FRESNO STATE

Lyles College of Engineering

CONSTRUCTION MANAGEMENT & ARCHITECTURAL STUDIES
DISCOVERe MOBILE DEVICE REQUIREMENTS

Rationale

As technology is playing an increasingly important role in our industry, the Department of Construction Management at Fresno State would like to outline the recommended mobile device specifications for incoming and current students taking DISCOVERe courses within Construction Management and/or Architectural Studies. The goal is to establish clear guidelines and expectations on mobile device use in your undergraduate study at Fresno State.

General Guidelines

When choosing a computer for your college education, we recommend that you take into account the type of work you are going to perform and the discipline-specific software packages you anticipate using. In the field of architecture, engineering and construction management, PC-based applications are predominant. For that reason, we strongly recommend that you purchase PC-based laptops or equivalent tablets and other mobile computing devices.

Microsoft Surface Tablets

While Windows-based laptops are strongly encouraged, Surface Pro tablets are acceptable alternatives. However, note that Pro versions that run full versions of Windows are most appropriate.

Apple Macintosh Laptops

If you insist on using Macintosh products, please make sure that you have an alternative device that supports these software applications required for your courses. Another option is to install dual systems on your Macintosh device, so it will run both Macintosh and Windows Operating Systems. Note that you will need to purchase Windows 10 in order to install it on your Mac. Apple provides some basic instructions on how to install Windows on your Mac using the Boot Camp feature:
https://support.apple.com/en-us/HT201468

Other Devices

When choosing mobile computing devices such as a tablet, Android and/or Apple products may be allowed per the discretion of instructors of specific courses. Please contact your DISCOVERe course instructor if you have any questions.

Hardware Requirements

Students in the Construction Management and Architectural Studies majors will be exposed to and expected to master a portfolio of sophisticated software applications that represent the state-of-the-art technology implemented in the industry, including 3D designing, visualization, simulation, and management solutions. Examples include Autodesk Revit (Architecture/Structure/MEP), Autodesk

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Navisworks Manage, BIM360, Trimble SketchUp, ProCore, PlanGrid, Bluebeam, Assemble Systems, Primavera, On-Screen Takeoff, and other Virtual Reality/Augmented Reality applications. In order to run these programs smoothly, the following hardware requirements are specified:

Laptops

Description	Minimum Configuration	Recommended Configuration
Operating System	Microsoft® Windows 10 64-bit Pro	Microsoft® Windows 10 64-bit Enterprise
CPU Type	Multi-Core Intel® i-Series processor with SSE2 technology. Highest affordable CPU speed rating recommended	8th Generation Intel® Core™ i7-8750H Processor (6-Core, 9MB Cache, up to 4.1GHz w/Turbo Boost) or better
Memory	8GB RAM	16GB DDR4-2666MHz (2x8GB) or better
Video Display	15.6-inch, 1280x1024 with true color	15.6-inch, 1920x1080 Full HD, VR-compatible
Video Adapter (GPU)	NVIDIA® GeForce® GTX 1050 2GB 128-Bit GDDR5 or equivalent	NVIDIA® GeForce® GTX 1050Ti with 128-Bit 4GB GDDR5 or equivalent, VR-compatible
Disk Space	512GB M.2 2280 PCIe Solid State Drive	1TB M.2 2280 PCIe Solid State Drive
Ports/Slots	2 USB 3.1, 1 HDMI 2.0, 1 Thunderbolt, 1 SD card slot	2 USB 3.1, 1 HDMI 2.0, 1 Thunderbolt, 1 SD card slot, Native DisplayPort 1.2 video output, VGA, Mini DisplayPort
Battery	3-Cell 56WHr Integrated	6-Cell 97WHr Integrated

Tablets

Description	Minimum Configuration	Recommended Configuration
Operating System	Microsoft® Windows 10 64-bit Pro	Microsoft® Windows 10 64-bit Enterprise
CPU Type	i7 4 GHz 8032	i7 4 GHz 8032
Memory	8GB RAM	16GB RAM
Video Display	12.3-inch, 2736 x 1824 (267 PPI)	12.3-inch, 2736 x 1824 (267 PPI)
Video Adapter (GPU)	Intel Iris Plus Graphics 640	Intel Iris Plus Graphics 640 (i7)
Disk Space	256GB SSD	512GB or 1TB SSD
Ports/Slots	Full-size USB 3.0 microSDXC card reader, Surface Connect, 3.5mm Headset jack, Mini DisplayPort, Cover port	Full-size USB 3.0, microSDXC card reader, Surface Connect, 3.5mm Headset jack, Mini DisplayPort, Cover port
Battery	Up to 13.5 hours video playback	Up to 13.5 hours video playback

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Software Requirements

MS Office

Students at Fresno State can sign up for Office 365 using your mail.fresnostate.edu account to access and download Office 365 for free. Please click **here** to sign up. Once you are signed up, you will use your mail.fresnostate.edu credentials (username@mail.fresnostate.edu) to access Office 365 at http://login.microsoftonline.com

Other Microsoft Products

Fresno State has a site license with the Education software tools within Azure for Education. This account will allow you to download and install free versions of Windows 10, Project, and other products not included in basic MS Office. *Note that you must have an Office 365 account in order to access these tools (see section above).* Link to the website: https://azureforeducation.microsoft.com/devtools

Autodesk Products

Autodesk offers students full free licenses to a comprehensive list of software applications. Please visit https://www.autodesk.com/education/free-software/featured to sign up for a free account and download the software packages including Autodesk Revit for free. The detailed downloading and installation instructions will be available at https://www.autodesk.com/education/home.

Bluebeam

This is a common PDF editing software used throughout the AEC industry. Students are provided free versions of this software for certain courses and for AEC related competitions. Please contact your course instructor if you would like a copy and/or have any questions.

Other Products

Via close partnership with the industry, students majoring in Construction Management and Architectural Studies will have access to a range of cutting-edge software applications for free or at minimum costs. Detailed information on these products will be available from course instructors.

Learning and Software Tutorials

Fresno State has a premium subscription to Lynda.com, one of the largest online learning platforms. All students enrolled at Fresno State will have free access to Lynda.com and enjoy its full list of online courses and software tutorials. The Lynda.com link is available on your https://my.fresnostate.edu landing page.

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Laptop Loans at the Fresno State Henry Madden Library

The Henry Madden Library loans students laptops and tablets for up to 4 hours. Note that these devices typically are not preloaded with the software that is commonly used in CM and Architecture courses. Therefore, students must build in time to install the required software on this device prior to the class period. More information is available via the Henry Madden Library website: https://library.fresnostate.edu/tech/laptop-lending