

**VIRTUAL**  
VIRGINIA



# TECHNOLOGY HANDBOOK

2019–2020

[virtualvirginia.org](https://virtualvirginia.org)

A PROGRAM OF THE VIRGINIA DEPARTMENT OF EDUCATION

# Welcome to Virtual Virginia

Welcome to Virtual Virginia! We are excited to have your division's participation in the program.

You play an important role in our virtual program! This document briefly describes the history of Virtual Virginia (VVA), discusses the role of the Virtual Virginia Technology Support Department, and outlines required hardware and software for schools participating in our program.

Virginia has a long history in providing distance-learning opportunities for its middle and high school students. Beginning in the 1980s, AP and world language courses were offered via satellite television to students throughout Virginia via the Virginia Satellite Education Network (VSEN) program. The primary mission of the program was to serve rural and underserved students with courses that were either unavailable because of the lack of highly qualified instructors or too few students to offer the course.

Several years ago, the program changed to include web-based delivery and to add AP, world language, core, and elective courses. The program became known as the Virginia Virtual Advanced Placement School (VVAPS). In 2005 the Virginia Department of Education saw a need to combine the VSEN and VVAPS programs and move toward embracing online education. Through that process, the VDOE created the Virtual Virginia (VVA) program. Over the years thousands of students in Virginia and across the nation have successfully completed courses using Virtual Virginia, and Virtual Virginia continues to expand course offerings to help meet the individual needs of students.

This handbook will detail some of the guidelines local school technology departments will need to use in order to ensure that the local school meets the technology standards defined by Virtual Virginia.

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*Note: This handbook is subject to change at any time. Virtual Virginia reserves the right to make changes to this handbook as needed and without prior notice.*

## VDOE Statement of Nondiscrimination

The Virginia Department of Education does not discriminate on the basis of race, sex, color, national origin, religion, sexual orientation, gender identity, age, political affiliation, or against otherwise qualified persons with disabilities. The policy permits appropriate employment preferences for veterans and specifically prohibits discrimination against veterans.

For further information on Federal non-discrimination regulations, contact the Office for Civil Rights at [OCR.DC@ed.gov](mailto:OCR.DC@ed.gov) or call 1-800-421-3481.

You may also view Governor Ralph Northam's Executive Order 1 (EO-1, 2018), which specifically prohibits discrimination on the basis of race, sex, color, national origin, religion, sexual orientation, gender identity, age, political affiliation, or against otherwise qualified persons with disabilities. The policy permits appropriate employment preferences for veterans and specifically prohibits discrimination against veterans.



## Virtual Virginia Technology Support Department

The Virtual Virginia Technology Support Department is available to work with students, local schools, and division staff to ensure that students have assistance in using the necessary computer hardware and software. Local technology staff will need to work with the Virtual Virginia staff to:

- Verify that the students' workstations meet the minimum hardware and software requirements in this document and ensure adequate bandwidth
- Act as a resource for the installation of programs and problem-solve any technology-related difficulties throughout the course
- Communicate with the Virtual Virginia Technology HelpDesk as needed

Students and the parent/guardian of any Virtual Virginia student working outside the local school setting must be aware of the need to access equipment that meets the minimum requirements as specified in this document.

The most updated version of these system requirements can be found at [virtualvirginia.org](http://virtualvirginia.org).

## Virtual Virginia Technology HelpDesk

Virtual Virginia operates the HelpDesk, a toll-free technical support line for students and local school personnel to use for assistance with any technology issues related to Virtual Virginia courses.

The HelpDesk toll-free number is 866-650-0027 and is available Monday–Friday, 8:00 a.m. to 4:00 p.m.

Technology-related questions may also be sent to [support@virtualhelpdesk.org](mailto:support@virtualhelpdesk.org).

The Virtual Virginia HelpDesk does not replace the local school technology support staff. Any questions related to Virtual Virginia enrollment or other program information should be directed to the Virtual Virginia main office at 866-650-0025.

When contacting the Virtual Virginia HelpDesk, it is important to have the following information available:

- Full course name (this can be found by clicking the Courses icon on the Blue Banner on the left)
- Name of the tool/area affected (modules, quizzes, etc.)
- Information about your web browser (name and version)
- Information about your operating system (name and version)
- Detailed description of the problem (i.e., assignment, grade item, content links/topics)
- Usernames of students experiencing the issue
- Screenshots (these are extremely helpful)

The Virtual Virginia HelpDesk representative will respond based on the severity of the students' issues (please see the chart below). The timeframes listed below are suggested response times; it may take longer to implement a resolution.

	<i>Description</i>	<i>Preferred Contact Method</i>	<i>Response Times</i>
<b>Urgent</b>	Outage or significant impact threatening students' productivity; very difficult to work around; system is unusable	Phone	Immediate
<b>Important</b>	Problem impact is high; productivity is proceeding but in an impaired fashion; workarounds are available	Phone or email	4–24 hours
<b>Non-urgent</b>	Issue does not have productivity impact; examples include enhancements, usage questions, and cosmetic problems	Email	Within 24 hours

## General Hardware and Software Requirements

	<i>Windows/PC</i>	<i>Mac</i>	<i>Chrome OS</i>
<b>Operating System</b> <a href="#">More details</a>	Windows 7, 8, 10	OS 10.11, 10.12, 10.13, 10.14	Most recent version  <i>Note: Some courses require external software that cannot run in Chrome OS. These courses are detailed in <a href="#">Appendix A</a>.</i>
<b>Supported Browsers (latest versions)</b> <a href="#">More details</a>	Firefox, Chrome	Firefox, Safari, Chrome	Chrome
<b>Video</b>	Minimum Resolution: 800x600 Recommended Resolution: 1024x768		
<b>Audio</b>	Sound card; headphone and microphone capability		
<b>Cookies</b>	Must be enabled		
<b>Java</b>	Latest version for your OS		
<b>Pop-Up Blocker</b>	Pop-up or ad blockers must be disabled.		
<b>Other Required Hardware</b>	Headphones and microphone Telephone and telephone connection Scanner		
<b>PDF Access</b>	Adobe Acrobat Reader		
<b>Media Players (latest versions)</b>	VLC Quicktime		
<b>Plug-ins (latest versions)</b>	Adobe Flash Player Adobe Shockwave		
<b>Audio Recording</b>	Any audio recording software that exports MP3		
<b>Zoom Client for Meetings</b>	Download and install at <a href="https://zoom.us/download">zoom.us/download</a>		

*The above-mentioned products and/or services retain their trademarks and copyrights where applicable. Third-party software updates can affect functionality. It may become necessary to modify these technical requirements during the year based on software updates.*

## Internet Connection

Access to a high-speed internet connection is required for all Virtual Virginia courses. A minimum of 512kbps is required.

## Website/Domain Access

All students will need access to the following URLs, IP addresses, and their subpages:

- <https://www.virtualvirginia.org>
  - <http://www.virtualva.org>
  - <https://virtualvirginia.instructure.com>
  - <http://streaming.virtualvirginia.org>
  - <http://streaming.whro.net>
  - <http://www.emediava.org>
  - <https://vva.geniussis.com>
  - <https://zoom.us>
- 
- ReadSpeak IP Addresses (**If you have IPv4**): 79.136.80.0/24
  - ReadSpeak IP Addresses (**If you have IPv6**): 2001:9b0:2:703::/64
  - ReadSpeak Helpdesk: 213.136.49.100

## Email Access

All division personnel and students will need to be able to receive email from and send email to addresses from the following domains:

- @virtualva.org
- @virtualhelpdesk.org
- @geniussis.com
- @vva.geniussis.com
- @cmail19.com

This may require you to **whitelist** these domains for student and personnel email addresses.

## Appendix A: Additional Technology Requirements for Virtual Virginia Courses

In addition to the general requirements for all courses listed in this document, Virtual Virginia courses may require access to additional technology resources. Additional technology resources are either purchased by Virtual Virginia for installation and/or use by the student enrolled in the associated Virtual Virginia course, or are free downloads from other providers. In the next several pages, we will outline the different types of software access required, organized by course.

Since much of this software is proprietary, download or access instructions will be sent to the mentor, student, and building technology personnel upon the start of the student’s course.

*The information in Appendix A represents the current technology requirements; however, there may be alterations throughout the school year due to curricular and/or instructional changes.*

The most updated version of these system requirements can be found at [virtualvirginia.org](http://virtualvirginia.org).

### Additional Technology Requirements:

#### Arabic, Chinese, French, Spanish, and World Language & Culture Courses

Resource Name	Description of Resource
<b>Headset/earbuds with microphone</b>	A headset with microphone or pair of earbuds with microphone is required for all World Language courses (except Latin courses) so that students may complete required speaking assignments.
<b>Webcam (recommended)</b>	A webcam is recommended for all World Language courses (except Latin courses)

### Additional Technology Requirements:

#### 3177 AP Calculus AB, 3178 AP Calculus BC, and 3192 AP Statistics

Resource Name	Description of Resource	Notes
<b>TI-Nspire</b>	<b>This is not required but strongly encouraged.</b> Nspire is an easy-to-learn device and software for producing, analyzing, and printing graphs.	<a href="#">Download iPad app</a> <a href="#">Download computer software</a> Device: TI-Nspire CX

**Additional Technology Requirements:  
3580 AP Computer Science A**

Resource Name	Description of Resource	Notes on Installation/System Requirements
<b>BlueJ IDE</b>	BlueJ is an integrated development environment (IDE) for programming, compiling, and executing programs in the Java language.  ( <b>Note:</b> When downloading BlueJ, an “examples” folder will also be included. Please ensure that students have access to this folder, as well as the BlueJ application.)	<a href="#">Download BlueJ for your OS</a>  <i>Note: BlueJ is not available for Chrome OS. This course requires the use of a Windows or Mac computer.</i>
<b>JDK (latest version)</b>	The JDK includes a complete JRE plus tools for developing, debugging, and monitoring Java applications.	<a href="#">Download the latest JDK for your OS from Oracle</a>
<b>Printer and scanner</b>	A printer and scanner (or a mobile device with a scanner app) are required so that students may print, complete, scan, and submit course worksheets and tests that require handwritten responses. The AP exam requires students to handwrite code, so these assignments and tests will help students prepare for that portion of the exam. Students are required to submit scanned documents via the course website in PDF or Word format.	

**Additional Technology Requirements:  
4260 Earth Science II: Astronomy**

Resource Name	Description of Resource	Notes
<b>ImageJ</b>	ImageJ is a public domain Java image processing and analysis program inspired by NIH Image for the Macintosh. It runs, either as an online applet or as a downloadable application, on any computer with a Java 1.5 or later virtual machine.	<a href="#">Download installation files</a>

**Additional Technology Requirements:**  
**4410 Chemistry I & 4420 Chemistry II**

Resource Name	Description of Resource	Notes
OnlineChemLabs	Accessed through MS Silverlight. Students are provided with a link and authorization code.	<a href="#">OnlineChemLabs technical support</a>
MS Silverlight	Silverlight is a powerful development tool for creating engaging, interactive mobile applications.	<a href="#">Download Silverlight</a>
TestNav8 Application		<a href="#">TestNav8 setup and information</a>

*Since the software listed above is proprietary, the link to the Chemistry resource page will be sent to the mentor, student, and building technology personnel upon the start of the student's course.*

**Additional Technology Requirements:**  
**5810 Chinese I, 5820 Chinese II, 5830 Chinese III, 5840 Chinese IV, and 5860 AP Chinese Language and Culture**

Resource Name	Description of Resource
Chinese Pinyin Simplified keyboard	Keyboard allows for typing simplified Chinese characters, required for all Virtual Virginia Chinese courses.

**Additional Technology Requirements:**  
**6640 Introduction to Game Design & Development**

Resource Name	Description of Resource	Notes
Scratch web application	Free game design web application. No download necessary. May be accessed at <a href="http://scratch.mit.edu">scratch.mit.edu</a>	Requires Adobe Flash and recent web browser.
Unity Personal (5.5.2)	Free game design software for Windows or Mac.  <b>Note for Windows installation:</b> If your student(s) will be using Unity on a Windows computer, then a specific option <b>MUST</b> be selected when the software is installed. During the Unity installation process, a Choose Components screen will appear. "Mac Build Support" <b>MUST</b> be checked so that your students can properly submit assignments. If this component isn't selected during the installation process, students will <b>NOT</b> be able to submit their projects properly, and the Unity software will have to be reinstalled.	Requires Windows 7SP1+, 8, 10, or Mac OS X 10.8 or later  <a href="#">Download Unity Personal at unity.com</a>  If installing on a 32-bit OS, <a href="#">download Unity 5.6.6</a> .  <i>Note: Unity is not available for Chrome OS. This course requires the use of a Windows or Mac computer.</i>

## Appendix B: Helpful Technology Links

<b>Adobe Acrobat Reader</b>	<a href="http://get.adobe.com/reader/">http://get.adobe.com/reader/</a>
<b>Adobe Flash Player</b>	<a href="http://get.adobe.com/flashplayer">http://get.adobe.com/flashplayer</a>
<b>Adobe Shockwave</b>	<a href="https://get.adobe.com/shockwave/">https://get.adobe.com/shockwave/</a>
<b>Java</b>	<a href="http://www.java.com/en/download/index.jsp">http://www.java.com/en/download/index.jsp</a>
<b>Mozilla Firefox</b>	<a href="http://www.mozilla.com/en-US/firefox/all.html">http://www.mozilla.com/en-US/firefox/all.html</a>
<b>QuickTime Player</b>	<a href="http://www.apple.com/quicktime/download">http://www.apple.com/quicktime/download</a>
<b>Windows Media Player</b>	<a href="http://windows.microsoft.com/en-us/windows/download-windows-media-player">http://windows.microsoft.com/en-us/windows/download-windows-media-player</a>
<b>VLC</b>	<a href="http://www.videolan.org/vlc">http://www.videolan.org/vlc</a>
<b>Zoom Client for Meetings</b>	<a href="https://zoom.us/download">https://zoom.us/download</a>