National Cyber Security Awareness Month

Week Five:

Building the Next Generation of Cyber Professionals

Webinar recording and evaluation survey

- This webinar is being recorded and will be made available online to view later

  o Recording will also be available at www.naco.org/webinars

- After the webinar, you will receive a notice asking you to complete a webinar evaluation survey. Thank you in advance for completing the webinar evaluation survey. Your feedback is important to us.

Tips for viewing this webinar:

- The questions box and buttons are on the right side of the webinar window.

- This box can collapse so that you can better view the presentation. To unhide the box, click the arrows on the top left corner of the panel.

- If you are having technical difficulties, please send us a message via the questions box on your right. Our organizer will reply to you privately and help resolve the issue.

Today's Speakers

Mr. Dan Stein
Cyber Education and Awareness
CS&C, DHS

Mr. David Stevens
Chief Information Officer
Maricopa County, Ariz.

Mr. Sri Sridharan
Managing Director and Chief
Operating Officer
Florida Center for Cybersecurity
University of South Florida (USF)

Building the Next Generation of Cyber Professionals

Daniel Stein
Department of Homeland Security (DHS)
National Cybersecurity Education & Awareness Branch (CE&A)

October 28, 2015
National Association of Counties (NACo) NCSAM Webinar

National Cybersecurity Awareness Month

A collaborative effort, celebrated each October, between government and industry to raise awareness about staying safe online

- **Formally recognized by the President,** Congress, and leaders from industry and academia.

- **International reach and support** from partners such as Canada, the European Union, and Japan

- **2015 marks National Cyber Security Awareness Month's (NCSAM) 12th year**, spreading cybersecurity awareness across the nation

Learn more at:

- **dhs.gov/national-cyber-security-awareness-month**

- **StaySafeOnline.org/ncsam**

NCSAM 2015

Each week in October is dedicated to a specific cybersecurity theme. The five themes listed below offer the opportunity for government and industry to get involved in cybersecurity activities most relevant to them.

- **Week 1, October 1-2** – General Cybersecurity Awareness: 5 Years of Stop.Think.Connect.™

- **Week 2, October 5-9** – Creating a Culture of Cybersecurity at Work

- **Week 3, October 12-16** – Connected Communities: Staying Protected While Always Connected

- **Week 4, October 19-23** – Your Evolving Digital Life

- **Week 5, October 26-30** – Building the Next Generation of Cyber Professionals

Homeland
Security

The Future Workforce

- Tomorrow's cybersecurity workforce is sitting in **our classrooms today**
- Encourage **STEM** and **introduce cyber concepts** early to increase **interest in cybersecurity education and careers**

Global Shortfall

Projections show a global shortfall of 1.5 million cybersecurity professionals by 2020.[1]

Cybersecurity Salaries

3X National Average

Cybersecurity professionals report an **average salary of $116,000**, or approximately $55.77 per hour. That's nearly three times the national median income for full-time wage and salary workers, according to the Bureau of Labor Statistics.[2]

1. 2015 (ISC)[2] Global Information Security Workforce Study
2. CIO.com

Integrating Cybersecurity into the Classroom

Increase knowledge and interest at an earlier age

Free Cybersecurity Curriculum

- Over 45 weeks of easy-to-integrate cybersecurity curricula
- Workshops for teachers
- Camps for exploring aptitude
- Visit NICERC.org

Application Opportunities

- High school cyber competitions with real-world scenarios in a competitive environment
- CyberPatriot competition increased from 8 teams in 2009 to over 2,100 in 2015
- Visit cybercompex.org for a comprehensive list of competitions

Homeland Security

Cyber Scholarships

Get Paid to Earn a Degree and Get a Job After Graduation

CyberCorps®: Scholarship for Service (SFS):

- Scholarships in return for government service upon graduation https://SFS.OPM.Gov
- ~2,300 graduates since 2000 with a 93% placement rate
  A total of 56 institutions in 28 States and D.C. currently receive SFS scholarship awards.
- DHS sponsors an annual virtual SFS Job Fair and annual in-person SFS Job Fair
- List of participating schools https://www.sfs.opm.gov/ContactsPI.aspx?p=st

Top Schools

2-year, 4-year, and graduate school

National Centers of Academic Excellence (CAE)

- DHS and NSA designation
- Information Assurance/Cyber Defense (IA/CD) programs
- Additional cybersecurity focus area designations
- Students can feel confident in their degree
- Employers can feel confident that CAE students are gaining the knowledge and skills required to work in the field.

CAEs across the country
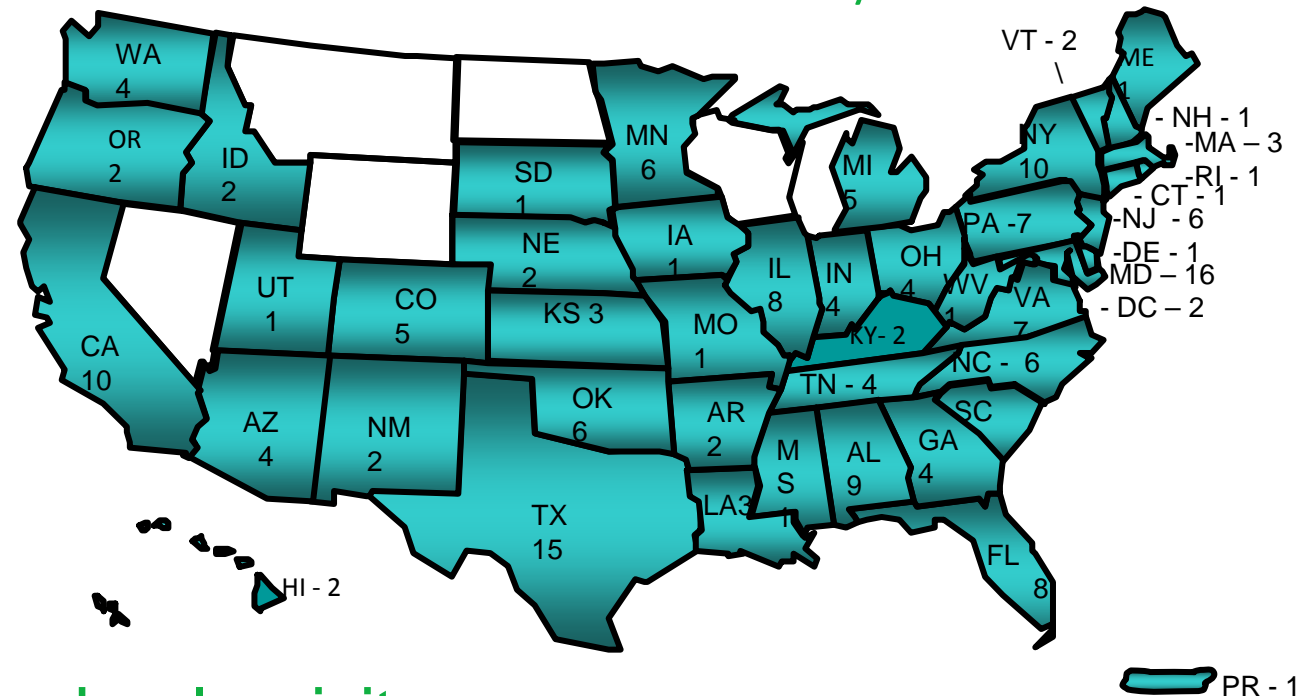
For a list of schools, visit:

https://www.nsa.gov/ia/academic_outreach/index.shtml

Training the Cybersecurity Workforce

DHS offers free cybersecurity training for U.S. government and veterans!

- ✓ Available to Federal, State, Local, Tribal, and Territorial government and US veterans!

- ✓ Courses ranging from beginner to advanced levels

- ✓ 55,000+ active users

- ✓ 42 courses and growing. Popular courses include certification preparation for the following exams:
  - Network +
  - Security +
  - Certified Information Systems Security Professional (CISSP)
 - Certified Ethical Hacker

Fedvte.usalearning.gov

Creating a Strong Cybersecurity Team

The Cybersecurity Workforce Development Toolkit equips you with resources to:

- ✓ **PREPARE** for workforce development

- ✓ **PLAN** your cybersecurity workforce

- ✓ **BUILD** a high-performing cybersecurity team

- ✓ **ADVANCE** cybersecurity staff with career development opportunities

Available online at niccs.us-cert.gov/
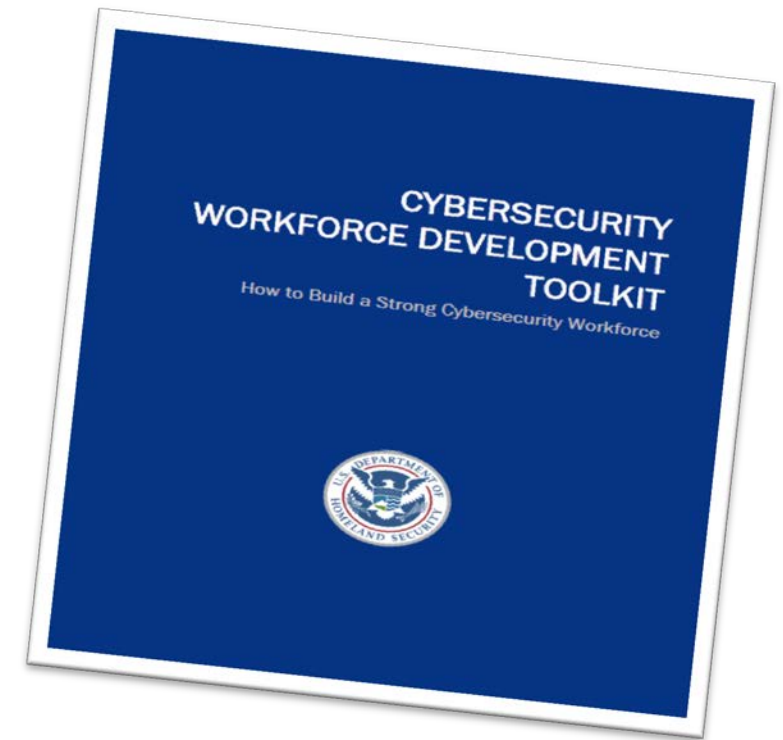
Thank You

For additional inquires, contact:

Dan Stein

Program Director,

National Cybersecurity Training and Education Program

Cybersecurity Education and Awareness Branch

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Email: Daniel.Stein@hq.dhs.gov

Homeland
Security

Office of Enterprise Technology
Week 5 Cyber Awareness Month
Building the Next Generation of Cyber Professionals

NACo

October 2015

 https://twitter.com/MaricopaCIO

Presented By:

David L. Stevens, Chief Information Officer

Week 5: October 26-30, 2015 – Building the Next Generation of Cyber Professionals

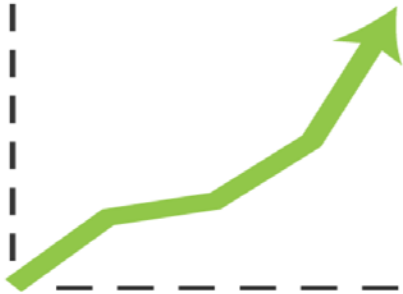**Bad News**

ALMOST TWO-THIRDS OF YOUNG AMERICANS don't know or aren't sure what the "cybersecurity" profession is according to the 2014 Raytheon-NCSA Millennial Survey: **staysafeonline.org/ncsam/resources/**

Good News

THE INDUSTRY IS BOOMING. The average cybersecurity professional **earns three times more** than the average worker, and according to the U.S. Bureau of Labor Statistics, jobs as network systems and information security professionals are **expected to grow by 53 percent in the next four years.**

NEARLY 40 PERCENT OF MILLENNIALS said they are more likely to choose a career in cyber safety than they were in 2013.

Salary Facts

SALARY FAST FACTS

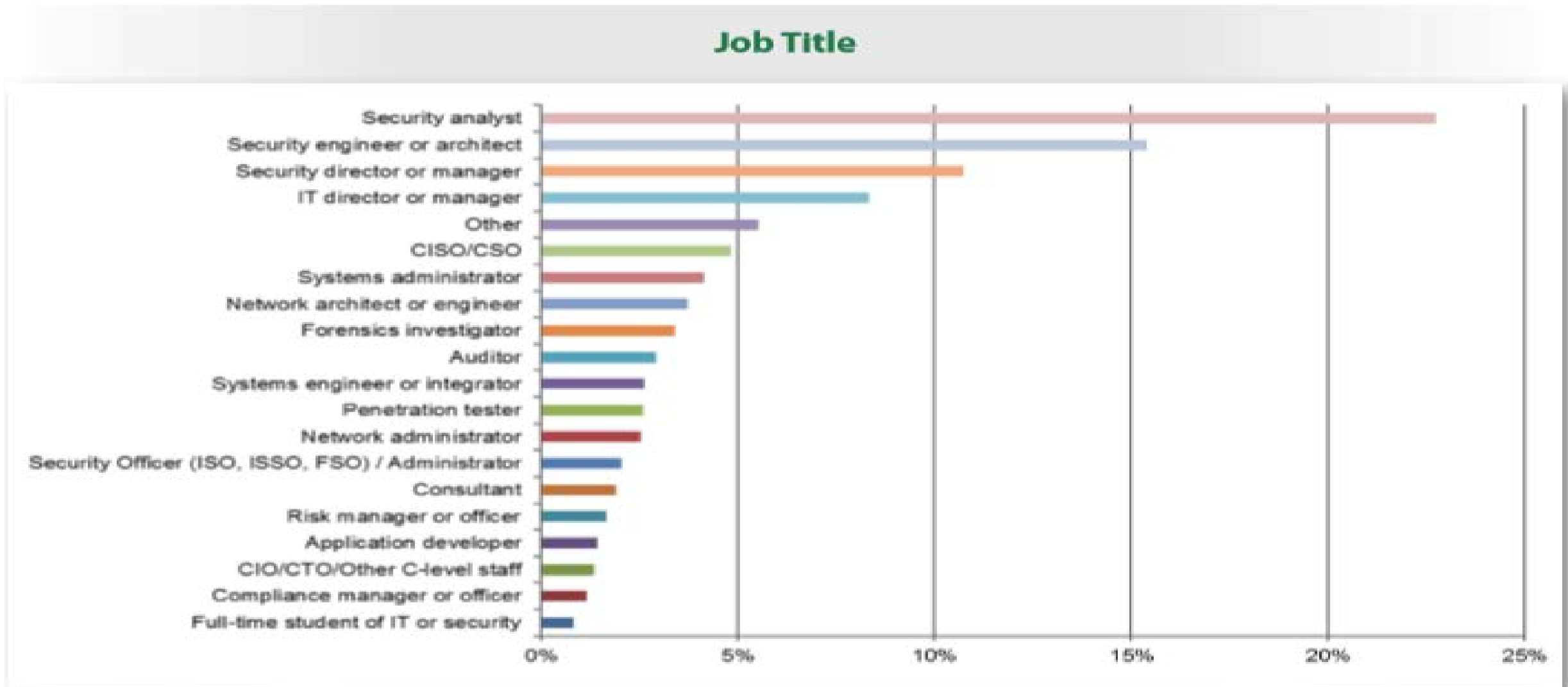Demand for cybersecurity experts **growing at three and a half times** the pace of the overall IT job market.

Cybersecurity professionals report an annual average salary of **$116,000 or approximately $55.77 per hour.** That's nearly three times the national median income for full-time wage and salary workers (U.S. Bureau of Labor Statistics).

A Cisco cybersecurity report estimated that in 2014 there were **1 million** unfilled cybersecurity security jobs globally.

The U.S. Bureau of Labor Statistics expects the information security analyst field **to grow by 37 percent by 2022,** which is much faster than the average job growth rate.

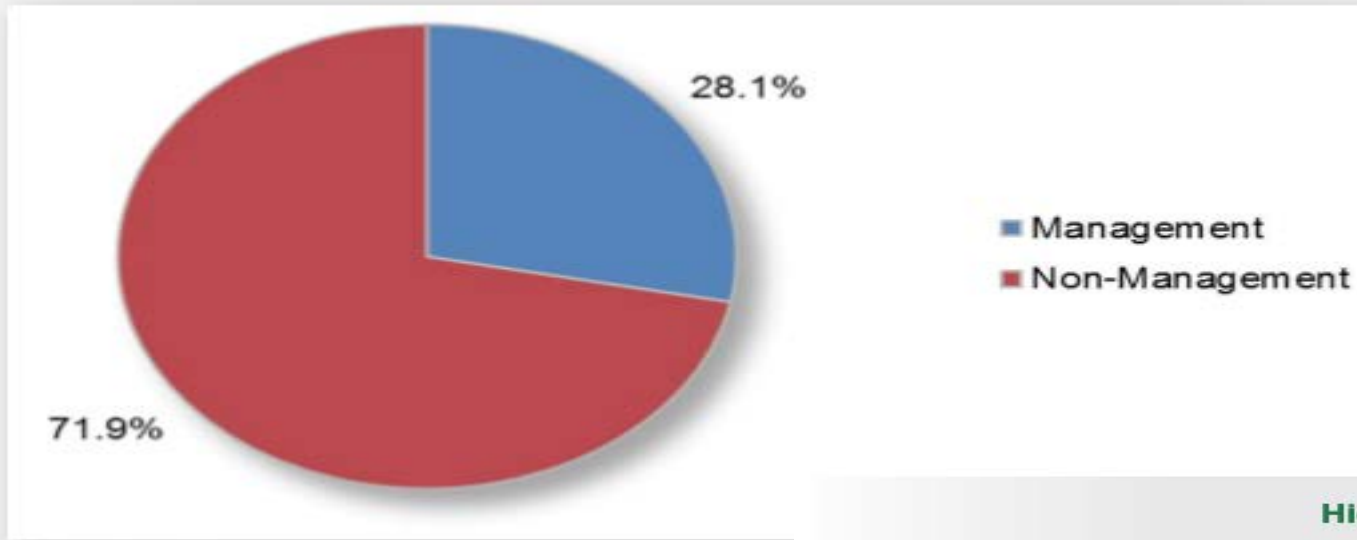Just out of college? The average salary starts at **$88,000+!**
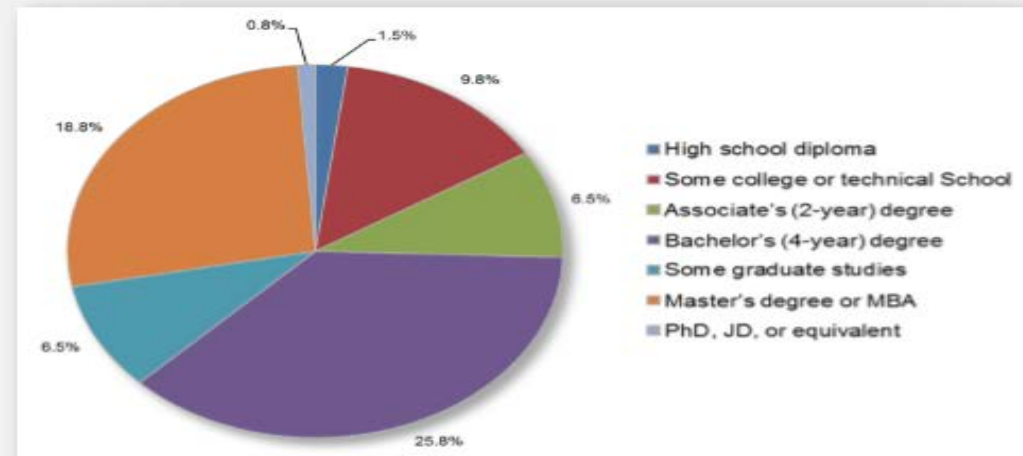
Cyber Security Job Titles

Current Distribution of Education

Categorization by Job Title

28.1%

71.9%

- Management
- Non-Management

Highest Level of Education

0.8% 1.5% 9.8%

18.8% 6.5%

6.5%

25.8%

- High school diploma
- Some college or technical School
- Associate's (2-year) degree
- Bachelor's (4-year) degree
- Some graduate studies
- Master's degree or MBA
- PhD, JD, or equivalent

Gaining Traction

Networking — • Memberships in ISACs and Community interest groups made it known that we had a program

Internships — • Hiring Summer Interns established experience that will be later cultivated to create value

Knowledge Transfer — • On the Job training resulted through shadowing results in enhanced capacity to support intiatives.

Standardization — • Documented processes created a learning opportunity for interns and value for the County

What to do

Find Talent

- get proactive about engaging tech talent

Attract Talent

- offer millennial's career paths, not just jobs

Build Skills

- rely more on competencies for workforce planning

Establish advertising campaigns

Create goals that result in promotions

Invest in training opportunities

NACO NCSAM WEBINAR
10/28/15

Presented by: Sri Sridharan

FLORIDA CENTER FOR CYBERSECURITY

LOCATED AT

CREATION

The Florida Center for Cybersecurity at USF will be a national model in cybersecurity, cyber-intelligence and digital forensics to create a safe and secure information infrastructure for business and national security.

- The Florida Board of Governors were called on by the 2013 Florida Legislature & asked to submit a report detailing the creation of the Florida Center for Cybersecurity (FC^2)

- FC^2 was enacted into law via proviso language in the General Appropriations Act for Fiscal Year 2013-2014 and signed by Gov. Rick Scott

- FC^2 is housed under the leadership of the University of South Florida and supports all (12) State University System institutions of Florida (SUS)

Florida Center for
Cybersecurity

MISSION

1. Position Florida as a national leader in cybersecurity and its related workforce through community engagement, education & innovative, interdisciplinary research

2. Create thousands of new, high-paying jobs in the state's cybersecurity industry

3. Serve as a statewide facilitator for cybersecurity education- providing degrees, certificates & training

4. Enhance Florida's cybersecurity workforce- including reintegrating military veterans by utilizing their specialized skills and training

5. Act as a cybersecurity clearinghouse for statewide business and higher education communities- sharing knowledge, resources & training opportunities to help mitigate cybersecurity threats & optimizing investment to eliminate unnecessary duplication

6. Attract new financial, healthcare, transportation, utility, and defense entities to Florida

Florida Center for
Cybersecurity

3 Pillars

- **Education**
  - Assist in closing the workforce gap by supporting fast-paced degree and certificate programs across the SUS institutions for new and current industry employees
  - Encourage industry and academia collaboration to ensure candidates have realistic and applicable workforce skills and experience
- **Research**
  - Promote entrepreneurial leadership in partnership with existing entities to create future cyber-solutions and economic opportunities through collaborative efforts across the SUS
- **Outreach**
  - Create cybersecurity awareness across all sectors- public, private and education; includes topics such as cyber hygiene, incident response & information sharing
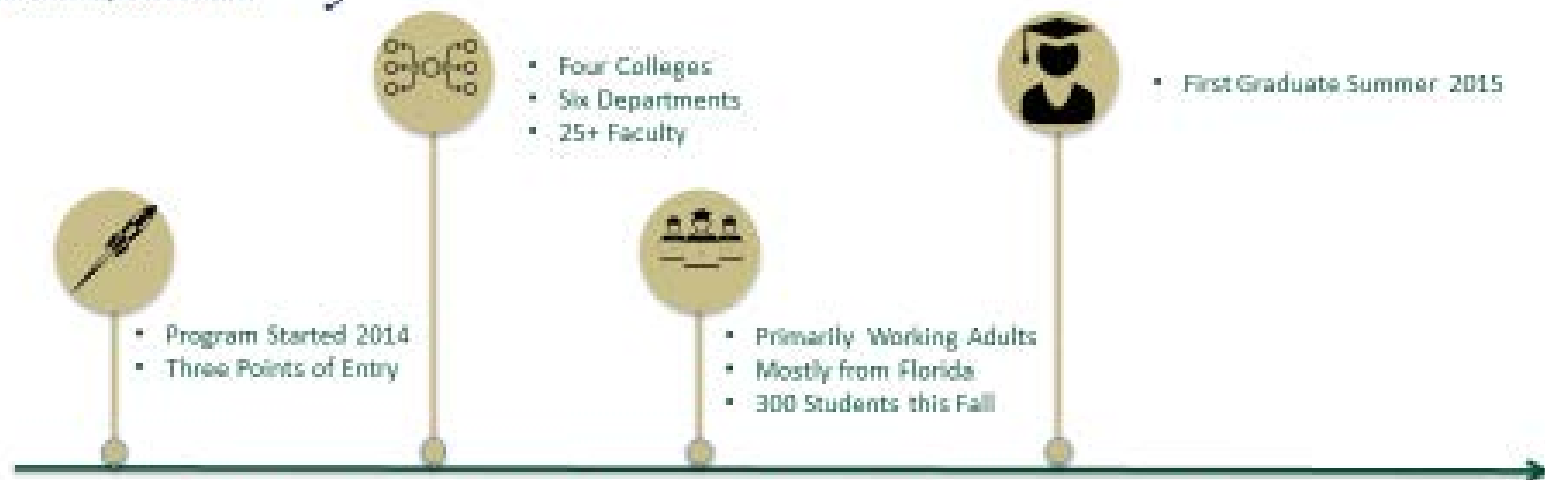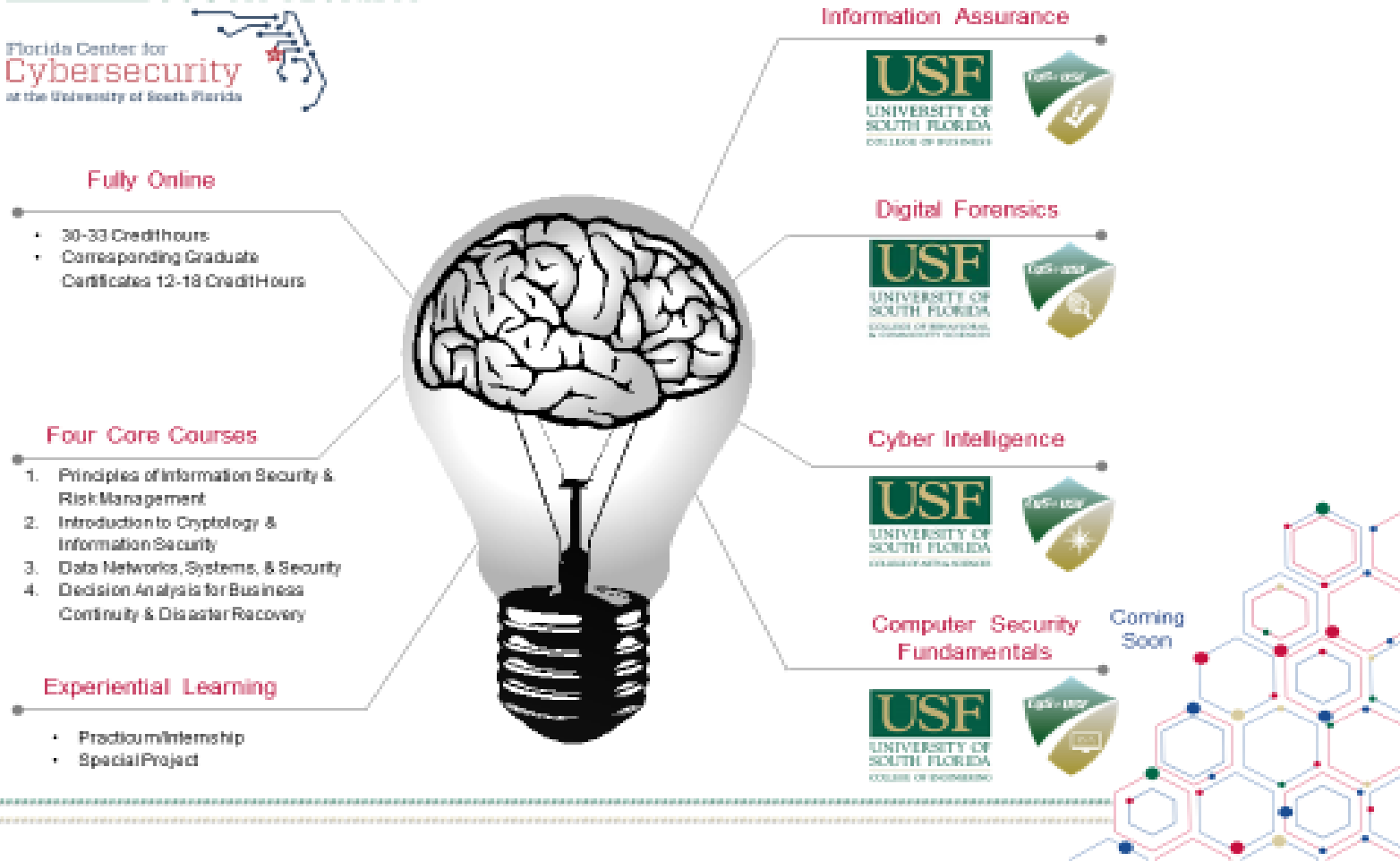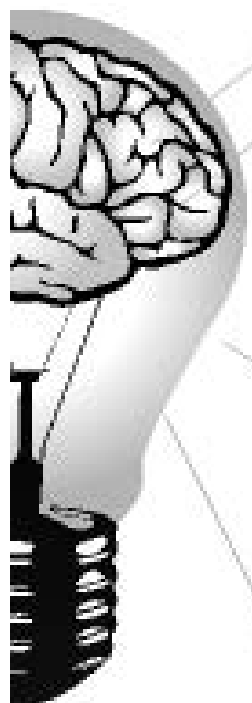
Florida Center for
Cybersecurity

USF UNIVERSITY OF SOUTH FLORIDA

Florida Center for
Cybersecurity
at the University of South Florida

Information Assurance

Any 4 of the following 5:

- Adv Systems Analysis and Design
- Adv Database Administration
- Statistical Data Mining
- Accounting Systems Audit, Control, and Security
- Risk Management & the Legal Environment

AND Any 1 of the following 3:

- Project Management
- Forensic Accounting & Legal Issues
- Seminar on Software Testing

Digital Forensics

- Cybercrime and Criminal Justice
- Digital Evidence Recognition
- Introduction to Digital Evidence
- Network Forensic Criminal
- Digital Forensic Criminal Investigations

Cyber Intelligence

- Information, Strategy & Decision Making
- Core Concepts in Intelligence
- Advanced Intelligence Analytic Methods
- Cyber Intelligence
- Advanced Cyber Intelligence
- Professional & Technical Communication for Analysts

Computer Security Fundamentals   Coming Soon

- Computer Architecture
- Operating Systems
- Graduate Algorithms
- Computer Systems Security
- One elective from another concentration

EDUCATION

NEW SKILLS FOR A NEW FIGHT

- FC^2 is proud to be launching a new program benefiting Florida's veterans in the Spring of 2016, thanks to the generous support of JPMorgan Chase & Co. – it will be called *"New Skills for a New Fight"*.
- The pilot program will include 20 student veterans who will participate in 24 weeks of fast-paced training in networking, programming, network operations, and security.
- Students will graduate with an undergraduate certificate, multiple industry certifications and will also gain hands-on industry experience through 12-week internships.
- Graduates of this program will be able to work full time in entry level analyst roles while pursuing their undergraduate degree online or part time.
- The goal is to create a successful program that can then be emulated by all SUS institutions across the state of Florida.

Florida Center for Cybersecurity

RESEARCH

- Generated more than $530,000 in grants, sponsorships & matching research dollars

- Awarded $500,000 for (12) seed grants for cybersecurity research to faculty from (10) different SUS institutions

Florida Center for Cybersecurity
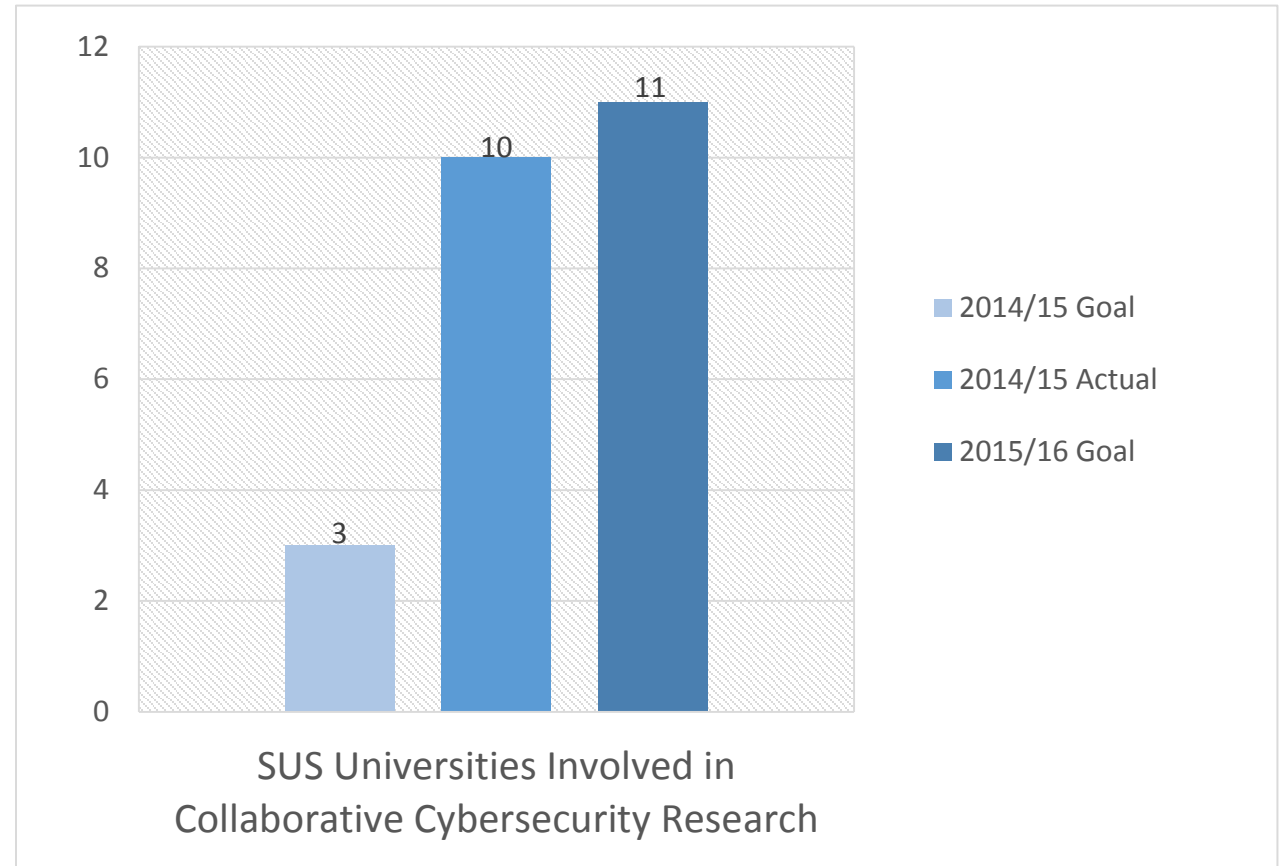
OUTREACH

- Since July 1st, 2014, FC^2 staff members have given more than **100 presentations**
  - Seminars
  - Conferences
  - Panel Discussions/Moderation
  - Events

- Average **attendance** at these speaking engagements is ~75 people

- FC^2 has reached more than **10,000 people** in their 1st year

Best Practices

Education

Awareness

Florida Center for Cybersecurity

Q&A

You may ask a question using the questions box on the right side of the webinar window.

Contact Information

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