

Recommended Minimum Technology Requirements for Students (Remote and Online Learning at the U of M)

Using computer systems, software, and internet connections that do not meet these minimum requirements could impact your ability to participate in and complete your courses. Issues that result from using non-recommended systems cannot usually be remedied by the Service Desk.

1. Computer:

Recommended:

- Computer with Windows 8, Windows 10, or Mac OS 10.11+ operating systems
- Web browsers - use Chrome, Edge, Firefox, or Safari
- Headphones, microphone, and a camera
- Test your computer to ensure its compatibility with UM Learn:
<https://universityofmanitoba.desire2learn.com/d2l/systemCheck>

Not recommended:

- Tablets / Phones (Android or iOS) or Chromebooks

2. Internet connection:

Recommended:

- Wired or Wireless connectivity: Ideally - a wired network connection or, if not available, a wireless internet connection that meets the following specifications:
 - Wireless-AC (802.11ac) access point (router or modem)
 - Computer that supports Wireless-AC (802.11ac)
 - Computer location within 10m (30 ft) of the access point (router or modem)
 - Limiting the number of other users or devices accessing the wireless internet connection (use 'airplane mode' for your other WIFI devices during class)
- Internet bandwidth - has a minimum of 5 Mbps of download and 2 Mbps of upload capacity

3. Testing your internet connectivity:

- Ideally, run these tests when your wired or wireless connections are under their usual load (i.e. if others in your location also use the internet regularly)
- Verify your internet speed using resources available, such as <https://support.bell.ca/Internet/Internet-Speed-Test> and <https://speedtest.shaw.ca/>
- Verify that your systems will support Webex using the network test site <https://mediatest.webex.com/#/main>

Other considerations:

- Avoid tethering off of mobile devices – using your phone as an internet connectivity point can be very slow and error prone