

CYBER
SECURITY
CENTER

CAL STATE SAN BERNARDINO



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Cyber Security **Crisis**

230k+ open cyber jobs, 91% growth

Higher ed producing **<10k per year**
domestic talent

Commercial training/certs are **available to adversaries**

No situational awareness of cyber talent -
what is being produced?

Problem solving skills have given way
to **product training, no future proofing**

Cost for commercial intensive training can be \$3500 for a week-
one week, 10k people =\$3,500,000

Train cyber talent in government, then they **leave**

Cyber Security **Responses**

NSA/DHS Centers of Academic Excellence
in Cyber Defense/Ops- 220
Universities/Colleges



Minimally funded, no incentive beyond being designated
Strong community sharing ideas, no visibility of what talents
are developed and what are not

NSA GenCyber & Competitions-
Increasing the pipeline through
middle/highschool programs



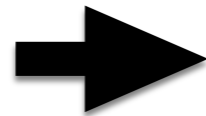
No permanent funding, "pilot" for years

NICE Framework- Cyber Security Workforce
framework for all cyber security job roles and
competencies



Comprehensive framework includes classified and
unclassified well defined competencies- American solution

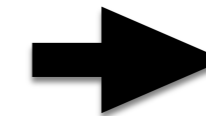
NSF CyberCorps: Scholarship for Service



Stemming the tide of attrition and incentive for government
cyber work

CR slowing hiring for important civilian positions

NSF Funded ATE Centers



Expertise and pipeline initiatives to grow a qualified
workforce

New Workforce needs



Cyber Security Intelligence- Proaction rather than reaction



NICE Challenge Project
Enabling the Cybersecurity Workforce of Tomorrow



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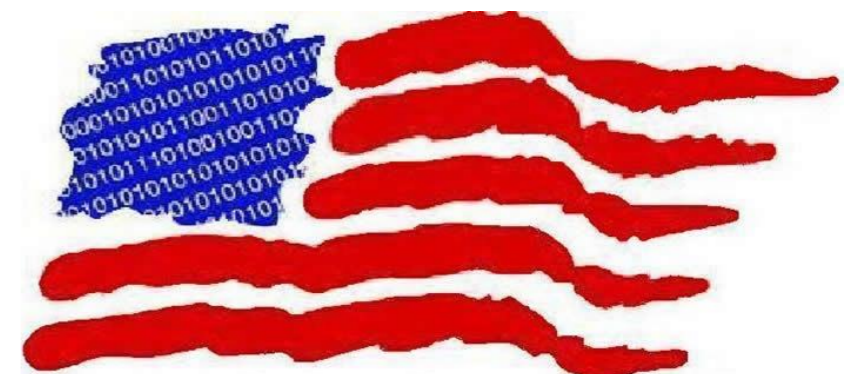
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National Science Foundation
WHERE DISCOVERIES BEGIN



NIST
National Institute of
Standards and Technology
U.S. Department of Commerce



CyberCorps®
Defending America's Cyberspace

Pipeline



www.gen-cyber.com

- Trains teachers and middle and high school students
- Builds domestic capacity in cyber leading to higher ed



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www.caecommunity.org

- NSA/DHS Designated higher ed schools- 220+, expand to 300
- Innovation and pipeline through high education

Competency and Visibility



- Pilot initiative funded by DHS/NSF/NIST/NSA virtual challenges based on the NICE (National Initiative for Cybersecurity Education) Workforce Framework tasks
- US ONLY challenge labs emphasize real world situations and give “Heat Map” of cyber skills readiness nationwide



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