

Required Software and Hardware

In order to take one of these online pesticide certification exams, you will need the following. **Please make sure you have all of these set and ready to go before you begin.**

1. **Computer** (exams cannot be taken on mobile devices)
2. **Camera/Webcam**
3. **Microphone** (internal or USB)
4. **Google Chrome Browser**
 - a. Go to <https://www.google.com/chrome>
 - b. Download Chrome
 - c. (Windows version needed: 7, 8, 8.1, 10 or later; Mac version needed: OSX Yosemite 10.10 or later)
5. **Proctorio Extension**
 - a. Link will be provided when you log into the Canvas website. Takes 30 seconds to install.
6. **Reliable Internet Connection VERY IMPORTANT**
 - The proctoring software streams data from your computer to their servers and back. In order to allow continuous exam data transfer, your bandwidth (upload speed) must meet the proctoring services requirements (**greater than 1.0 Mbps/US national average is 9.4 Mbps**).
 - Test your bandwidth (upload speed) here: <https://www.speedtest.net>.
 - Add the "speed test" extension to test your internet speed.
 - **An unstable connection may cause you to be disconnected from the exam and prevent your exam from being graded. (see Proctorio's requirements below).**


If your system does not meet these requirements try these steps:

- a. Use a private network when taking a proctored exam.
- b. Turn off any programs that can consume a lot of bandwidth (e.g., BitTorrent, Netflix, video gaming systems, etc.)
- c. Avoid WiFi interference. Take your exam using a wired (Ethernet) connection. If that is not possible, move closer to the router for best performance.
- d. 2GB free ram is needed to ensure good internet connectivity.
We recommend that you clear your cache and cookies which will help free up some ram and assist with overall internet connectivity. To clear your cache and cookies see below:

To determine how many GB of free RAM your computer has:

- a. Click on the **Start** menu
- b. Type "**about**," and press Enter when "**About Your PC**" appears.
- c. Scroll down, and under **Device Specifications**, you should see a line "**Installed RAM**"—this will tell you how much RAM you currently have.
- d. **Proctorio requires 2GB to run the system properly.**

To clear your cache:

- a. On your computer, open **Chrome**.
- b. At the top right, click More .
- c. Click **More Tools** > Click **Clear browsing data**.
- d. At the top, choose a time range.
- e. To delete everything, select All time.
- f. Next to "**Cookies and other site data**" and "**Cached images and files**," check the boxes

- g. Click Clear data.
- h. Restart your computer.

- 7. **Photo identification** (driver’s license, passport, or government issued ID)
- 8. **Quiet, comfortable location** to take the exam (**headphones or earphones are not permitted**)

Proctorio’s Requirements:

| | Windows | Mac | Linux | Chrome OS |
|--|-------------------------|------------------------|-------------------------|------------------------|
| Operating System | Window 7+ | macOS 10.11+ | Ubuntu 18.04+ | Chrome 58+ |
| Processor | Intel Pentium or better | Intel | Intel Pentium or better | Intel or ARM |
| Free Disk Space | 250 MB | 250 MB | 250 MB | 250 MB |
| Free Ram | 2 GB | 2GB | 2GB | 2GB |
| Upload Speed | Greater than 1Mbps | Greater than 1Mbps | Greater than 1Mbps | Greater than 1Mbps |
| Microphone | Internal or external | Internal or external | Internal or external | Internal or external |
| Webcam Internal or External | 320x240 VGA resolution | 320x240 VGA resolution | 320x240 VGA resolution | 320x240 VGA resolution |