Northern Virginia Community College

RECOMMENDED COMPUTER SPECIFICATIONS FOR STUDENTS IN GENERAL STUDIES AND STANDARD USE IN MOST ACADEMIC PROGRAMS (*PROGRAMS WITH SPECIAL REQUIREMENT FOLLOW*)

MARCH 2023

NOVA is committed to preparing students for today's workforce and recognizes computers to be an extension of the learning tools needed to be globally competitive. To attend NOVA, students are expected to have a laptop (or a desktop with webcam and microphone) that meets the minimum requirements for their major and internet access at home or through a mobile device hot spot.

NOTE: Chromebooks and iPads are useful but <u>no</u>t sufficient to replace a laptop. They will not run all the software typically needed at NOVA.

WINDOWS

Feature	Minimum Recommended	Preferred	Rationale for Recommendation
Processor	Intel i3 11100HE or AMD Ryzen 5 5000 series (Windows)	Intel Core i5 12 gen or AMD Ryzen 7 5000 series (Windows)	The latest Windows operating systems and applications written for it will require advanced processors to be used effectively.
Memory	8GB	16GB	Memory demands for Windows will require at least 8 gigabytes (GB) of memory.
Hard disk	128 GB SSD	256 GB SSD	This allows for storing of files from classes on the computer. A backup solution is also recommended for storage. SSD will provide a faster overall system.

Feature	Minimum Recommended	Preferred	Rationale for Recommendation
Wireless Networking	802.11ac	802.11ac	This will allow machines to operate on the 5GHz wireless frequencies that provide increased throughput and roaming performance over some previously installed wireless adapters.
Bluetooth	Bluetooth 4.1 or newer	Bluetooth 4.1 or newer	Provides for greater accessory attachment
WebCam and Microphone	Required	Required	Required to use online proctoring, attend ZOOM or collaboration sessions and have people see you.
USB	Type A 2.0	Type A 3.0 / Type C	Allows access to other devices such as external hard drives, older keyboards & mice, USB thumb drives.
Video Output	Video out: HDMI or DisplayPort	Video out: HDMI or DisplayPort	Provide the ability to connect to an additional monitor for a bigger screen.
Operating system	Windows 10 or Higher	Windows 10 or Higher	Windows is the preferred operating system on campus for students
Battery	6 Cell Battery	9 Cell Battery	9 cell batteries provide optimum life for the laptop when students are in classes for long periods of time

Feature	Minimum Recommended	Preferred	Rationale for Recommendation
Software	Microsoft Office, Anti-Virus Software	Microsoft Office, Anti-Virus Software	Every laptop should have anti-virus software for protection in addition to all the latest security patches. Microsoft Office365 available at no cost from VCCS Canvas Portal
Warranty	1 Year Limited Warranty	3 Year Warranty with Complete care/ accidental damage protection	The warranty will cover the hardware in the laptop for 3 years in the case of any problems. Complete care / accidental coverage covers accidental damage as well as defective parts.

MACS

Feature	Minimum Recommended	Preferred (if applicable)	Rationale for Recommendation
Processor	Intel Core i3 (Mac)	Apple M1 (Mac)	The latest Windows operating systems and applications written for it will require advanced processors to be used effectively.
Memory	8GB	16 GB	Memory demands for running MAC OS and Windows will require at least 8 gigabytes (GB) of memory.
Hard disk	128 GB SSD	256 GB SSD	This allows for storing of files from classes on the computer. A backup solution is also recommended for storage.
Wireless Networking	802.11ac	802.11ac	This will allow machines to operate on the 5GHz wireless frequencies that provide increased throughput and roaming performance over some previously installed wireless adapters.
Bluetooth	Bluetooth 4.1 or newer	Bluetooth 4.1 or newer	Provides for greater accessory attachment

Video RAM	512 MB	1 GB	Windows will require a more powerful graphics card.
WebCam and Microphone	Required	Required	Required to use online proctoring, attend ZOOM or collaboration sessions and have people see you.
USB	Type A 2.0	Type A 3.0 / Type C	Allows access to other devices such as external hard drives, older keyboards & mice, USB thumb drives.
Video Output	Video out: HDMI or DisplayPort	Video out: HDMI or DisplayPort	Provide the ability to connect to an additional monitor for a bigger screen.
Operating system	Mac OS 10.13* or Higher and Windows 10 or higher	Mac OS 11* or Higher and Windows 10 or higher	Windows is the preferred operating system for most students *If you wish to use an Apple machine, extra steps and cost may be necessary to install Windows alongside the Mac OS as some applications do not have a Mac OS counterpart.
Software	Microsoft Office or Office365, Anti-Virus Software	Microsoft Office, Anti-Virus Software	Every laptop should have anti-virus software for protection in addition to all the latest security patches. Microsoft Office 365 available at no cost from VCCS Canvas Portal
Warranty	1 Year Limited Warranty	3 Year Warranty with Complete care/ accidental damage protection	The warranty will cover the hardware in the laptop for 3 years in the case of any problems. Complete care covers accidental damage as well as defective parts.

Northern Virginia Community College

RECOMMENDED COMPUTER SPECIFICATIONS FOR STUDENTS IN IET/CAD/EGR/GIS

May 2020

NOVA is committed to preparing students for today's workforce and recognizes computers to be an extension of the learning tools needed to be globally competitive. To attend NOVA, students are expected to have a laptop (or a desktop with webcam and microphone) that meets the minimum requirements for their major and internet access at home or through a mobile device hot spot.

NOTE: Chromebooks and iPads are useful but not sufficient to replace a laptop. They will not run all the software typically needed at NOVA.

WINDOWS

Feature	Minimum Recommended	Preferred (if applicable)	Rationale for Recommendation
Processor	Intel i5 12 gen or AMD Ryzen 5 5000 series (Windows)	Intel i7 12 gen or AMD Ryzen 7 5000 series (Windows)	The latest Windows operating systems and applications written for it will require advanced processors to be used effectively.
Memory	8GB	16GB	Memory demands for Windows will require at least 8 gigabytes (GB) of memory.
Hard disk	256 GB SSD	512 GB SSD	This allows for storing of files from classes on the computer. A backup solution is also recommended for storage. SSD Drives will provide the fastest systems.
Wireless Networking	802.11ac	802.11ac	This will allow machines to operate on the 5GHz wireless frequencies that provide increased throughput and roaming performance over some previously installed wireless adapters.

Feature	Minimum Recommended	Preferred (if applicable)	Rationale for Recommendation
Bluetooth	Bluetooth 4.1 or newer	Bluetooth 4.1 or newer	Provides for greater accessory attachment
WebCam and Microphone	Required	Required	Required to use online proctoring, attend ZOOM or collaboration sessions and have people see you.
USB	Type A 2.0	Type A 3.0 / Type C	Allows access to other devices such as external hard drives, older keyboards & mice, USB thumb drives.
Video Output	Video out: HDMI or DisplayPort	Video out: HDMI or DisplayPort	Provide the ability to connect to an additional monitor for a bigger screen.
Operating system	Windows 10 or higher	Windows 10 or higher	Windows is the preferred operating system on campus for students
Battery	6 Cell Battery	9 Cell Battery	optimum life for the laptop when students are in classes for long periods of time (Not applicable on a MAC) 9 cell batteries provide
Software	Microsoft Office or Office 365, Anti-Virus Software	Microsoft Office, Anti-Virus Software	Every laptop should have anti-virus software for protection in addition to all the latest security patches. Microsoft Office 365 available at no cost from VCCS Canvas Portal
Warranty	1 Year Limited Warranty	3 Year Warranty with Complete care/ accidental damage protection	The warranty will cover the hardware in the laptop for 3 years in the case of any problems. Complete care covers accidental damage as well as defective parts.

NOTE: MACS are not recommended for GIS. GIS Software does not work well outside a Windows enrvironment.

MAC

Feature	Minimum Recommended	Preferred (if applicable)	Rationale for Recommendation
Processor	Apple M1 (Mac)	Apple M2(Mac)	The latest Windows operating systems and applications written for it will require advanced processors to be used effectively.
Memory	8GB	16GB	Memory demands for Windows will require at least 8 gigabytes (GB) of memory.
Hard disk	256 GB SSD	512 GB SSD	This allows for storing of files from classes on the computer. A backup solution is also recommended for storage.
Wireless Networking	802.11ac	802.11ac	This will allow machines to operate on the 5GHz wireless frequencies that provide increased throughput and roaming performance over some previously installed wireless adapters.
Bluetooth	Bluetooth 4.1	Bluetooth 4.1	Provides for greater accessory attachment
Video RAM	512 MB	1 GB	Windows will require a more powerful graphics card.

Feature	Minimum Recommended	Preferred (if applicable)	Rationale for Recommendation
WebCam and Microphone	Required	Required	Required to use online proctoring, attend ZOOM or collaboration sessions and have people see you.
USB	Type A 2.0	Type A 3.0 / Type C	Allows access to other devices such as external hard drives, older keyboards & mice, USB thumb drives.
Video Output	Video out: HDMI or DisplayPort	Video out: HDMI or DisplayPort	Provide the ability to connect to an additional monitor for a bigger screen.
Operating system	Mac OS 11* or Higher	Mac OS 13* or Higher	If you wish to use an Apple machine for IET/CAD/ENG you will need to have Windows available, extra steps and cost may be necessary to install Windows alongside the Mac OS as some applications do not have an Mac OS counterpart.
Software	Microsoft Office or Office365, Anti-Virus Software	Microsoft Office, Anti-Virus Software	Every laptop should have anti-virus software for protection in addition to all the latest security patches. Microsoft Office365 available at no cost from VCCS Canvas Portal
Warranty	1 Year Limited Warranty	3 Year Warranty with Complete care/ accidental damage protection	The warranty will cover the hardware in the laptop for 3 years in the case of any problems. Complete care covers accidental damage as well as defective parts.

Notes: The hardware requirements listed above are **general** recommendations for most courses. Some requirements may vary – check your course syllabus for special hardware or software requirements. Lower versions of some software may continue to work with reduced functions or compatibility with other software.

Chromebooks – sold under a number of different manufacturers and sometimes called *Chrome Laptops* are **not recommended**. These computers are for running web-based applications **only**. Some classes may require specialized or locally installed software that will be incompatible with Chromebooks. The Canvas LMS does support Chromebooks in general, but some class related activities may not.

* Reliable High-Speed Internet access is required for all online course and many supplemental tools for face to face courses. Cellular hot-spots are acceptable depending on type and connection speed – consult your mobile carrier for possible costs.
** Some application functions and services may not be compatible with all mobile devices.

Other Software Requirements

- **Browser:** Firefox (Latest), or Chrome (latest), Edge (Windows 10/11), Safari 12+. Canvas Browser Compatibility Page. If you have software problems with Edge or Safari, try Firefox and Chrome. Some digital resources work better with those browsers.
Some applications such as Navigate do NOT support Edge or Safari. Firefox and /or Chrome are strongly recommended.
- **Microsoft Office 365:** (available from the VCCS for Students) *Google Docs is supported but may require extra steps.
- **Antivirus Software:** Microsoft Defender Antivirus comes pre-installed on Windows 10 and 11. Apple does not provide free antivirus software but there are many free offerings by other companies.