

#Online Learning

Step 1, for everyone

Beginner

- Khan Academy Cybersecurity (less than 1 hr): <https://www.khanacademy.org/partner-content/nova/cybersecurity>
- Cisco NetAcad (10-20 hrs): <http://tiny.cc/GPT2019> (Ignore the branding, it's for both boys and girls)

Intermediate

- Khan Academy Internet (2 hrs): <https://www.khanacademy.org/computing/computer-science/internet-intro>
- Cybrary Courses: <https://www.cybrary.it/>

#More About Cybersecurity Careers

Step 2, for everyone

Blog: <https://tisiphone.net/2015/10/12/starting-an-infosec-career-the-megamix-chapters-1-3/>

Blog: <https://danielmiessler.com/blog/build-successful-infosec-career/>

Govt: <https://niccs.us-cert.gov/workforce-development/cyber-security-workforce-framework>

#Next Summer

For 10th and 11th graders

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|----------------|---|----------------------------|
| Free Camps | https://www.gen-cyber.com | (Look for student camps) |
| Paid Camps | https://www.uscyberpatriot.org | (Look for AFA Cyber camps) |
| Online program | https://www.cyber-fasttrack.org/ | (Requires sign up later) |

#College & University Degrees

For 11th and 12th graders

Some **technical** degrees or course pathways that will jump start you in a cybersecurity career are:

- information technology
- management information systems
- computer science
- electrical engineering
- computer engineering
- network administration
- information assurance

Texas 2-year programs

Austin Community College: <http://sites.austincc.edu/cs/computer-information-technology/cybersecurity/>

San Antonio College: <https://www.alamo.edu/sac/academics/program-index/science-and-technology/information-security/>

Texas 4-year programs

UT Austin: <https://www.cs.utexas.edu/concentrations/cybersecurity>

UT San Antonio: <http://www.utsa.edu/spotlights/cybersecurity/>

University of Houston: <http://www.uh.edu/tech/cisre/education/undergraduate/>

Texas A&M: <https://cybersecurity.tamu.edu/education/undergraduate/>

Texas A&M San Antonio: <http://www.tamusa.edu/citcs/>

Scholarships

ISC²: <https://www.iamcybersafe.org/scholarships/undergraduate-scholarships/>

Minorities in Cybersecurity: <https://www.icmcp.org/educational-scholarships>

General (not cybersecurity focus): <https://www.edsmart.org/scholarship/>

Scholarship for Service (U.S. Citizen or Permanent Resident only)

<https://www.sfs.opm.gov/ContactsPl.aspx> -- contact schools to find out more

- UT: <https://www.cs.utexas.edu/undergraduate/academics/scholarship-service>
- UTEP: https://www.utep.edu/cs/opportunities/sfs_program.html
- TAMU: <https://cybersecurity.tamu.edu/students-corner/available-scholarships/sfs-scholarship/>
- San Antonio College: <https://www.alamo.edu/sac/about-sac/grants/cyber-service-scholarship-css/>

#Certifications

If you're ALL IN!

These cost money just to take (and you don't get your money back regardless if you pass or fail) BUT can also really help you get a job. Sometimes college classes will work with the companies to include the test cost as part of the course fee. If you are able to take the test, DO IT.

Don't give companies ANY reason to pay you less than top \$\$!

CompTIA Network+

Official Website: <https://certification.comptia.org/certifications/network>

Cost: \$319 ****\$154 for students with valid ID and a .edu address****

Source of info below: <https://www.springboard.com/blog/cybersecurity-certifications/>

While the Network+ certification is not necessary for most jobs in cybersecurity, it does provide a great foundation on how computers and networks communicate with each other as well as some cybersecurity best practices.

What will you learn?

The goal of the Network+ certification is to measure participants' foundational knowledge of how systems and networks communicate and interact. In order to receive this certificate, you must understand the following:

- Networking concepts
- Infrastructure
- Networking operations
- Network security
- Network troubleshooting and tools
- What are your job options?

The salary you can earn varies -- but you can generally expect to make at least \$40,000 a year with little or no experience. Network+ is an **optional** prerequisite for Security+.

CompTIA Security+

Official Website: <https://certification.comptia.org/certifications/security>

Cost: \$339 ****\$215 for students with valid ID and a .edu address****

Source: <https://www.springboard.com/blog/cybersecurity-certifications/>

Like Network+, Security+ is earned through CompTIA and is arguably the most important cybersecurity certification, as it provides a foundational understanding of cryptography, risk management, and vulnerabilities.

What will you learn?

This certification will prove you understand the proper way to install and configure systems as well as secure devices, application, and networks. In addition, you will be able to conduct threat analysis on these systems and employ mitigation techniques.

To pass the Security+ exam, you will need to have a thorough understanding of the following:

- Threats, attacks, and vulnerabilities
- Identity and access management
- Risk management
- Network architecture and design
- Cryptography and KPI
- What are your job options?

(ISC)2 Systems Security Certified Practitioner (SSCP)

Official Website: <https://www.isc2.org/Certifications/SSCP>

Cost: \$250

Source: <https://www.businessnewsdaily.com/9661-cybersecurity-certifications.html>

The entry-level System Security Certified Practitioner (SSCP) prepares you for such jobs as systems security analyst, network security engineer and security administrator.

To achieve the SSCP, you must pass a single exam that includes questions that span:

- Access Controls
- Security Operations and Administration
- Risk Identification, Monitoring, and Analysis
- Incident Response and Recovery
- Cryptography
- Network and Communications Security
- Systems and Application Security

#Potential Employers

The big payoff -- finally the chance to earn some \$\$!

There are many different kinds of employers for cybersecurity:

- General tech industry - Cisco, Google, Microsoft, Amazon, Facebook, Apple, IBM
- Cybersecurity tech industry - McAfee, FireEye, Symantec, Sophos, Trend Micro
- Financial - Bank of America, Chase, Citi, Fidelity
- Academia - UT and TACC, Texas A&M, UTSA
- Telecommunications: AT&T, Verizon, Spectrum, T-Mobile
- Government - NSA, CIA, FBI, IRS, state & local government
- Others - **many** large companies have a cybersecurity group in their IT department, for example:
 - Yum! Brands that owns Taco Bell, KFC, and Pizza Hut
 - Target, Walmart
 - Ford, Toyota, GM
 - United, Southwest, American Airlines