

Minimum Hardware and Software Requirements

There are some minimum hardware and software requirements for navigating and accessing the different materials in this Canvas course that you will need to have to be successful in this online course. There are additional hardware and software requirements for this course over and above what you need to navigate Canvas.

Please note that you are responsible for knowing how to fully operate a computer. If you have difficulties using Canvas, please go through the **Canvas Student Tour**. Further, as computer science student, it is important that you develop deeper technical understanding of computer systems in general. To that end, your instructor is not your personal technical support department. You are encouraged to make use of the **course discussion forum for issues related to Java installation** in this course

Overall Hardware and Software Requirements

1. You will need access to a computer and the Internet. Most late model computers have adequate processing capabilities for online courses. For specific questions about the technical suitability of your home computer or laptop, contact the IRT Help Desk. Visit **AIRC 2005** during **open hours** to speak with the IRT Service Desk Team, or **call (916)278-7337, IRT website**. If you do not have a computer at home or work but do spend time on campus, you can use any of the computer labs during open hours. A laptop with wireless capability will provide maximum flexibility for accessing the course when on campus.
2. If you plan to connect to the Internet from home, you will need Internet access. High-speed Internet access with a cable modem or DSL is recommended. For either connection method, you will need an Internet Service Provider (ISP).
3. You also will need word processing software (e.g., Microsoft Word). If you need a word processor, Microsoft Office 365 (includes Microsoft Word word processing software) is available to registered Sac State students. For more information on software resources available to students, please visit **Sac State's Software and Tools Catalog**. Mac users can also use Apple Pages, but must convert their files from Pages to .doc or .pdf before submitting within Canvas.
4. Free web browsing software can be downloaded from the Internet but is usually already installed on modern computers. **Firefox is the recommended web browser most compatible with Canvas for Mac Users. Windows users can use Firefox or Chrome.** Your browser must have the Java plug-in enabled.

Course Specific Hardware and Software Requirements

In this course you will be required to use the Java to execute some software. You may also be required to use the Java programming language and a Java IDE. You may use IntelliJ, Eclipse, or NetBeans. IntelliJ is recommended. The following requirements are for IntelliJ. You should target the recommended requirements.

System requirements

Requirement	Minimum	Recommended
RAM	2 GB of free RAM	8 GB of total system RAM
Disk space	2.5 GB and another 1 GB for caches	SSD drive with at least 5 GB of free space
Monitor resolution	1024x768	1920×1080
Operating system	Officially released 64-bit versions of the following: <ul style="list-style-type: none"> • Microsoft Windows 8 or later • macOS 10.13 or later • Any Linux distribution that supports Gnome, KDE , or Unity DE 	Latest 64-bit version of Windows, macOS, or Linux (for example, Debian, Ubuntu, or RHEL)

Note that the screen size and RAM requirements are greater than that needed for Canvas (below). While you may be able to get buy with a 1024x768 monitor, you will most likely find resolution that low to be challenging for software development today.

You will also need to install a Java JDK on your system if you do currently have one installed, or, your currently installed JDK does not meet the requirements for this course. There will be an assignment in the first week with the detailed requirements. For now, note that you must be using Java 11 JDK or later.

Computer (hardware) Specifications for Canvas

Canvas and its hosting infrastructure are designed for maximum compatibility and minimal requirements.

Screen Size

Canvas is best viewed at a minimum of 1024x600, which is the average size of a notebook computer. If you want to view Canvas on a device with a smaller screen, we recommend using the [Canvasmobile app](#) .

Operating Systems

- Windows XP SP3 and newer
- Mac OSX 10.6 and newer
- Linux - chromeOS

Mobile Operating System Native App Support

- iOS 7 and newer
- Android 2.3 and newer

Computer Speed and Processor

- Use a computer 5 or less years old when possible
- 1 GB of RAM
- 2 GHz processor

Internet Speed

- Along with compatibility and web standards, Canvas has been carefully crafted to accommodate low bandwidth environments.
- Minimum of 512kbps

Screen Readers

- Macintosh: [VoiceOver \(Links to an external site.\)](#) (latest version for Safari)
- PC: [JAWS \(Links to an external site.\)](#) (latest version for Internet Explorer 10 & 11)
- PC: [NVDA \(Links to an external site.\)](#) (latest version for Firefox)
- There is no screen reader support for Canvas in Chrome
- Find more detailed information here: [Tips for Students Using Screen Readers in Canvas](#)

Supported Browsers

Canvas supports the current and first previous major releases of the following browsers:

- **Chrome** 77 and 78
- **Firefox** 69 and 70 (**Extended Releases** are not supported*)
- **Edge** 44 (*Windows only*)
- **Respondus Lockdown Browser** (supporting the latest **system requirements**)
- **Safari** 12 and 13 (*Macintosh only*)

You should always use the most current version of your preferred browser. Your browser will notify you if there is a new version available.

Unsupported Browser Banner

Some supported browsers may still produce a banner stating *Your browser does not meet the minimum requirements for Canvas*. If you have upgraded your browser but you are still seeing the warning banner, try logging out of Canvas and deleting your browser cookies.

[Learn more about browsers and browser settings for Canvas](#) .

Software Recommendations

- **IDEs**
 - [IntelliJ](#)
 - [Netbeans](#)
 - [Eclipse](#)