KENZIE ACADEMY

COMPUTER REQUIREMENTS

It's going to be the #1 tool of your career, and tools are worth some investment. Get a reliable computer, treat it well, and pay for the extended warranty if you can afford it.

Operating Systems	Hardware Models	Minimum Specs
Mac OS Catalina (10.15.x) or newer	Approved Apple models only (avoid Hackintosh)	Memory: 8 GB+ Processor: Any modern chip Storage: 256 GB+ Other: Headset, webcam
Ubuntu Linux 20.04.x or newer (avoid dual-boot setups)	Approved models only (avoid virtual machines)	
Windows 10 or 11 Pro Windows 10 or 11 Home	Any model with a physical keyboard	

These computers requirements are maintained by instructional staff with the goal of reducing risks which could disrupt your learning experience and slow your progress toward your goals. These requirements are designed to prevent avoidable bugs, incompatibilities, and performance issues in your hardware and software.

If you have questions, check below for answers. If you still have questions, contact your Admissions Advisor who will be able to answer your question or refer your question to technical support or instructional staff.

Good Advice

Be fully prepared at least one week *before* Orientation Day!

If you wait until the last minute to set up your system, unexpected difficulties could risk a smooth start to your learning journey. It is your responsibility to have a working operating system, meeting the above requirements, prior to starting the program.

Learners always fall behind *from the very beginning* if they do not show up prepared on Day One. That's not a good way to set yourself up for success! Set up your computer early and use it for a few days.

How do I choose a reliable computer?

As a rule of thumb, if a computer is inexpensive, it is not likely to last long. So, weigh your options. You don't want your computer breaking down during your time in the program, if you can help it.

We recommend that you consider computer models which meet all three of the following conditions. These are industry-standard best-practices.

1. **This model is marketed to businesses.** This usually means that the manufacturer built this machine under stricter quality requirements. (Find business-class laptops by shopping the "Business" section of a laptop manufacturer's online store. You will not always find business-class laptops at a physical store.)
2. **This model is well-reviewed.** This means that users appreciate the quality of the machine.
3. **This model name has been around for several years.** This means that users and companies have returned to purchase this model multiple times and that the engineers have had many chances to get it right.

An example: The Dell XPS 13 model which was released in 2021 is likely to be reliable because:

1. Dell markets the XPS 13 to businesses.
2. Dell XPS models have been reviewed highly for many years, overall.
3. There have been successful *older* versions in the XPS 13 line dating all the way back to 2012.

Other examples include (but are not limited to) the Lenovo ThinkPad X-Series and T-Series, as well as the Apple MacBook Pro.

One more thing: When it comes to today's computers, the one hardware requirement which will make the biggest difference to your daily experience in this program is RAM memory. Read more.

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FAQ

Why is 8 GB the *minimum* RAM memory required?

It may seem like a lot to some of us – especially those of us who remember the days of dial-up modems. But 8 GB isn't much in today's computing era. You will be using a *lot* of RAM memory as a developer or a designer. Even jumping to 12 GB will noticeably affect your daily experience.

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Any modern processor? Really?

Processor clock speeds (for example, "2 Ghz") are not reliable indicators of processor performance. If it isn't a very old processor, and your computer meets all the *other* requirements, then it is probably enough for this program.

If you get a 2020 or newer Apple computer containing an M1 (Silicon) chip, you may want to consider upgrading your RAM memory a little higher than normal. Our normal minimum RAM requirement is 8 GB. But we would *recommend,* 12 or 16 GB for these Apple computers.

Overall, your computer's RAM memory is far more important than the processor for the purposes of most software developers and designers.

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That's it? Is there anything else I can do for better specs?

Of course! We would, for example, recommend an SSD (solid-state drive) rather than a HDD (hard-disk drive). SSDs are far, far faster. This is the most easily-attainable improvement to performance, apart from increased RAM. But don't stress it if you don't get it.

Good graphics support will also provide a significant performance improvement, but you won't find a lot of options in the *laptop* ecosystem, except for expensive gaming machines.

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Headset? Webcam?

A set of headphones, a mic, and a webcam will be essential for communicating with instructors, advisors, and your peers – even if you are not a remote learner. Headphones will also be important for listening to video curriculum while in public spaces (such as a campus).

We recommend avoiding the very cheapest headsets, because the audio quality and volume levels of the mic and headphones *will* grow annoying to you and others. You don't need an extremely high-quality headset, but pick up a slightly more expensive kind, if you can afford it. Gaming headsets are often good.

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Why is Mac OS Catalina the oldest version allowed?

This is the oldest version of Mac OS which Apple will still support by the end of the next calendar year.

Official support is critically important, because unsupported computers will not receive dire security fixes.

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Why avoid Hackintosh installations of Mac OS?

While Hackintosh is a cool idea, it is also the hardest option to get working correctly and can be unreliable even in the best cases. For now, we would recommend against trusting your education and career to it.

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Wait, only Ubuntu? Can I use a different Linux distribution?

All of the Linux-specific instructions in our curriculum are written for Ubuntu. It is also far easier to find Ubuntu-specific help on the Web than it is to find help for other distributions.

If you are already comfortable with another Linux distribution, however, you may choose to continue to use it – provided you understand that you will be responsible for figuring out the differences and fixing any problems that arise.

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Why do you recommend avoiding dual-boot setups between Ubuntu and Windows?

Why? At least once every six months, Microsoft releases a maintenance update which resets the system's bootloader.

When this occurs, the computer suddenly forgets that Linux (Ubuntu) is installed, making it impossible to access your Linux installation – as well as making it temporarily appear that your entire Ubuntu installation was somehow deleted – until you fix the bootloader again.

The fix isn't always difficult, but it is risky and advanced. So, avoid it or proceed with thoughtful caution. We cannot commit to providing IT support for every type of problem. Your computer is your property. If something goes wrong, it's up to you to find a solution (though we may be able to provide some help).

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Why avoid virtual machine installations of Ubuntu?

Avoid installing Ubuntu on a virtual machine unless you know your computer both supports virtualization and has the specs to support a virtualized Ubuntu at the same time as Zoom video streaming and Google Chrome with a few dozen busy tabs open.

Virtual machines have heavy performance requirements, so it is best only to use them on gaming machines or other very powerful computers.

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Why not other versions of Windows?

Windows 7 and earlier versions are no longer receiving critical security updates from Microsoft. *No one* should be using them while connected to the Internet even for a few seconds. The risk to yourself and others is too great. Even if the machine seems to work fine, it is at much higher risk of being used to record your personal/financial data or operating as a drone in a botnet without your knowledge.

Windows 8.1 does not fully support certain features which you may require during our program. The chief concern is WSL. Though WSL is not currently a requirement, it is increasingly useful for developers on Windows systems and may become a requirement during your time in the program.

Windows 10 **S** and Windows 11 **SE** are very restricted versions of Windows, which – among other limitations – prohibit most types of software installation. You will need to be able to install many types of software during the program, and you will need full control.

Additionally, on Windows Home or Pro editions, some manufacturers enable what is called "S mode," which restricts software installations to the Windows Store. You will need to disable this in order to install some of the software you will need.

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Really? Any computer model is okay for Windows?

If your Windows computer meets or (even better) *exceeds* the requirements at the top of this document, any model should be enough. However, we do have some very good advice for selecting a quality computer.

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Approved Laptop Models

For Mac OS

Only Catalina-compatible Apple computers are approved, for reasons mentioned above.

- MacBook Pro or MacBook Air (mid-2012 or newer)
- MacBook (early-2015 or newer)
- Mac Pro (2019 or newer, or late-2013)
- Mac Mini (late-2012 or newer)
- iMac Pro (2017 or newer)
- iMac (late-2012 or newer)

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For Ubuntu

If you have already had Ubuntu running on your personal machine successfully for quite some time, don't worry about the model. But if you are purchasing, get something you know will be compatible:

1. Any laptop which is certified for Ubuntu Desktop 20.04 and above.
2. Dell XPS 13 Developer Edition, as well as some other Dell computers, can come with Ubuntu pre-installed, optionally.
3. Most Lenovo ThinkPad models are compatible with Ubuntu, especially the X- or T-series. Check Lenovo's Linux for Personal Systems page for compatibility: look for support for Ubuntu 20.04 (or above).

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For Windows

See Really? Any computer model is okay for Windows?

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