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Bits & Bytes

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Industry Certifications for Beginners and Career Changers

The right IT certification can improve an IT resume short on real-world experience.

Some IT certifications may open doors for newcomers, career-changers or IT pros looking to build a new specialty.

First determine what it is you really want to do. IT is a big field, so not all certifications make sense. Think about your long-term goals and not just how a particular certification might help you land your first (or next) job, but how it might lead to the job you aspire to in the future

Depending on your goals, certifications from the CompTIA "+" series have a positive reputation as a stepping-stone into various IT functions or making a move from junior to higher-level roles. You can always build off these foundations with higher-level certifications or branch out into other skill areas altogether.

Program Highlight: Cybersecurity & IT Support

As previously announced in the spring 2021 newsletters, the *Cybersecurity* associate degree / certificate and the *IT Support* associate degree / certificate are no longer offered starting in the fall 2021 semester.

In their place are new programs. The *Cybersecurity and IT Support Specialist* associate degree provides students thinking of beginning their careers in IT with a broad background of skills involved with IT technical support.

Job responsibilities include help-desk technical support to non-IT computer users and as a technical support specialist who analyzes, troubleshoots, and evaluates computer system problems. IT Support Specialists play an important role in the routine maintenance of their organization's systems and networks,

The new degree program provides students with a broad knowledge and skills that are in line with many IT certifications required by many employers in the fields of:

- Computer Hardware
- Network Administration
- Operating Systems
- Cybersecurity Implementation

Students already holding a related degree and likely working in an IT environment, should consider the new certificate programs as a Network Support Specialist and Cybersecurity Support Specialist to extend and enhance their skills.

Students enrolled in the previous *IT Support* programs can continue in their program and complete its required courses. The only change is that CIT-182 *Principles of Cybersecurity* can be used as an additional restricted elective.

Students enrolled in the previous *Cyberecurity* programs should plan on completing their program sometime by the end of calendar year 2022. After that time, certain courses may no longer be offered and their replacement courses must be taken as substitutes assuming the prerequisites are met.

When scheduling for the Spring 2022 semester, please consider the following and see an advisor if there are any questions:

If you have only taken CIT-115 and/or CIT-175 you should see an Advisor about moving to one of the new programs.

If you need to take CIT-181, you can substitute CIT-120 or CIT-182 in its place.

If you need to take CIT-185 and/or CIT-186, you need to take these courses in spring or summer of 2022.

If you need to take CIT-282, CIT-181 will be accepted as meeting its prerequisite requirement during 2022.

Students must take CIT-285 *Cybersecurity Capstone* in 2022.

Industry Certifications for Beginners and Career Changers

Here are some certifications that are recommended for beginners, career-changers or veteran IT pros looking to demonstrate their knowledge in a fresh area.

CompTIA A+

For someone essentially starting from scratch, the A+ certification is one of the better bets – just keep in mind that it is likely going to open the door to a help desk or other support-related position. CompTIA brands the certification as a foundation for a long-term IT career, noting on its website: "It's about more than just PC repair."

The A+ certification can help get someone with little to no prior experience in the door as a computer support specialist. From there, professionals can work their way up into systems administration.

CCAC CIT-150 *Computer Configuration and Technical Support* provides students with a solid background on topics covered by the A+ exam
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CompTIA Network+

Among the other starting points in the + series, Network+ leads into a network support role. It is a good option for an entry-level professional interested in later becoming network administration. If you are interested in the networking side of IT, there is also the Cisco CCNA certification which has multiple levels.

CCAC CIT-120 *Networking Concepts* and CIT250 *Network Routing and Switching* provide students with a solid background on topics covered by the Network+ and entry level CCNA exams.

CompTIA Security+

Early career or career-changing professionals thinking about their long-term career prospects should consider areas related to cybersecurity. Security+ is geared towards those looking to start a career in information assurance..

CCAC CIT-182 *Principles of Cybersecurity* provides students with a solid background on topics covered by the Security+ exam.

Tips on choosing a computer for your degree

When enrolling into a computer-based degree program, one of the biggest decisions a student makes is what type of computer meets their needs.

Although CCAC has several open lab environments at all campuses, sometimes students find themselves needing the ability to work on projects during off hours. With so many options and the cost of computers rising, this can be an expensive decision for students to make.

Desktop vs. Laptop

Students should consider whether a desktop or laptop fits their style of learning. If a student finds they are trying to work on assignments during down time between classes, during transportation, or public library then selecting a laptop might be the best option. It's important to understand, laptops are very capable machines and students can do a lot from programming to 3D modelling and animation.

However, for students who find themselves working in a workspace in their homes or spending a lot of time in a specific location working on schoolwork, a desktop might be a better option.

Desktop machines offer the ability to upgrade the hardware such as storage space and video cards. Additionally, to move work from one computer to another, students will have to either invest in an external storage device or cloud storage to have access to their files.

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What about Chromebooks?

One thing to caution students on is Chromebooks. Although these machines look like laptops, they rely upon the Google Play App store and download app versions of software, like a phone or tablet. So, availability of software needed for coursework is limited and can be a hindrance to the student's study.

A note regarding Computer Information Technology, Data Analytics and Multimedia Communication courses is if students are going to purchase a computer, students run the risk a Chromebook will not suffice for course work and practices.

Operating System

The next thing to decide is what operating system to use. If students wish to replicate the lab computers at CCAC, many of the courses in CIT and DAT taught on-campus use Microsoft Windows.

Various courses involving Multimedia Communications are also taught using Microsoft Windows. However, many of the software packages are also available for Mac OS. Mac OS is a great choice and has come a long way regarding cross compatibility and availability of software.

There are still some software packages not available through the Mac OS and could require access to another computer with a different operating system. One of the biggest examples is Microsoft Access database software package not available for MacOS.

Another operating system is Linux, which is open source and available for download. There are several different types of Linux that students can choose from, with Ubuntu one of the more well-known versions. Course CIT-220 Linux System Administration offers students to gain experience using Linux focused systems.

Although many software packages may not be available for Linux, more of a push is being made by companies to recognize the Linux OS and provide options. There are many open source software packages that work on Linux. This can make using Linux more challenging as the software packages may not replicate the look of the software being used in a classroom. However, this can be very rewarding and accomplishes the task at hand..

Final Advice:

If a student is not sure about a good computer purchase, reach out to one of the CIT, DAT, or MMC faculty members. We would rather make sure students have guidance in such an important decision, then learn that a sub-par machine was purchased that will not meet the student's needs. Investing in a good machine can often get students through two to four years of studies. Think about the options and needs, talk to the instructor, and set yourself up for success.

Windows 11: Are you ready?

Microsoft made Windows 11 available in early October as a free upgrade to most Windows 10 users. If you have Windows 8, you'll have to get the free upgrade to Windows 10 first, then download Windows 11. Before you decide whether or not to install the new OS, there are a few things to consider.

Windows 11 feels more like Windows 10.5 than a generational leap -- not that there's really anything wrong with that. The base requirements are a 64-bit processor, 4GB of memory, 64GB of storage, UEFI secure boot and TPM (trusted platform module) 2.0. It's that last one that gets tricky for some people, especially on cheaper laptops. If you've got a CPU older than a seventh-gen Intel Core series (most PCs since 2017 should easily meet or exceed this requirement), you might be in trouble. If you want to check, use the Microsoft PC Health Check app.
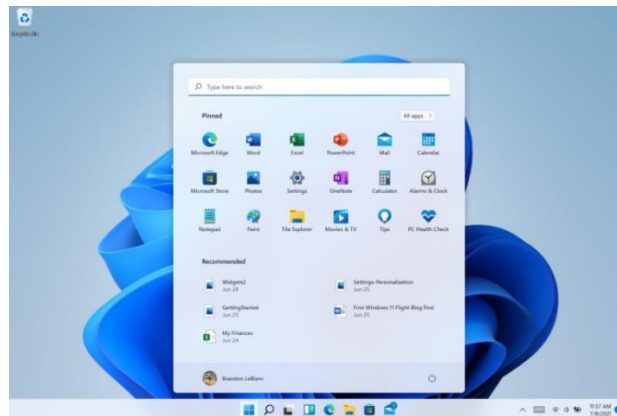
The following is a short summary of major features found in Windows 11. Prior to upgrading, you might to investigate on the web if there is any value in how you use your computer before upgrading. Windows 10 will continue to be supported by Microsoft through October 2025.

Security and scanning:
- Windows security app is build into the operating system along with Microsoft Defender Antivirus
- Security baselines are preset without you having to answer a number of questions

Easier access to new and existing services
- Windows 365 can run like a virtual machine, allowing internet-connected Andriod and macOS devices to run Windows 365
- Microsoft Teams included and usable for personal accounts and not just organization accounts

Customize the desktop experience
- Snap Layouts and Snap Groups that allow you to choose a different layout for the app window on the monitor
- New and improved Start menu layout and Taskbar
- Virtual desktops for opening different apps depending on what you are doing

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CCAC IT Services Student Work-Study Opportunities

ITS student work-study positions are now posted for each campus. Students can find the positions by searching the https://www.collegecentral.com/ccac job bank. This is a great opportunity to apply some of your knowledge and apply them to support students, faculty and staff!

IT in the News:

Click and check out these articles on the Web

Best laptop 2021: The 14 laptops we recommend

There are so many to choose from, so let CNET help you choose the right laptop …

T-Mobile Suffered a Massive Data Breach. Its Response Is the One Thing No Company Should Ever Do

T-Mobile confirmed that it was the subject of a massive data breach that exposed the personal information of at least 50 million people. That's pretty much the worst-case scenario, and the only reason we found out is …

Google Says It's Committed to Privacy. What It Isn't Saying Should Worry You

Most of the money Google makes comes from those little ads at the top of the search results pages after you type in something you're looking for. Those ads brought in roughly $100 billion in revenue for the company last year. There is one problem, however … Privacy.

Best IoT Device Management Platforms & Software 2021

The Internet of Things (IoT) has broken out from its smart home roots to become a full-fledged game changer in the worlds of cloud computing and data management. As 5G brings a dynamic level of speed and latency to network environments, the number of devices connected to these networks continues to explode, with Statista forecasting that 50 billion IoT devices will be in use globally by 2030 ...

Microsoft prepares Windows 11 for a post-pandemic world

The coronavirus has irrevocably changed how we live and work. Soon, it'll have changed our devices too. Microsoft announced the next big iteration of its Windows software and, with it, new features designed for life in the modern age ...