# Informal Self-Assessment & Advisories
## Information Technology

Evaluate your interests, skills, and goals within the field of IT.  IT is a broad industry with various specialties, so understanding your skill level can help you choose the right path.

These self-assessments are designed by our instructors to help you determine which Certificate Programs best fit your current IT skill level.   If you are a beginner, with no computer repair or networking experience, no problem.  We recommend you start with the Desktop Technician Certificate starting with Comp 612.

If you are a working IT professional or a natural techie, you can enhance your skills with our more advanced IT networking, cloud computing, and cybersecurity certificate programs.

***Take your time, think about the questions.***

Select a certificate that best fits your level.  We want you to be successful.  If you have any questions along the way, please make an appointment to speak with a Counselor at 619-388-1800.

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The questions below will help you decide whether you should take entry level or intermediate IT classes.

**Entry level Self-Assessment: If you are not familiar with the answers to the questions below, start with Comp 612 Hardware Service Technician course, part of the Desktop Technician Certificate.**

1. Do you know how to identify, use or connect hardware components and devices?
2. Do you know how to install and support Windows OS including command line & client support?
3. Do you know how to troubleshoot PC and mobile device issues including application security support?
4. Can you troubleshoot devices and network issues?
5. Can you explain the types of networks and connections including TCP/IP, WIFI and SOHO?
6. Can you identify and protect against security vulnerabilities for devices and their network connections?
7. Can you install and configure laptops and other mobile devices?
8. Do you understand Mac OS, Linux and mobile OS?
9. Do you know how to follow best practices for safety, environmental impact, and communication and professionalism?

**Intermediate level Self-Assessment If you are familiar with the answers to the questions below, consider taking (Comp 640) Windows Operating Systems or (COMP 641) Linux Essentials**

1. Do you know the difference between a network address & a broadcast address?
2. Do you understand how data travels in relation to networks & can you describe the functions of the seven layers of the OSI Model?
3. Can you use Binary Mathematics- Convert binary, decimal, & hexadecimals?  Can you use binary in relation to IP addressing?
4. Can you describe and perform Sub-netting?
5. Can you describe the use of MAC addresses?
6. Can you describe IP Class ranges, TCP/IP & configure IP addresses on hosts?
7. Can you demonstrate the use of LAN topologies *(Star, Bus, Ring, and Mesh)* & LAN/WAN protocols?
8. Can you demonstrate basic knowledge of Windows and Linux servers?
9. Can you demonstrate knowledge of basic electricity & safety procedures?
10. Can you demonstrate cable configurations & standards for LANs and WANs?

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**CISCO Certified Network Associate (CCNA) CERTIFICATE PROGRAM**

This certificate Program requires extensive knowledge in networking.  It is recommended that students have one of the following:

- N+ certification
- Have taken our Basic Network Configuration course
- Currently working in the industry

Important Note: If you are changing careers and completely new to IT, we recommend you start with our entry level certificate, the Desktop Technician Certificate.

If you cannot answer at least 4 of the questions below, start with the Desktop Technician Certificate

| | | |
|---|---|---|
| 10010010 Binary to Decimal conversion is 120 | T | F |
| Layer 1 of OSI Model manages signaling to and from physical network connections. | T | F |
| Modern Ethernet networks are based on the star-wired bus topology. | T | F |
| TCP is a network layer core protocol that reports on the success or failure of data delivery. | T | F |
| There are 128 bits in an IPV6 address. | T | F |

| | | |
|---|---|---|
| Hubs operate in the OSI layer 3 | | |

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## CYBERSECURITY, CySA+:

This certificate Program requires <u>extensive knowledge in networking and security administration</u>.  It is recommended that students are **familiar with the answers to the questions below**:

1. What is the CIA triad?
2. What is an ACL, and how is it used?
3. How is a packet sniffer used?
4. What is the purpose of a firewall?
5. Where would you see the following: #!/bin/bash.

*<u>Advisories:</u>*  WE RECOMMEND COMPLETING AT LEAST ONE OF THE FOLLOWING COURSES PRIOR TO TAKING CYBERSECURITY, or have the equivalent prior training or work experience:

- Security Essentials Certificate Program (N+ & S+ Classes)
- CCNA OR CCNA Security Programs (CISCO)
- Linux Server Administration Program

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## CLOUD SOLUTIONS: AWS ASSOCIATE

This certificate Program requires <u>knowledge in networking and security administration</u>.  It is recommended that students are **familiar with the answers to the questions below**:

Which of the following are examples of an operating system?
a) MacOS
b) Windows 10
c) Facebook
d) Linux

Which of the following is/are not (a) main subsystem of a computer?
a) memory
b) cpu
c) storage
d) keyboard
e) display

Which of the following are web browsers?

a) Chrome

b) Firefox

c) Windows

d) Microsoft

e) Mac

***Advisories:*** Students should have general IT Technical Knowledge. That can be had by:

- At least one year of practical experience in the IT industry,

Or at least one of the following

- A+ and N+ Certification, or equivalent
- OS/Server Administration (Linux Server Administration)
- Application Development (Python, FEWD Program)
- Cloud or Virtualization (Virtual Datacenter Program)
- Databases and SQL

Important Note: If you are changing careers and completely new to IT, we recommend you start with our entry level certificate, the Desktop Technician Certificate.

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## SECURITY ESSENTIALS CERTIFICATE PROGRAM

This certificate Program will prepare you for CompTIA N+ and S+ certification and can be used as preparation for our Cybersecurity Analyst Certificate.  It is recommended that a student is:

- Currently working in the industry.

If you wish to only take our S+ class, we recommend that you have at least one of the following:

- N+ certification
- Have taken our Basic Network Configuration class (Comp 608)
- Currently working in the industry

Important Note: If you are changing careers and completely new to IT, we recommend you start with our entry level certificate, the Desktop Technician Certificate.