

### Overview

This document outlines the network and hardware recommendations for the following Apex Learning solutions:

- Courses
- Tutorials
- Technology Courses
- Apex Learning Virtual School (ALVS)

### Network Configuration

#### Bandwidth

All Apex Learning products require internet access. A broadband connection is highly recommended and should provide adequate bandwidth to support the following:

- Streaming Video (multi-bitrate)
- Voice Translation
- Text-to-Speech

#### Access

Access firewalls, content filters, and other network infrastructure must allow secure HTTP connections (port 443) to the following URLs and domains:

- \*.apexvs.com (root domain + all subdomains)
- \*.apexlearning.com
- correlation.edgate.com

Some courses may also contain references to external URLs for instructional purposes. For an updated list of these URLs, please contact [support@apexlearning.com](mailto:support@apexlearning.com).

#### HTTPS Support

Apex Learning makes exclusive use of HTTP/1.1 over TLS 1.2 for all communications.

#### Content Caching

Cache Setting	Courses, ALVS	Tutorials
Domains that may be cached, but should be refreshed weekly	<ul style="list-style-type: none"> <li>• media.apexlearning.com</li> <li>• assets.apexlearning.com</li> <li>• acecontent.apexlearning.com</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
Domains that must NOT be cached	<ul style="list-style-type: none"> <li>• apexvs.com</li> <li>• courses.apexlearning.com</li> <li>• course.apexlearning.com</li> <li>• course-api.apexlearning.com</li> </ul>	<ul style="list-style-type: none"> <li>• apexvs.com</li> <li>• tutorials2.apexvs.com</li> </ul>

## Hardware Configuration

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### Supported Operating Systems

Versions of the following operating systems which have received vendor security updates within the last year:

- Microsoft Windows
- Apple macOS
- Google Chrome OS

### Supported Web Browsers

Versions of the following browsers which have received vendor security updates within the last year:

- Microsoft Edge
- Apple Safari
- Mozilla Firefox
- Google Chrome
- Microsoft Internet Explorer (support ends March 2021)
- Microsoft Edge Legacy (support ends March 2021)

### Supported Tablet Configuration

Versions of the following configurations which have received vendor security updates within the last year:

- Apple iOS + Safari
- Google Android + Chrome

### Additional Recommendations and Requirements

- Speakers/Headphones (for media, interactive assets and text-to-speech)
- Microphone (for World Language courses only)
- Printer (optional for supplemental resources and written assignments)

## Technology Courses

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The following sections outline the minimum requirements for Technology Courses. The table that follows provides additional requirements and information by course title.

### Hardware Requirements

- PC or Mac (not tablet or Chromebook)
- Windows 10, 8, or 7, Mac OS10.8 or higher (Note: Mac OS Catalina and Big Sur are not compatible with some courses)
- Intel® Pentium® CPU N3530 (or better)
- OpenGL 3.2 compatible graphics with 1 GB VRAM
- 4 GB RAM
- 7 GB free disk space

## Additional Requirements

- Headphones/Speakers
- E-mail access
- Access to local storage for saving/loading of student project files
- Broadband internet connection (1mbps or higher)

## Course-Specific Requirements

This table provides an overview of the additional requirements for each course. For specifics, please see the Installation Guides.

Title (links to syllabus)	Student Project	Tools	Software Access	Additional Requirements
<a href="#">3D Animation</a>	Create a 3D movie	Blender®		<ul style="list-style-type: none"> <li>• See <a href="#">Installation Guide</a></li> </ul>
<a href="#">3D Character Animation</a>	Create a Minecraft® animated short movie	Blender®		<ul style="list-style-type: none"> <li>• See <a href="#">Installation Guide</a></li> <li>• Systems should meet minimum hardware requirements of Minecraft found here: <a href="https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements">https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements</a></li> <li>• The latest version of Java installed</li> </ul>
<a href="#">3D Game Design</a>	Create a basic 3D video game	OWL Game Creator		<ul style="list-style-type: none"> <li>• See <a href="#">Installation Guide</a> Note: This course has stricter OS requirements than general requirements</li> <li>• Windows Vista not applicable</li> <li>• MAC OS 10.9 or above</li> </ul>
<a href="#">3D Game Development</a>	Design a custom video game using C#	Unity®		<ul style="list-style-type: none"> <li>• See <a href="#">Installation Guide</a></li> <li>• Graphics card must support DirectX10 or higher and support Shader Model 4.0 or higher. Most graphic cards manufactured after 2007 should meet these requirements.</li> </ul>
<a href="#">3D Printing &amp; Modeling</a>	Design 3D models suitable for printing	Blender®		<ul style="list-style-type: none"> <li>• See <a href="#">Installation Guide</a></li> </ul>
<a href="#">Adventure Maps</a>	Design a Minecraft® world using command block programming	Minecraft® (Java edition)	Minecraft (Java edition) is required. Licenses will be provided based on enrollment in the course but limited by overall seats purchased.	<ul style="list-style-type: none"> <li>• See <a href="#">Installation Guide</a></li> <li>• Systems should meet minimum hardware requirements of Minecraft found here: <a href="https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements">https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements</a></li> <li>• The latest version of Java installed</li> <li>• Contact Apex Learning Support to gain access to needed licenses</li> </ul>

Title (links to syllabus)	Student Project	Tools	Software Access	Additional Requirements
<a href="#">App Design</a>	Create a downloadable app for iOS or Android	Clickteam Fusion 2.5	Fusion 2.5 is required. Licenses will be provided based on enrollment in the course but limited by overall seats purchased.	<ul style="list-style-type: none"> <li>See <a href="#">Installation Guide</a></li> <li>Older graphics cards are compatible with this course.</li> <li>Contact Apex Learning Support to gain access to needed licenses</li> </ul>
<a href="#">Fashion Design</a>	Design a fashion collection	Inkscape™		<ul style="list-style-type: none"> <li>See <a href="#">Installation Guide</a></li> <li>Older graphics cards are compatible with this course.</li> </ul>
<a href="#">Mod Design</a>	Create an advanced Minecraft® mod using Java™	Eclipse™, GIMP, Tabula	Access to Minecraft (Java edition) is not required, therefore not provided by Apex.	<ul style="list-style-type: none"> <li>See <a href="#">Installation Guide</a></li> <li>Systems should meet minimum hardware requirements of Minecraft found here: <a href="https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements">https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements</a></li> <li>The latest version of Java installed</li> </ul>
<a href="#">Server Design</a>	Code a custom Minecraft® multiplayer server	Eclipse™, Minecraft® (Java edition)	Minecraft (Java edition) is required. Licenses will be provided based on enrollment in the course but limited by overall seats purchased.	<ul style="list-style-type: none"> <li>See <a href="#">Installation Guide</a></li> <li>Systems should meet minimum hardware requirements of Minecraft found here: <a href="https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements">https://help.mojang.com/customer/en/portal/articles/325948-minecraft-java-edition-system-requirements</a></li> <li>The latest version of Java</li> <li>Must allow access to a private network for local servers</li> <li>Contact Apex Learning Support to gain access to needed licenses</li> </ul>

“Minecraft” and “Mojang” are registered trademarks of Microsoft Corporation. “Unity” is a registered trademark of Unity Technologies. Apex Learning Technology Courses are not sponsored by or affiliated with Microsoft Corporation or Unity Technologies.

## Getting Support

To access **online help** at any time, sign in to Apex Learning and click Help in the main menu.

Apex Learning Support:

- Monday – Friday. 5:00 AM – 7:00 PM Pacific Time
- 1-800-453-1454 option 2
- [support@apexlearning.com](mailto:support@apexlearning.com)