

CAREER JOB:
CYBERSECURITY
PROFESSIONAL



REWARDING CAREERS IN CYBERSECURITY

In the next five years, Washington companies anticipate hiring approximately 5,000 cybersecurity professionals. These employees will work to protect company networks, investigate cyber events and triage potentially malicious activity. Success in these positions begins with a career- and college-ready diploma. Students will further benefit from high school coursework emphasizing computational problem-solving, abstract thinking, pattern recognition and coding. These positions require a bachelor's degree in computer science, engineering or a related field. A master's degree is preferred but not required. Interested students should also pursue internships, apprenticeships and hands-on experience.

THE JOB

THE BASICS:

- » Industries: High-tech, computer science, security, defense, energy
- » Salary Range: \$60,000 to \$250,000/yr.
- » Hiring Need (5 years): ~5000

A DAY IN THE LIFE:

- » "My typical workday is spent investigating events—attacks on PNNL's network. We receive incoming computer alerts of malicious activity that I help triage, determining which ones require further investigation or action. It's a bit like a game of cat and mouse—the bad people peek around a corner in our network, and we chase them down." – Lisa Campbell, Cyber Defender, Pacific Northwest National Laboratory, Richland, WA

CANDIDATE PROFILE

EDUCATION REQUIREMENTS:

- » Bachelor's degree in computer science, behavioral science, mathematics, linguistics, engineering or a related field
- » Master's degree preferred but not required for an entry-level position
- » Various certifications likely required before or after employment, depending on position

SKILLS REQUIREMENTS:

- » Programming languages, network, system & web security, cryptographic knowledge, internal operating systems, vulnerability analyses, network protocols, cyber law and security standards
- » Written communication, critical thinking, teamwork, project & time management, creativity, curiosity

PATHWAYS

K-12

- » Coursework emphasizing:
 - Computational problem-solving
 - Abstract thinking
 - Pattern recognition
 - Coding/app-creation
 - Teamwork
- » Career- and college-ready high school diploma
- » Potential internships: MITRE Cyber Academy, Cyber Patriot Program, student intern at national laboratories, national high school STEM summer

POSTSECONDARY

- » Coursework emphasizing:
 - Computer science
 - Math
- » Join collegiate cyber defense groups
- » Hands-on experience in system and database administration, help desk support and software development

CAREER

- » Apply for jobs, internships, recruitment programs or apprenticeships.
- » Fast-paced, ever-changing field where continuous professional development and certification are key
- » Wide latitude to carve out your own career path