

Information Security Programs
Technology Requirements for Laptop (or Desktop) Computer

Hardware	Minimum requirements
CPU	<ul style="list-style-type: none"> • Quad Core (not counting hyper-threading) 2.4Ghz, Intel VT or AMD V (Intel i5 or better) • Virtual box/VMware must be supported. • Intel is preferred over AMD for Linux support. • Intel 8th Gen i7 is recommended. 7th Gen i7 is acceptable.
Memory	<ul style="list-style-type: none"> • 16 GB • The ability to install more memory is desirable. • 8 GB will function but will experience performance issues with Virtual Machine usage.
Disk	<ul style="list-style-type: none"> • 1 TB 7200 RPM OR 256 GB SSD • 500 GB 7200 RPM is acceptable • 512 GB SSD is recommended • Combination of OS SSD drive, and storage HDD drive as noted above also is acceptable.
Graphics	<ul style="list-style-type: none"> • Accelerated, Gaming Support • Nvidia is preferred over AMD • 1920 by 1080 resolution is recommended (at least on an external port) • At least 1280 by 1024 resolution • HDMI output recommended (perhaps with an adapter)
Sound	<ul style="list-style-type: none"> • Mic in/Headphone out (either analog or two free USB ports)
Mouse	<ul style="list-style-type: none"> • An external mouse (USB or Bluetooth) is desirable
USB	<ul style="list-style-type: none"> • USB 3.0 desirable for an external disk • Other USB ports may be needed for: mouse, printer, mic-in and headphones-out, depending on how these are connected.
Wireless	<ul style="list-style-type: none"> • 802.11 n required • 802.11 ac is recommended
External monitor	<ul style="list-style-type: none"> • A 23" HDMI monitor is recommended, with reasonable resolution
Laptop or Desktop is Acceptable	<ul style="list-style-type: none"> • Windows 10 or macOS. Linux is also acceptable if a mainstream distribution (e.g. Ubuntu).

Hardware	Minimum requirements
Apple	<ul style="list-style-type: none"> • MacBook Pros can be used or iMac with above hardware recommendations.
Software	
Installs	<ul style="list-style-type: none"> • Students must be able to install software on the computer they will use for the Information Security courses.
OS	<ul style="list-style-type: none"> • The ability to either dual boot into Windows or Linux is necessary. If a system can run these operating systems in VMWare with only a minor performance impact this is also acceptable. • Students should Google their chosen system for serious Linux support problems. A few manufacturers use non-standard hardware configurations, making running Linux a challenge.
Microsoft Office	<ul style="list-style-type: none"> • Provided to all WMU students. • Students should be able to run these programs either on their system or the Web versions.
Development software	<ul style="list-style-type: none"> • Provided by the Information Security Program at no additional cost to the student. These include many Microsoft developer tools and operating systems, as well as VMWare and many open source security tools and Linux distributions.
Service	<ul style="list-style-type: none"> • An Extended warranty is recommended.