

# Civil Engineering

## Bring Your Own Device



**Bring Your Own Device (BYOD) at BCIT** is an initiative that allows you as a registered BCIT student to access campus computing resources at any time through your own device. The Department of Civil Engineering is participating in a pilot project being steered by BCIT Information Technology Services where students in Civil Engineering are required to bring their own computing device. You will be able to securely connect through a web browser to a BCIT managed “virtual desktop” where computing applications for your courses will be available while you are a student. This virtual desktop can be accessed both on campus and remotely, and will be used for instruction purposes in some courses. No additional software will need to be installed on your computing device.

### BYOD Computing Device Requirements for Civil Engineering

As a Civil Engineering student, you must provide your own computing device for classroom use that meets or exceeds the minimum requirements listed below. Your device’s web browser will be used to access a virtual desktop interface where you will run BCIT-provided software applications for specific courses.

#### Minimum requirements<sup>1</sup>:

- 14" screen<sup>2</sup>
- Minimum resolution of 1280 x 1024
- Wireless standard 802.11n or Wireless 802.11ac (2x2 wireless preferred over 1x1)
- Integrated keyboard<sup>3</sup>
- Current Chrome/Safari/Firefox installed web browser
- Power cord for recharging
- Recommended: 2-hour or greater battery life. Some classrooms have limited access to power receptacles.

<sup>1</sup> BCIT Engineering programs use the Windows 10 platform as a teaching environment. In addition to Windows laptops, Mac laptops are acceptable as BYOD devices but only for remote access via web browser to software applications.

<sup>2</sup> BCIT Civil Engineering courses make extensive use of AutoCAD and other Autodesk products. While AutoCAD will run on any number of screen sizes, it is optimal if students have as large a screen as practical.

<sup>3</sup> Tablet computers are consumption devices. As a student you will be *creating* content and not just consuming it; tablet computers without keyboards (iPads, Android devices) are not well suited for this and are not recommended.

The above minimum requirements will allow you to remotely access and run BCIT-provided software applications without physically installing them on your own device. A good wireless card is more important than processor, RAM and hard drive requirements – these are less relevant as the computing resources are provided by BCIT for the virtual desktop and there is very little ‘work’ done by the endpoint device. This configuration is what will be used for course instruction during the Civil Engineering program.

## Some software applications used in Level 1 (1<sup>st</sup> year) of BCIT Civil Engineering

- Adobe Acrobat Professional
- AutoCAD 2019
- AutoCAD Civil 3D 2019
- Microsoft Office
- Revit 2019

## Some software applications used in later terms of BCIT Civil Engineering

- |                     |                     |
|---------------------|---------------------|
| ■ Ensoft            | ■ PCSWMM            |
| ■ GeoStudio         | ■ Revit Structural  |
| ■ HeavyBid          | ■ Rstudio           |
| ■ HEC-RAS           | ■ S-Frame           |
| ■ Maple             | ■ SAP2000           |
| ■ Mathcad           | ■ Synchro 10        |
| ■ Microsoft Project | ■ Transoft AutoTurn |

Software titles and versions actually installed and available through the virtual desktop may differ from the list above.

## Standalone software installation

You may optionally elect to purchase a more powerful computing device that exceeds the minimum requirements listed and would be capable of installing and running some of the above software applications natively (standalone) for use after you have completed your Civil Engineering program at BCIT. Windows based machines are optimal for this purpose as they match the delivery platform used by BCIT Civil Engineering. If you want to use a Mac laptop, you may find it necessary to install Windows emulation software to run certain applications.

If you plan on installing standalone software applications, you should research for yourself the hardware requirements necessary to accommodate some or all of the software indicated above. Some (not all) of these software applications have versions that are available free of charge to registered students. Note that as a BCIT Civil Engineering student, you will be able to install educational versions of Office 365 and other Microsoft products through Microsoft Imagine (Microsoft Windows, Microsoft Project, Microsoft Visio, and more).

## Useful Links

If you would like to have the ability to natively run (i.e. standalone) software used in BCIT Civil Engineering on your own computer, please review and consider the following links before making any purchasing decisions:

- AutoCAD hardware <https://tinyurl.com/ycdp9uoz>
- Revit hardware <https://tinyurl.com/y8p8tcwh>