REASONS TO CONSIDER A CAREER IN CYBERSECURITY

- According to *Forbes*, the cybersecurity job market is expected to grow to more than $170 billion in just four years, making it not only one of the fastest growing employment segments in IT, but one that also comes with six-figure salaries, security and plenty of room for upward mobility.
- *U.S. News & World Report* ranked cybersecurity eighth on a list of the 100 best jobs in 2017.
- *Certification Magazine* released its own survey, with most jobs in the field topping out well over the $100K mark. *Forbes* noted that this number can actually exceed $300K in major American cities.
- The U.S. Bureau of Labor Statistics estimated that there are currently more than 200,000 available cybersecurity jobs in the U.S. alone. Cisco reported that this number is actually closer to 1,000,000 nationally and 6,000,000 globally.
- Cybersecurity specialists make upwards of $6,500 more than their IT peers, according to a job market intelligence report by Burning Glass Technologies.

CYBER HAWAII

CyberHawaii is partnership of local federal, state, county, private industry, professional organizations and academia combining efforts to implement a "cyber-ecosystem" to defend Hawai'i against cyberattacks. Spearheaded by the University of Hawai'i, its purpose will be to coordinate and support cyber activities related to readiness and resilience, education and workforce development, economic development and innovation throughout the state.

CyberHawaii is aligned with CyberUSA, a non-profit "community of communities" governed by its members, established to enhance information sharing between states and improve cyber resilience at all levels of participation—local, regional and national—all while connecting the cyber ecosystem of the United States and its allies.

CYBER USA

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UNIVERSITY of HAWAI'I SYSTEM

Hawai'i Cybersecurity Workforce Initiative

Developing a clear education and workforce pathway to the cybersecurity profession

A CYBER HAWAII PARTNERSHIP

WHAT IS CYBERSECURITY?

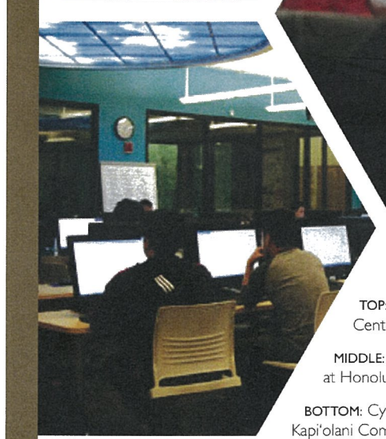
Cybersecurity is the ability to protect or defend the use of cyberspace from cyber attacks. With cyber threats in a state of rapid and continuous evolution, keeping pace in cyber security strategy and operations is a major challenge to governments, private industry and individuals.

THE ISSUES

- 2013 Target breach cost: $300 million
- 2014 Home Depot breach cost: $263 million
- Estimated global losses from cyber crime: $400 billion annually
- 14 million federal worker identities compromised in 2015 breach
- According to privaterights.org, there have been an estimated 889,508,931 records (government, private, and personal) breached since 2005.
- The cybersecurity field is expected to experience a deficit of 1.5 million professionals by 2020

THE SOLUTION

To develop a clear education and workforce pathway to the cybersecurity profession.



TOP: Cyber Security Coordination Center at UH West O'ahu

MIDDLE: GenCyber camp held at Honolulu Community College

BOTTOM: Cybersecurity Center at Kapi'olani Community College

Cybersecurity Career Pathways

Cybersecurity professionals have unique skills, are in short supply, and are vital to our nation's national security. There are many pathways to get to this goal, follow the one that is right for you.

4 Graduate Path [MA / MS / PhD]

Competency Level: Expert / Sr. Practitioner
Principles:
Information Security Governance
Security Architecture / Engineering

3 University Path [4 yr. degree · BS / BA]

Competency Level: Practitioner
Principles:
Networks + Communications
Access Control

2 College Path [2 yr. degree · ASNS / AA]

Competency Level: Technician
Principles:
Information Security
Security Tools + Techniques

1 General Education [k-12 high school diploma]

While K-12 schools in Hawai'i offer a wide array of STEM programs and curricula, it is essential that students concentrate on the STEM Foundation. Students who plan to attend higher education in Hawai'i or on the mainland, should focus their academic preparation on chemistry, physics and biology, while math preparation should push toward calculus.

INVESTIGATE THREATS

Specialty areas responsible for investigating cyber events or crimes of information technology (IT) systems, networks, and digital evidence.

- Computer Forensic Analyst
- Computer Network Defense (CND) Forensic Analyst
- Digital Forensic Examiner
- Digital Media Collector
- Forensic Analyst

CYBER LEADERSHIP

Specialty areas responsible for providing leadership, management, direction, or development and advocacy so that the organization may effectively conduct cybersecurity work.

- Legal Advisor/Staff Judge Advocate
- Paralegal
- Cyber Trainer
- Information Security Trainer
- Security Training Coordinator

OPERATE AND MAINTAIN

Specialty areas responsible for providing support, administration and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.

- Systems Security Analysis
- System Administration
- Network Services
- Knowledge Management
- Data Administration

SECURITY PROVISION

Specialty areas responsible for conceptualizing, designing and building secure information technology (IT) systems, i.e., responsible for some aspect of systems development.

- Systems Security Architecture
- Software Assurance and Security Engineer
- Technology Research and Development
- Test and Evaluation
- Systems Development

PROTECT AND DEFEND

Specialty areas responsible for identification, analysis and mitigation of threats to internal information technology (IT) systems or networks.

- Computer Network Defense Analysis
- Incident Response
- Computer Network Defense Infrastructure Support
- Vulnerability Assessment and Management