Please Note...

This webinar and the engagement tools will be recorded.

An archive will be available on the event website.
Welcome and Overview

Marian Merritt
Deputy Director and Lead for Industry Engagement
National Initiative for Cybersecurity Education (NICE)
Federal Cybersecurity Workforce Webinar: Introducing Cybersecurity Apprenticeships in Federal Environments

Douglass McPherson
Supervisory Apprenticeship and Training Representative
Office of Apprenticeship
What is Registered Apprenticeship

A Proven Workforce Solution

Registered Apprenticeship is an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience, classroom instruction, and a portable, nationally-recognized credential.
Apprenticeships are jobs
On-the-job learning in a work setting
Job-related classroom training
Learning with the help of a mentor
Industry-recognized credential
A Diverse Range of Industries

Healthcare  Cybersecurity  Information Technology  Biotechnology  Transportation  Construction

Financial Services  Advanced Manufacturing  Hospitality  Engineering  Energy  Telecommunications
Successful Engagement with Major Employers to Grow Apprenticeship

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Why Registered Apprenticeship?

- Registered Apprenticeship is a proven training model
- Industry-validated occupations
- Modernized registration process
- Nationwide Technical Assistance
Federal Apprenticeship Programs

- United Services Military Apprenticeship Program (USMAP)
- Center for Disease Control (CDC)
- Federal Bureau of Prisons
- Department of Interior
- Department of Justice
- Department of Treasury
- and the Department of Labor
Cyber/I.T. Occupations

- Hardware Hacker
- Cyber Security Support Technician
- Database Administrators
- I.T. Systems Administrator
- Information Security Analysts
- Computer Network Architects
- Computer and Information Systems Managers
Thank You for Joining Us Today

Ready to get involved? The Office of Apprenticeship is here to help!
Visit [www.apprenticeship.gov/national-apprenticeship-week](http://www.apprenticeship.gov/national-apprenticeship-week) for all things NAW 2021
Have questions? Email us at NAW@dol.gov

Douglass McPherson, Supervisory Apprenticeship and Training Representative
Office of Apprenticeship
(202) 693-3783
Cybersecurity Apprenticeships -a map for federal agencies

Dr. Costis Toregas  
GWU Cybersecurity and Privacy Research Institute  
October 26, 2021
Defining apprenticeships

• Earn while you learn
• Mentor to pass on the wisdom
• Three learning pathways with in hours expectation
  • Academic
  • Company
  • OJT
NSF-funded project to explore terrain

11. NCC Working Group Membership

- Academic:
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- Federal:
  - Jamie Bennett, bennett.jamie.s@dol.gov

Federal Cybersecurity Apprenticeship Resource Guide

Co-developed by the National CyberWatch Center™ Working Group on Federal Cybersecurity Apprenticeships

January 2021
What we learned

• It’s all about the employer- make sure both hiring and technical side managers understand the value proposition of apprenticeships

• Many organizations and individuals exist to help start the journey! Engage and be open to offers of assistance.

• Benefits are many- understand them and convey them

  • Recruiting and developing a diverse and highly-skilled workforce including women, minorities, and veterans
  • Improving productivity, profitability, and the bottom line
  • Increasing staff loyalty and retention of workers, during and following the apprenticeship
  • Creating flexible training options that ensure workers develop the right skills
  • Minimizing liability costs through appropriate training of workers
Ticking clock for you

• Retirement wave of technicians and technical managers
• Industry salary gap and timing issues to hiring
• Presidential Orders focusing on cyber skills
Different onboarding models

• Set up internal program
• Intermediaries
• Hybrid approach
**MISSION**: ISGCyber provides cybersecurity services and develops IT and cyber professionals using apprenticeship as a development tool.

**CONCEPT**: The ISG Cybersecurity Apprenticeship Program (ICAP) integrates foundational education, virtual simulation training, global certifications and supervised work experience to produce educated, trained, certified and experienced cyber professionals. ICAP primarily supports transitioning military Veterans but is configurable to meet any defined population group.

**COMPANY**: Founded in 1998 (custom software); 2012 transition to cybersecurity; 2013 federally registered cybersecurity apprenticeship; Veteran focused apprenticeship since 2016

**PATHWAY**: Selection; Pre-Apprenticeship; Apprenticeship; Career

**CONTACT**: [https://isgcyber.com/](https://isgcyber.com/)  EMAIL: Tony.Marshall@ISGlink.com

**NAICS**: 423609, 611420, 611513, 541519 CAGE: #3C257
Suggestions for success

• Buy in from the top is vital
• Engage two vital elements:
  • HR/hiring managers
  • CIO/CISO
• Registered or not? Pros and cons
• Innovate through pilots
  • take small bytes
  • Win
  • Expand
Who can help?

• NIST/NICE community of practice
• DoL program support
• Academia, intermediaries and accreditation organizations
Stay in touch

costis.toregas@gmail.com
Q & A
SAN DIEGO’S CYBERSECURITY APPRENTICESHIP PROGRAM

Presented by: Lisa Easterly, CCOE President & CEO
Cybersecurity in San Diego

BY THE NUMBERS

$3.5B
ANNUAL ECONOMIC IMPACT
nearly 15% more than in 2019

23.4K
TOTAL JOBS IMPACTED
10% increase since 2019

874
CYBER FIRMS CALL SAN DIEGO HOME
3 in 5 expect to increase employment in next year

12.4K
TECH WORKERS ENGAGED IN CYBER
7.5% more than in 2019

$106.4K
AVG SALARY FOR TECH & CYBER WORKERS
nearly 12% above national avg

22.2K
CYBER-RELATED DEGREE COMPLETIONS
across 118 local programs

©2021 Cyber Center of Excellence
NAVWAR is San Diego’s Cyber Juggernaut

NAVWAR’S ECONOMIC IMPACT

5.2K
FEDERAL EMPLOYEES IN SAN DIEGO
11K+ worldwide

$800M
IN WAGES AND BENEFITS
2020

3.7K
CYBER EMPLOYEES IN SAN DIEGO
1/3 of all Cyber workers

$1.6B
IN SD-SPECIFIC CONTRACTS
$530M for small businesses

SAN DIEGO’S MILITARY FOOTPRINT

Military Bases in the San Diego Region

SOUTH

Imperial Beach

Naval Submarine Base San Diego

Naval Base San Diego

Naval Amphibious Base Coronado

Naval Base Coronado

Naval Medical Center San Diego

Naval Base San Diego

Imperial Beach

Naval Amphibious Base Coronado

Naval Base San Diego

Naval Medical Center San Diego
Creation of the Purple Elephant Program

• Talent shortage and lack of diversity identified as #1 industry pain point in regional economic impact and workforce studies
• Inspired by 2018 NICE Conference apprenticeship theme
• Convened academia and industry roundtables to discuss gap
• As the largest cyber employer, NAVWAR developed cybersecurity student-employee/apprenticeship criteria
• CCOE shared the criteria with both government and industry partners to cultivate a region-wide apprenticeship program
• Fostered partnerships with community colleges and continuing education programs to identify student cohorts
• Facilitate employer info sessions, matchmaking and interviews

Yielding…5 college district partnerships and 30+ student-employees hired and offered full-time employment to date!
Benefits and Lessons Learned

- Increased talent diversity – homogeneity is the bad actor’s best friend!
- Decreased turnover and training costs
- Customized work-based learning and skills development
- Upskilling of current workforce
- Team approach to mentorship
- Requires senior leadership, but…
- Creates a sustainable and responsive talent pipeline
“This is huge,” Yesenia Ponce said. “When you go to school, you don’t necessarily get any work experience. So to get this kind of an opportunity to work in a field you’d like to go into, and get a taste of what it’s like, is amazing. And then there’s a job waiting for you when you graduate with your bachelor’s degree? That’s just unbelievable.”
For more information, please visit:

https://sdcccoe.org/
Tuesday, January 25, 2022, 1:30-3:00 p.m. ET
Impactful Diversity, Equity, Inclusion, and Accessibility Initiatives for the Federal Cybersecurity Workforce

Register here: https://go.usa.gov/xe3kZ
2022 Federal Cybersecurity Workforce Summit

SAVE THE DATE
Tuesday, April 26, 2022
Complete Evaluation Form

• https://www.surveymonkey.com/r/L6JFZZX