National Cybersecurity Awareness Month

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OCTOBER 2018

WEEK 2

Educating the Next Generation for a Career in Cybersecurity to Ensure the Future Security of our Health Delivery Infrastructure

Why is Cybersecurity Important?

Every day, the Indian Health Service (IHS) handles critical health and identity data that criminals consider high value. According to www.healthcareitnews.com, so far in 2018, phishing and hacking have resulted in the compromise of millions of patients' data. In one cyberattack at UnityPoint Health, criminals stole the medical information of 1.4 million people, along with the credit and debit card information of many of them, and cybercrime appears to be increasing every year.

Today's computer-reliant environment promotes the relatively new and lucrative career field of cybersecurity. If you know someone looking for a career path, you may want to help yourself, as well as them, by recommending a career that will help keep everyone's sensitive data safe.

There are many paths to getting a cybersecurity education, ranging from programs for students as young as five to degree programs to professional certifications.

Cybersecurity Education for K-12 Students

- GenCyber is a five-day summer camp for learning about cybersecurity in a classroom environment. It is free and available in almost every state.
- The National Integrated Cyber Education Research Center provides a curriculum that includes Cyber Literacy 1, Cyber Literacy 2, Cyber Science, and Cyber Society. The curriculum is free for K-12 teachers in the United States.
- Teachers can speak with the NSA to:
  - Request speakers to come to their classrooms.
  - Start cybersecurity extracurricular programs at their schools.

Cybersecurity Education for College Students

Many colleges and universities offer both bachelor- and master-level degrees in cybersecurity. Before selecting a program, consider its accreditation and how well it meets your needs (career goals, location, subject expertise, cost, financial assistance), etc.

To promote higher education in cybersecurity, the NSA and Department of Homeland Security (DHS) teamed up to designate a number of cyber-related educational institutions as *National Centers of Academic Excellence (CAE)*.

- NSA/DHS National CAE in Cyber Defense Designated Institutions
- NSA/DHS National CAE in Cyber Operations Designated Institutions

Cybersecurity Certifications

Information Technology certifications are a way for you to demonstrate proficiency in skills by passing standardized exams. Employers may require certain certifications. Even for those employers who don't, having professional certification often increases your employability and salary.

Some certifications are created and awarded by vendors such as Cisco, while other certifications are vendor neutral. Certification exam requirements vary. For example, Security+ does not have prerequisites, while Certified Information Systems Security Professional (CISSP), arguably the most prestigious certification, requires five years of specific work experience, and nomination by a current certification holder.

Vendor-Neutral

Certification	*Awarding Organization*
Security+	CompTIA
Information Security Fundamentals (GISF)	Global Information Assurance Certification
Certified Ethical Hacker (CEH)	International Council of Electronic Commerce Consultants (EC-Council)
CISSP I	International Information Systems Security Certification Consortium (ISC)2
Certified Information Security Manager (CISM)	Information Systems Audit and Control Association (ISACA)

Vendor Specific

Cisco Certified Network Associate Security (CCNA Security)	CISCO
Offensive Security Certified Professional (OSCP)	Offensive Security

For further information on the material included in this newsletter, please see the NCSAM 2018 website.

Cybersecurity Job Opportunities

Career Pathways

The Bureau of Labor Statistics Quick Facts

Information Security Analysts

2017 Median Pay	$95,510 per year $45.92 per hour
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	Less than 5 years
On-the-job Training	None
Number of Jobs, 2016	100,000
Job Growth Outlook, 2016-26	28% (Much faster than average)
Employment Change, 2016-26	28,500

According to Burning Glass Technologies, cybersecurity job postings increased 74% from 2007 to 2013.

The 2017 (ISC)² Center for Cyber Safety and Education's 2017 Global Information Security Workforce Study estimates that there will be a shortage of over 1.8 million qualified cybersecurity professionals by 2022. This estimated deficit increased by 20% between 2015 and 2017. The study notes that hiring managers in the healthcare field are particularly interested in expansion, with nearly 40% wishing to increase their workforces by 15% or more.