.2 NVMe Drive
- Audio, Webcam and Mic (required)
- 10/100/1000 Network interface
- Wireless 802.11 ac dual band
- USB 3.1 ports, Gen 1 and Gen 2 (Type-C)
- OS: Windows 10 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 10th Gen i7, no U series Intel processors; AMD Ryzen series processors)
- 16GB RAM or higher
- HDMI port and cable for external monitor/projector
- 512GB SSD
- Webcam and mic (required)
- Wireless N or better
- Gigabit Ethernet (internal or external) recommended
- Wireless 802.11g/n (minimum), 802.11 ac dual band (recommended)
- Dedicated **WORKSTATION** class video card required (nVidia Quadro or AMD FirePro/Pro)

    - **Construction Management** - nVidia Quadro P620 – 4GB GDDR5 graphics card or higher

- o **Civil Engineering** – nVidia Quadro P620 – 4GB GDDR5 graphics card is acceptable, however, the nVidia Quadro T1000 – 4GB GDDR6 graphics card or higher is strongly preferred
- o **Architectural Engineering** - nVidia Quadro T1000 – 4GB GDDR6 graphics card or higher (Quadro T2000 – 4GB GDDR6 recommended)

Negotiated Student Pricing for Dell Models - The following Dell Portal site provides laptop specifications that meet the minimum hardware requirements specified above: www.Dell.com/UC_CEAS.
(Note: Due to Dell supply chain issues, it is possible that the specifications on their portal could change. Please ensure that the specifications on the Dell portal match or exceed the requirements listed above.)

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.
- CEAS OCC does not support Mac OS X. 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.
- 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.