

Helping to Chart the Course - Unlocking Student Pathways into Cybersecurity Careers

October 21, 2026

Notes and Reminders



Attendees are muted: Due to the number of attendees, all participant microphones and cameras are automatically muted.



Webinar Recording: This webinar and the engagement tools will be recorded. An archive will be available at www.nist.gov/nice/webinars.



Submitting Questions: Please enter questions and comments for presenters in the Zoom for Government Q&A. Chat is available for this event. Please be respectful and keep all comments professional and appropriate.



CE/CPE credits: The CEU form will be available on the event page after the event.

Helping to Chart the Course - Unlocking Student Pathways into Cybersecurity Careers

October 21, 2026



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Helping Chart the Course:

Unlocking Student Pathways into Cybersecurity Careers

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explore cyber



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What we'll cover



Why it matters

The workforce need and the awareness gap

Today: who cyber is for, and why students miss opportunities



Discover Possibilities

Connect strengths and interests to NICE Work Roles

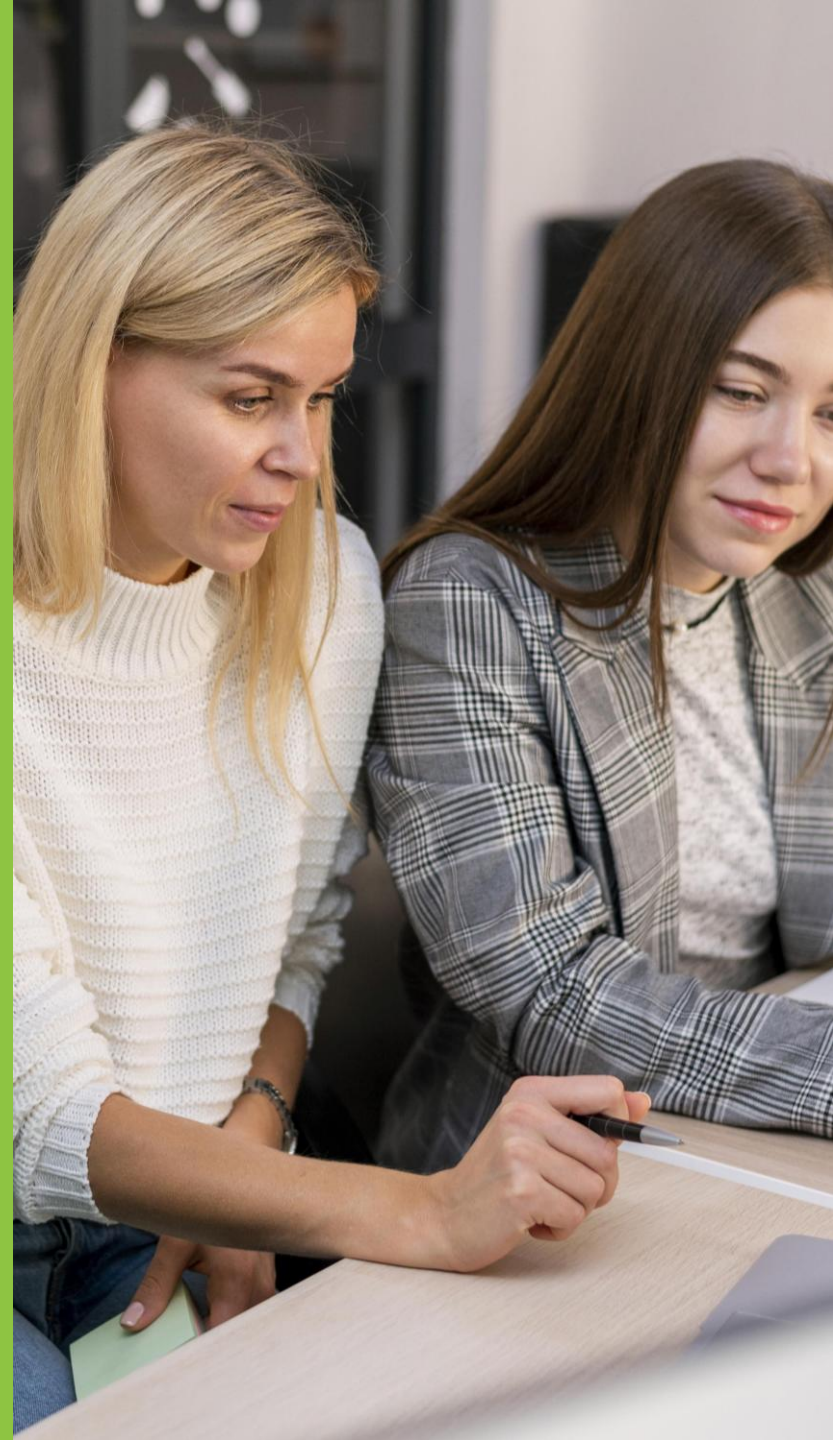
Today: the EXPLORE Model and work role matching



Build Pathways

Turn curiosity into education, experience, and actions

Today: practical resources & next steps



What you will leave with today



Explore interactive tools

Personality and work role matcher, TryCyber, CyberSeek, and the Explore Cyber Toolkit



Align interests to roles

Connect what students enjoy and do well to real roles in the NICE Framework and DCWF



Use adaptable strategies

The EXPLORE Model: seven steps from the Explore Cyber Toolkit



Cyber Guides: A community to keep going

Join the Explore Cyber Community of Practice: share what works, pilot new resources, and learn alongside peers.

Join our CoP:
info@explorecyber.org

Quick poll: what keeps people from exploring cybersecurity?

A

Lack of awareness

B

Limited advisor and counselor knowledge

C

Too many career options

D

Misconceptions about cybersecurity

E

Career readiness concerns

F

Competing with other disciplines



It's not just a talent gap. It's an awareness gap.

1

Hundreds of thousands of cybersecurity positions remain open

The U.S. alone has 500,000+ unfilled roles, and the gap is growing every year

CyberSeek / CompTIA, 2025

2

Many counselors & advisors report limited familiarity with cyber career pathways

78.6% of participants had little to no knowledge of the cybersecurity career landscape

3

Cybersecurity is often misunderstood

Many people associate cybersecurity primarily with hackers, cybercrime, and highly technical work, overlooking roles focused on protection, education, and risk management.

4

Students may not see themselves in cybersecurity

Cybersecurity careers span business, healthcare, education, communications, law, policy, manufacturing, and technology, yet many students believe the field is only for programmers and hackers



The result: Students may never discover cybersecurity careers that align with their interests, strengths, and goals. Explore Cyber is designed to address that gap.



The EXPLORE Model

From the Explore Cyber Toolkit: seven steps from awareness to a student-owned pathway

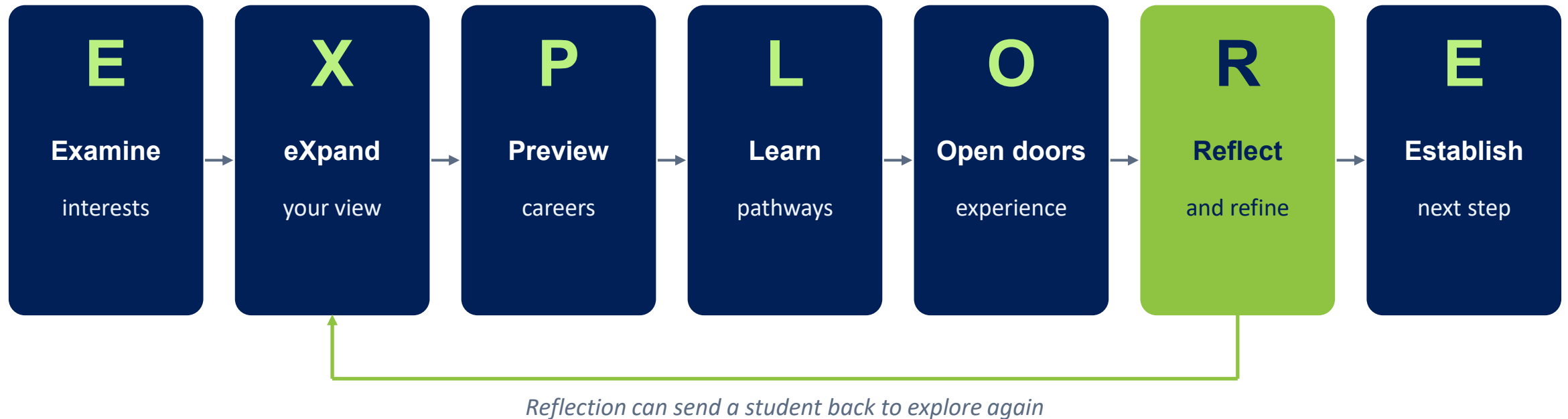


The EXPLORE Model:

- E** **Examine Your Interests**
Start with what the student enjoys, values, and wants to solve.
- X** **eXpand Your View**
See cyber beyond the hoodie-hacker myth.
- P** **Preview Career Possibilities**
Explore NICE Work Roles and career options worth investigating.
- L** **Learn Pathways**
Compare programs, credentials, transfer options, and other routes in.
- O** **Open Doors Through Experience**
Connect to labs, clubs, competitions, internships, and work-based learning.
- R** **Reflect and Refine**
Use new information and experiences to narrow, adjust, or expand the plan.
- E** **Establish Your Next Step**
Turn exploration into one concrete, achievable action.

The goal is not to pick a career for a student. It is to help the student build enough awareness, evidence, and confidence to choose a meaningful next step.

The EXPLORE model



Start with the student, not the job title. Students can enter at any step. A student who reflects and changes direction is using the model well.

Examine Interests:

Start with the student,
not a job title

- **Interests:** problems, causes, sectors, and activities that matter to them.
- **Strengths:** technical and transferable skills they already use.
- **Preferences:** collaboration, structure, analysis, creativity, service.
- **Context:** access, time, costs, prior learning, and personal goals.



E X P L O R E

Examine Your Interests: how do you work best?

Dimension	Preference	Cyber examples	Preference	Cyber examples
Energy	Extraversion	Awareness training, consulting	Introversion	Threat analysis, forensics
Information	Sensing	Compliance, auditing	Intuition	Threat modeling, strategy
Decisions	Thinking	Pen testing, engineering	Feeling	Policy, workforce development
Work style	Judging	GRC, project management	Perceiving	Incident response, threat hunting



Exploratory tools, not verdicts. Type is a conversation starter. Pair it with interests, values, and real experiences, and never use it to steer a student away from a role.

eXpand Your View:

Beyond the Hacker in a Hoodie



What people think of

- A hooded hacker in a dark room
- Only for coders and math whizzes
- Cybercrime, not careers



What the work really is

- Protecting hospitals, schools, cars, and power grids
- Writing policy, teaching, investigating, advising
- Teams of communicators, analysts, and builders

Cybersecurity has something for everyone!

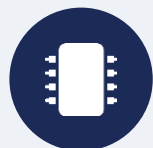
Paths into cybersecurity start in many disciplines, technical and non-technical.

Technical



Computer Science

Cyber operations, forensics



Computer / Electrical Eng.

Cyber engineering



Business IT

Cyber IT, network defense

Non-technical



Law and Criminal Justice

Legal, ethics, investigation



Public Policy

Governance, privacy, compliance



Social Sciences and Comm.

Human factors, awareness, training

Add a Side of Cyber



Business

Fraud, audit, risk, cyber insurance



Criminal justice

Digital forensics, cybercrime



Automotive

Connected vehicles, secure diagnostics



Healthcare

Patient data, medical devices



Manufacturing

Robots, PLCs, plant networks



Energy and water

Grid and treatment plant controls



Data and AI

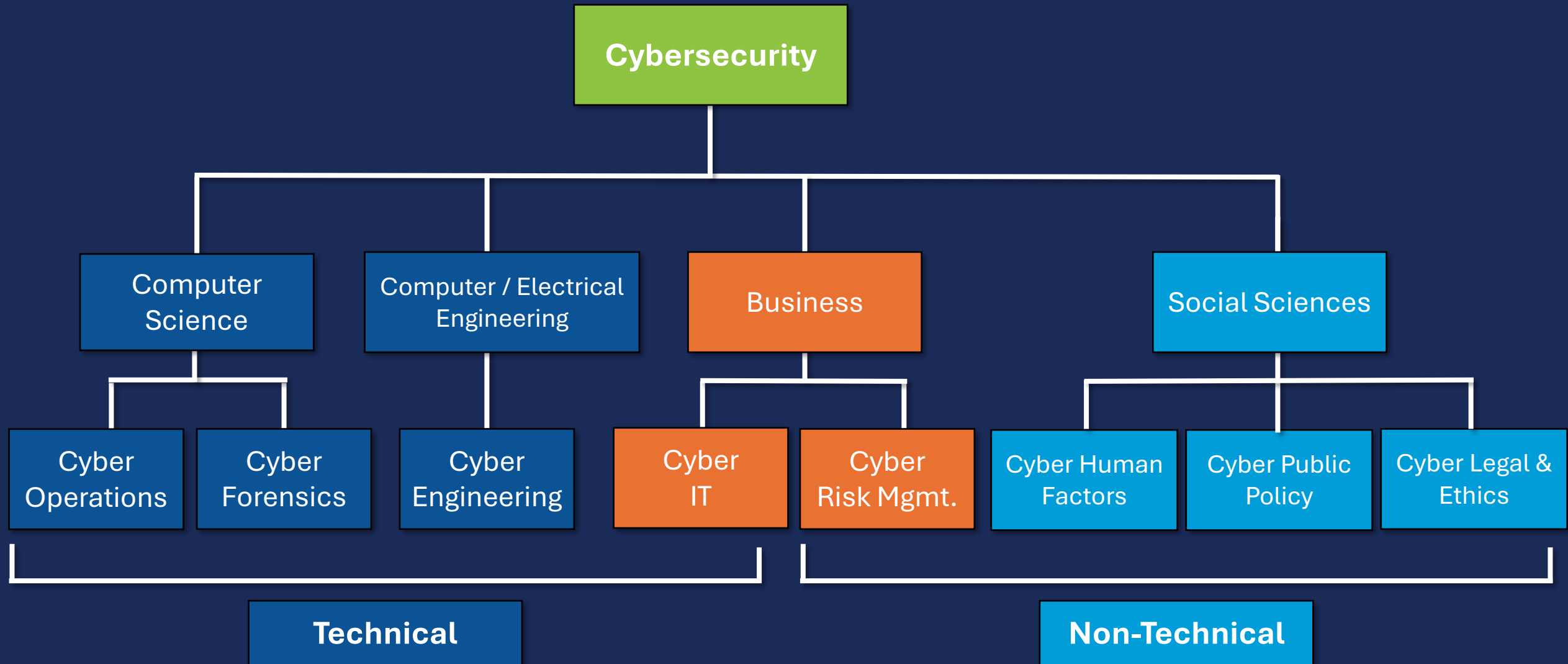
Threat analytics, AI security



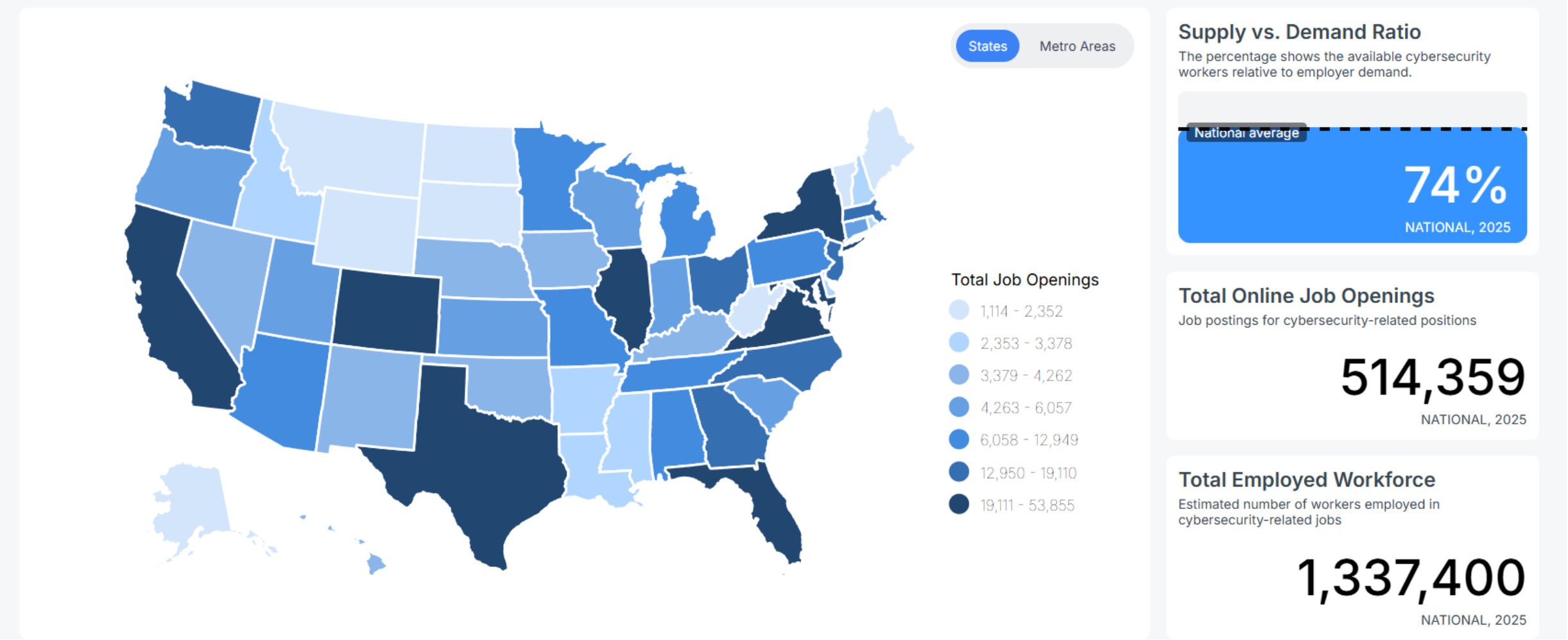
Teaching and training

Awareness training, human factors

Add cyber through a certificate, minor, or second major. Ask: “Can we add cyber to the path you already like?”



CyberSeek Heat Map & Career Pathways



Preview Career Possibilities

NICE v2.2.0: 5 categories, 42 work roles



Oversight and Governance



Design and Development



Implementation and Operation



Protection and Defense



Investigation

Three steps with the matcher

1

Find your type

16personalities.com or the Quick Personality Explorer

2

Match to roles

i.explorecyber.org returns top 10 NICE or DCWF matches

3

Explore the role

Open each role's tasks, knowledge, and skills on NICCS

Preview: interests to roles students recognize

If a student...	Explore this role	NICE category
Likes puzzles and patterns	Security / SOC Analyst	Protection and Defense
Enjoys games and challenges	Penetration Tester	Protection and Defense
Into criminal justice	Digital Forensics Analyst	Investigation
Detail-oriented and technical	Network / Systems Defender	Implementation and Operation
Loves writing, law, or debate	Risk, Policy, or Privacy Analyst	Oversight and Governance
Likes designing and building	Security Engineer / Architect	Design and Development
Enjoys helping people learn	Cyber Educator / Trainer	Oversight and Governance
Likes business, contracts, or logistics	Supply Chain Risk Manager (new)	Oversight and Governance

Personality and Work Role Matcher

A

Find your type

Quick Personality Explorer (high school or adult) or 16Personalities

B

See your matches

Top NICE work roles, plus an optional DCWF view

C

Dig into one role

Tasks, knowledge, and skills from the role's NICCS page

D

Reflect and discuss

Connect results to interests and talk with an adult



i.explore cyber.org

Scan to try it now

A conversation starter, not a verdict. The workbook turns this into a graded assignment with a 20-point scoring guide.

E

X

P

L

O

R

E

Personality Exploration & Work Role Matcher



i.explorecyber.org



ExploreCyber — Personality & Work Role Matching

Discover cybersecurity careers aligned to how you prefer to think, learn, and work.

Get Started in Two Easy Steps

1. **Learn your personality type.** Visit 16Personalities.com and take the free assessment:

Free Personality Test (16Personalities)

Prefer a faster check? Try our Quick Personality Explorer:

Quick Personality Explorer (High School)

Quick Personality Explorer (Adult)

2. **Use your type to match work roles.** With your four-letter type (e.g., *INTJ*, *ESFP*), explore cybersecurity roles using either the NICE (NIST) or DCWF (DoD) framework.

Tip: Use these results as a conversation starter, not a final answer. Combine this tool with real experiences such as student clubs, workshops, or internships to explore your best fit.

Explore Your Match Using the NICE and DCWF Framework

NICE and DCWF share a common language for describing cyber work. The NICE Framework (NIST) standardizes how roles are described across education, industry, and government. The DoD Cyber Workforce Framework (DCWF) builds on NICE for defense needs, adding DoD-specific role codes, qualification levels, and certification guidance. Together, they help you map roles from civilian to defense contexts.

NICE Framework

What it is: The NICE Workforce Framework for Cybersecurity (NICE Framework), developed by NIST, is a nationally focused resource that establishes a common lexicon for describing cybersecurity work and workers across public, private, and academic sectors.

DCWF Framework

What it is: The DoD Cyber Workforce Framework (DCWF) is a standardized framework developed by the Department of Defense to categorize and describe the full spectrum of cyber workforce roles, building upon the NICE Framework but tailored for DoD-specific needs.

Match Your Personality Type with a Work Role

explorecyber

Home

Personality Type → NICE Work Role Matcher

Powered by the latest **NICE Framework** to help you discover cybersecurity careers aligned with your personality type.

How to Use This Tool for Career Exploration

1. Enter your Name (if printing) and select your Personality Type to begin.
2. Click on each Work Role title to open the NICCS Work Role Explorer Page, where you can learn more about each role's Tasks, Knowledge, Skills, and Abilities (KSAs).
3. Talk with a Teacher, Counselor, Advisor, Mentor, or Professional in the field to gain additional insight and mentorship about the roles that interest you.

Tip: Use these results as a conversation starter, not a final answer. Combine this tool with real experiences such as student clubs, workshops, or internships to explore your best fit.

Select your personality type to view your cybersecurity behavioral profile and your **Top 10** matched work roles across the NICE Framework, and use it to explore which cybersecurity careers might fit you.

[Getting Started with the NICE Framework \(NIST\)](#)

Name:

Personality Type:

Choose...

Print Results

NICE Framework

The **NICE Framework** describes cybersecurity work through **5 Categories** and **42 Work Roles**, offering a common language for identifying and guiding cybersecurity work across education, industry, and government. Understanding the NICE Framework is essential for anyone pursuing cybersecurity careers, as it connects Tasks, Knowledge, Skills, and Abilities

ENTP — The Debater

Exploratory • Challenge-seeking • systems Strong in testing and novel solutioning.

Top 10 Work Role Matches

To explore each Work Role in depth—including its **Tasks**, **Knowledge**, and **Skills**—click on the **Work Role title** to visit the **NICCS Work Role page**.

Secure Software Development

Category: Design and Development (DD) · DD-WRL-003

Executes software planning, requirements, risk management, design, development, architecture, modeling, and security using software development methodologies.

Excellent Fit

Software Security Assessment

Category: Design and Development (DD) · DD-WRL-005

Analyzes the security of new or existing computer applications, software, or specialized utility programs and provides actionable results.

Excellent Fit

Cybersecurity Architecture

Category: Design and Development (DD) · DD-WRL-001

Excellent Fit

E X P L O R E

Explore Your Matches

ENTP — The Debater

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Excellent Fit

Cybersecurity Architecture

Category: Design and Development (DD) • DD-WRL-001

Excellent Fit

NICCS[®]

NATIONAL INITIATIVE FOR CYBERSECURITY CAREERS AND STUDIES

ABOUT

CONTACT

SUBSCRIBE

Cybersecurity by Audience

Training

Interactive Tools

Resources

News & Events

Interactive Tools

NICE Workforce Framework for Cybersecurity (NICE Framework)

Work Role Search

Secure Software Development

Secure Software Development

Responsible for developing, creating, modifying, and maintaining computer applications, software, or specialized utility programs.

DD-WRL-003

Task Statements

Knowledge Statements

Skill Statements

Source: Workforce Framework for Cybersecurity (NICE Framework) (NIST SP 800-181 Rev 1) (Version: 2.1.0)

WORK ROLE CATEGORIES

COMPETENCY AREAS

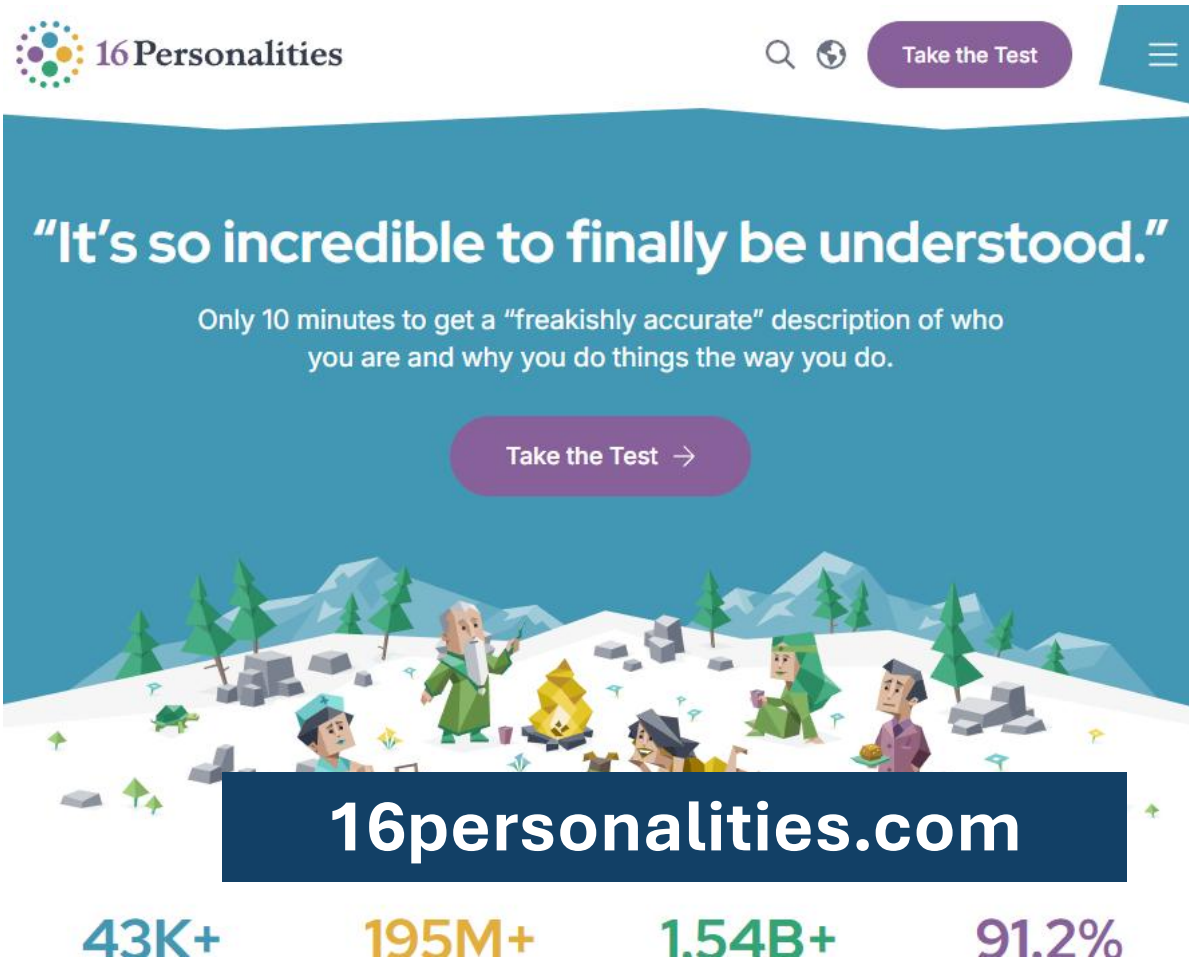
WORK ROLE SEARCH

TASK SEARCH

KNOWLEDGE SEARCH

SKILL SEARCH

Find Your Personality Type



The banner for 16Personalities features a colorful logo at the top left, a search icon, a globe icon, and a "Take the Test" button. The main text reads: "It's so incredible to finally be understood." followed by "Only 10 minutes to get a 'freakishly accurate' description of who you are and why you do things the way you do." Below this is another "Take the Test" button with a right arrow. The background illustration shows a group of diverse people in a snowy, mountainous landscape with a campfire. At the bottom, a dark blue bar displays the website URL "16personalities.com" and four statistics: "43K+", "195M+", "1.54B+", and "91.2%".

16Personalities

Take the Test

"It's so incredible to finally be understood."

Only 10 minutes to get a "freakishly accurate" description of who you are and why you do things the way you do.

Take the Test →

16personalities.com

43K+ 195M+ 1.54B+ 91.2%



The ExploreCyber banner has a dark blue header with the "exploreCyber" logo. Below it, a dark blue bar contains the text "ExploreCyber — Personality & Work Role Matching" and "Discover cybersecurity careers aligned to how you prefer to think, learn, and work." The main content area is white and titled "Get Started in Two Easy Steps". Step 1 is "Learn your personality type. Visit 16Personalities.com and take the free assessment:", followed by a green button "Free Personality Test (16Personalities)". Below this is a red-bordered box containing two blue buttons: "Quick Personality Explorer (High School)" and "Quick Personality Explorer (Adult)". Step 2 is "Use your type to match work roles. With your four-letter type (e.g., INTJ, ESFP), explore cybersecurity roles using either the NICE (NIST) or DCWF (DoD) framework." Below the steps is a light green box with text: "as a conversation starter, not a final answer. Combine this tool with real experiences workshops, or internships to explore your best fit." At the bottom left is a QR code, and at the bottom right is a dark blue bar with the URL "i.exploreCyber.org".

exploreCyber

ExploreCyber — Personality & Work Role Matching

Discover cybersecurity careers aligned to how you prefer to think, learn, and work.

Get Started in Two Easy Steps

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as a conversation starter, not a final answer. Combine this tool with real experiences workshops, or internships to explore your best fit.

i.exploreCyber.org

16 Personalities

Analysts

Intuitive (N) and Thinking (T) personality types, known for their rationality, impartiality, and intellectual excellence.

Architect
INTJ

Logician
INTP

Commander
ENTJ

Debater
ENTP

Diplomats

Intuitive (N) and Feeling (F) personality types, known for their empathy, diplomatic skills, and passionate idealism.

Advocate
INFJ

Mediator
INFP

Protagonist
ENFJ

Campaigner
ENFP

Sentinels

Observant (S) and Judging (J) personality types, known for their practicality and focus on order, security, and stability.

Logistician
ISTJ

Defender
ISFJ

Executive
ESTJ

Consul
ESFJ

Explorers

Observant (S) and Prospecting (P) personality types, known for their spontaneity, ingenuity, and flexibility.

Virtuoso
ISTP

Adventurer
ISFP

Entrepreneur
ESTP

Entertainer
ESFP

Explore This Type

Introduction	
Strengths & Weaknesses	→
Romantic Relationships	→
Friendships	→
Parenthood	→
Career Paths	→
Workplace Habits	→
Conclusion	→

Introduction

WHO IS THE DEBATER PERSONALITY TYPE?

ENTP (Debater) is a personality type with the **Extravert** to be bold and creative, deconstructing and rebuilding vigorously despite any resistance they might encounter.

Quick-witted and audacious, people with this type are not afraid to disagree with the status quo. In fact, they challenge much anything or anyone. Few things light them up like sparring – and if the conversation veers into territory they don't like, they'll shut it down.

It would be a mistake, though, to think of ENTPs as just argumentative. Instead, people with this personality type are

Hands-on: map these students to work roles



Maya, 11th grade

Loves true-crime podcasts, organized, takes careful notes, quieter in groups (ISTJ)



Devon, community college

Communications major, outgoing, loves helping people, interested in law (ENFJ)



Sam, adult career changer

Former pharmacy technician, detail-focused, enjoys rules and procedures (ISFJ)

Your turn: pick one student. Name a NICE category, two work roles, and one first step.

Learn Pathways: the route, not just the job



Find a CAE school

NSA-designated Centers of Academic Excellence:
maps.caecommunity.org



Stack credentials

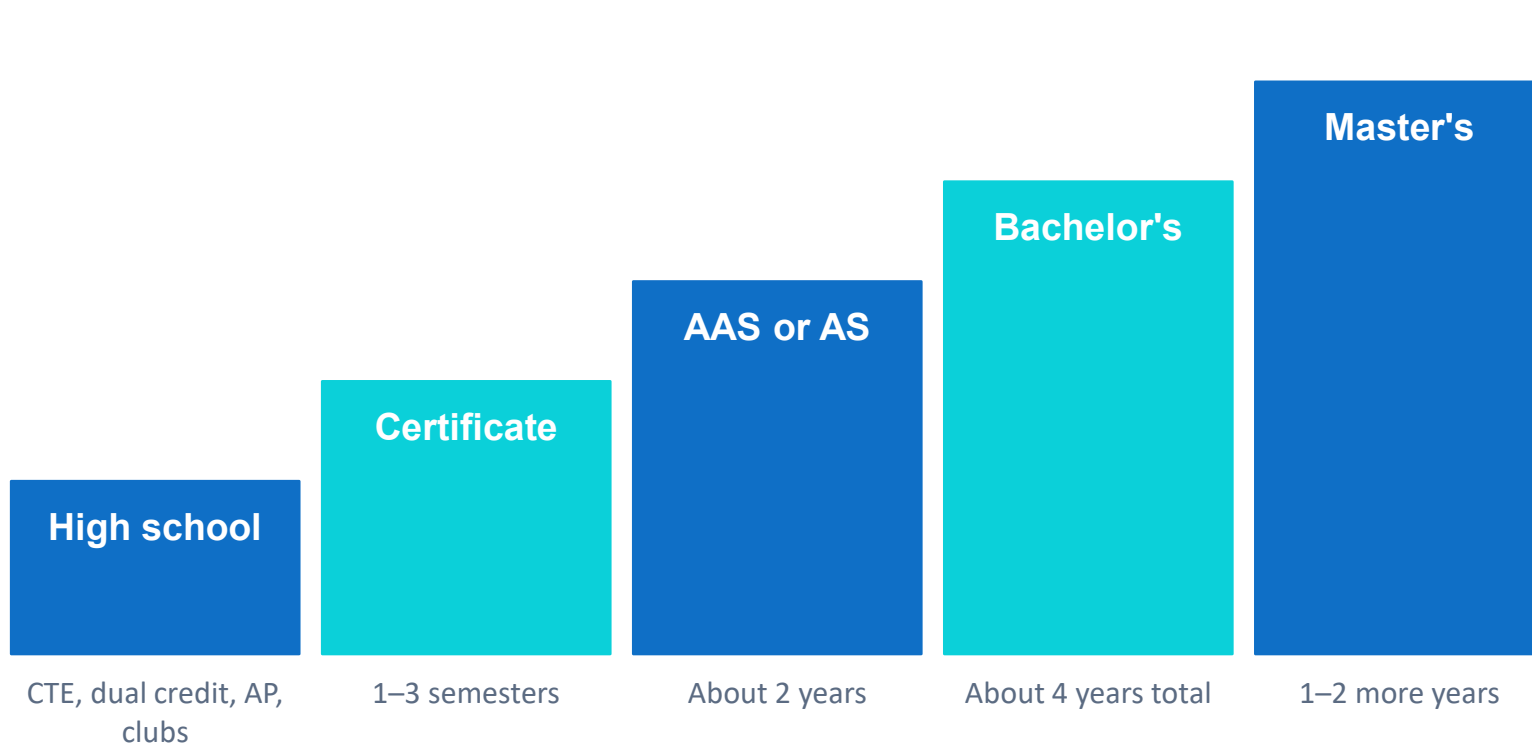
Start with entry certs (e.g., Security+), then specialize



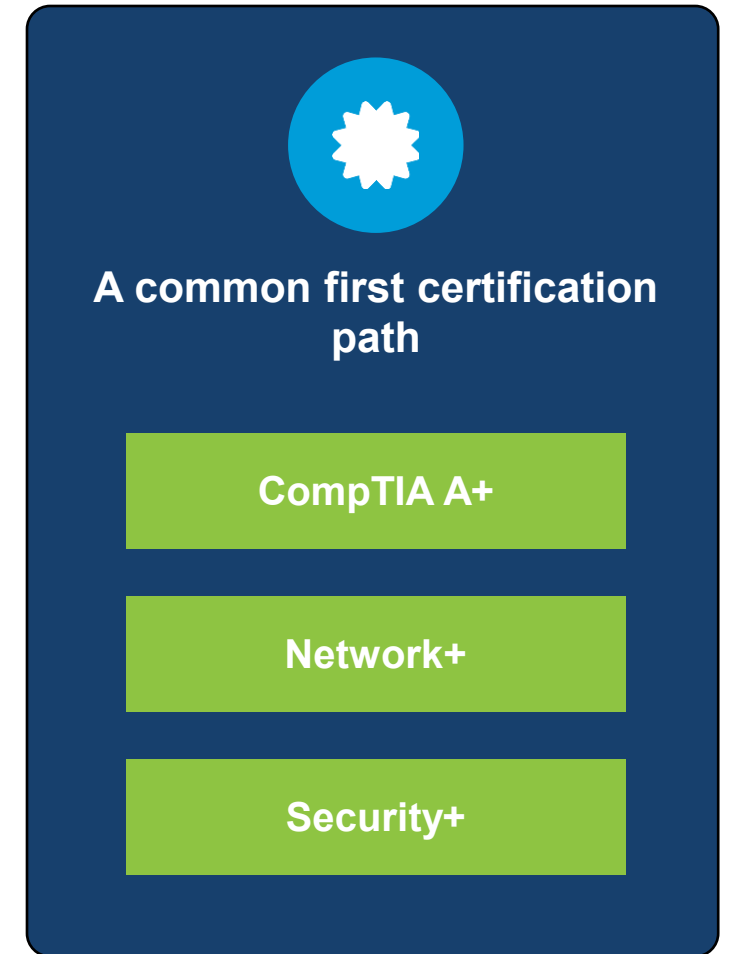
Fund it

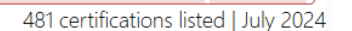
CyberCorps SFS, DoD Cyber Service Academy, FAIT Fellowship, Last Mile, and other scholarships

Stackable Credentials



Students can work between steps, lowering cost and risk.





E X P L O R E

Build a trustworthy record early



Investigators look at

- Honesty on forms, the most important factor
- Finances and unpaid debts
- Drug use, including marijuana under federal law
- Criminal activity, including unauthorized hacking
- Online behavior and judgment



Good online hygiene

- Strong passwords and multi-factor authentication
- Private settings; think before posting
- Practice hacking only where permitted
- Keep devices updated

Project SCOPE (project-scope.org) from the Fort Meade Alliance helps middle school, high school, and college students, parents, and teachers understand security clearances.

Open Doors Through Experience



TryCyber

Quick challenges tagged to NICE tasks

trycyber.us



National Cyber League

Seasonal games with a scouting report

nationalcyberleague.org



NCAE Cyber Games

Beginner-friendly team competition

ncaecybergames.org



Free courses with badges

Cisco and Microsoft intro courses

netacad.com | learn.microsoft.com



Field-specific interactives

Defend the Hospital, HackableHospital

cyberskillslive.com



Community and internships

WiCyS, CISA internships, clubs

wicys.org | cisa.gov/careers

Cybersecurity Activities & Competitions



<https://www.xpcyber.com/>



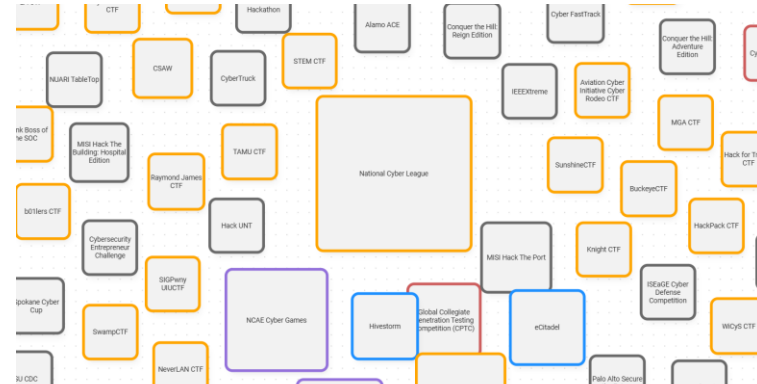
<https://trycyber.us>



<https://nationalcyberleague.org>



<https://www.ncaecybergames.org/>



<https://cyber-atlas.caecommunity.org/>

Cyber Work Role Discovery & Exploration

SELECT CHALLENGE

Filter Challenges: All Challenges

Cybercrime Investigation [NEW]

Non-Technical Challenge | Difficulty: ☆

Assist in identifying application logs that contain evidence of a cybercrime. [DCWF: 635 | NICE: T1198]



Network Operations

Technical Challenge | Difficulty: ☆

Assist with adding additional IP addresses to a server's network interface. [DCWF: 857 | NICE: T1314]



Privacy Compliance [NEW]

Non-Technical Challenge | Difficulty: ☆

Help review an AI companies privacy and data security policies to confirm compliance. [DCWF: 5766 | NICE: T1853]



Systems Administration

Technical Challenge | Difficulty: ☆

Assist with managing system privileges by adding users to privileged groups. [DCWF: 695 | NICE: T1569]



Systems Security Ma

Non-Technical Challenge | Difficulty: ☆

Help conduct a risk assessment and rep [NICE: T1300, T1586]

Data Analysis

Technical Challenge | Difficulty: ☆ ☆

Help identify troubling trends in the intr 5100 | NICE: T0349]

Digital Evidence Ana

Technical Challenge | Difficulty: ☆ ☆

Help scan digital evidence for malicious

Cybercrime Investigation [NEW]

Non-Technical Challenge | Difficulty: ☆

Assist in identifying application logs that contain evidence of a cybercrime. [DCWF: 635 | NICE: T1198]



trycyber.us



E X P L O R E

Extracurricular Activities & Competitions



Introduction to Cybersecurity

This course is part of the **Career Path - Junior Cybersecurity Analyst**

Explore the exciting field of cybersecurity and why cybersecurity is a future-proof career.

Self-Paced Online
Learn online at your own pace

Instructor-Led
Learn with an academy

English (English)

Get Started With Self-Paced
8,331,872 already enrolled

AVAILABLE LANGUAGES
العربية, Bahasa Indonesia, 中文(简体), Deutsch, English, Español, Français, Ελληνικά, Italiano, 日本語, 한국어, Nederlands, Polski, Português, Română, ไทย, Türkçe, Український

FREE **6 HOURS** **BEGINNER**

7 LABS **SELF-PACED**

<https://www.netacad.com/>



<https://www.cisa.gov/careers/work-rolescyber-and-it-interns>

Microsoft Learn: Free Courses with Badging



4500 XP

Describe the concepts of cybersecurity

2 hr 17 min • Learning Path • 0 of 6 modules completed

At a glance



Level

Beginner



Product

Azure, Microsoft 365



Role

Business Owner, Business User, Student



Subject

Security

Knowing the fundamentals of cybersecurity is a first step toward protecting against cyberthreats. In this learning path you will learn about cybersecurity concepts and ways to protect yourself and your business from cyberattacks.

<https://learn.microsoft.com/en-us/training/paths/describe-basic-concepts-of-cybersecurity/>



Cybersecurity Scholarship Opportunities

- **CyberCorps: Scholarship for Service**

<http://sfs.opm.gov>



- **DoDCyber Service Academy**

<https://www.cyber.mil/dod-workforce-innovation-directorate/csa/>



- **Foreign Affairs Information Technology Fellowship**

<https://www.faitfellowship.org/>

- **Diplomatic Technology Officer Career:**

<https://www.faitfellowship.org/dto-career/>

Match Resources to Readiness

Resource ladder

1. See it

CYBER.ORG profiles, CyberSeek

2. Try it

NOVA Cyber Lab, KC7 detective game

3. Practice it

CyLab Security Academy (formerly picoCTF), TryCyber

4. Learn it

Cisco Intro to Cybersecurity /
Microsoft Learn / RING

5. Apply it

CyberPatriot, NCL, internships

Ways to pay



FAFSA first

Unlocks Pell, state aid, and scholarships



Workforce Pell

Short-term programs, starting July 2026



CyberCorps: SFS

\$27K / \$37K yearly stipends plus tuition



DoW Cyber Service Academy

Tuition plus stipend for DoW service



Apprenticeships

Earn while you learn

Reflect and Refine: Discover What Fits

1 Reflect on discoveries

What did you learn about yourself, your interests, and the cybersecurity careers you explored?

2 Evaluate career fit

Which roles best align with your strengths, values, goals, and the kind of work you enjoy?

3 Learn from experience

What activities did you enjoy? What surprised or challenged you? What would you try again?

4 Refine your direction

Which opportunities deserve a closer look? Revisit earlier EXPLORE steps as your interests evolve.

Reflect and Refine: SI as a thinking partner

1 Identify strengths

"Student is a Comm major, detail-oriented, motivated by helping people, interested in law. What NICE roles fit?"

2 Find transferable skills

"Identify transferable cybersecurity skills from this student's experience as a pharmacy technician."

3 Tailor the resume

"Rewrite these internship bullets for a GRC Analyst role using NICE Framework knowledge statements."

4 Compare options

"Compare SOC Analyst, GRC Analyst, and Digital Forensics careers: duties, skills, pay, advancement."

Establish Your Next Step: a 6-month plan

Months 1–2

Examine

- Take the matcher
- Finish 3 TryCyber challenges
- Join a club or WiCyS chapter

Months 3–4

Build

- Free course with a badge
- Compete in NCL or NCAE Cyber Games
- Update resume with AI + advisor

Months 5–6

Reflect

- Informational interview with a pro
- Apply for a scholarship or internship
- Revisit EXPLORE and set the next step

Prompt: "Create a 6-month plan for a student targeting SOC Analyst with no cyber certs yet."

4 Ways to Get Involved



1. Try it

Use one EXPLORE activity with a student this semester



2. Share it

Send feedback or a student success story



3. Pilot it

Test new activities, worksheets, and workshops



4. Lead it

Co-present or host a Cyber Guide session in your region



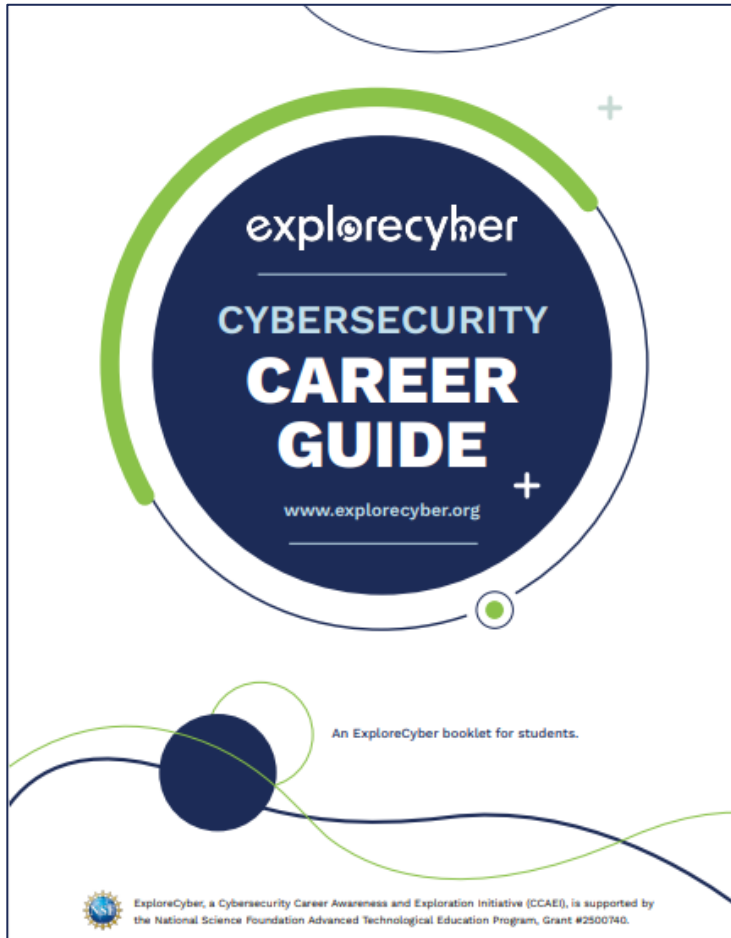
**Scan to join the
Cyber Guides**

explore.cyber.org/contact

Tell us your role, school, and how you'd like to take part.

Before you leave: scan to sign up, and write down one student you'll guide this month.

Cybersecurity Career Awareness Toolkit



- **Career Guide** – Supports counselors and advisors in guiding students into cybersecurity careers.
- **Education Pathways** – Covers degrees, certifications, and scholarships.
- **Career Tools** – Features NICE & DCWF Frameworks, CyberSeek, and CYBER.ORG resources.
- **Hands-on Experience** – Highlights competitions and workforce readiness programs.

Cybersecurity Career Awareness Toolkit

5

Career Counselors and Academic Advisors Cybersecurity Careers Toolkit

DEFINING AND UNDERSTANDING THE CYBERSECURITY WORKFORCE

The cybersecurity occupation is still a relatively new profession. However, this profession has grown exponentially over the last 20 years.

Key workforce statistics (2024–2026):

- There are approximately 500,000+ unfilled cybersecurity job openings in the United States (CyberSeek, 2025)
- The global cybersecurity workforce gap stands at approximately 4.8 million unfilled positions (ISC2 Cybersecurity Workforce Study, 2024)
- Cybersecurity employment is projected to grow 33% through 2033 — far faster than the average for all occupations (U.S. Bureau of Labor Statistics, 2024)
- The median annual salary for cybersecurity analysts in the U.S. is approximately \$120,000 (BLS, 2024)

Cybersecurity Workforce Landscape



The shortage of qualified professionals is largely due to the rapidly growing threat landscape and demand for new talent. By prioritizing and promoting cybersecurity careers, career and academic advisors help the nation and local communities mitigate the risk of data breaches, financial losses, and interruptions to critical business operations and supply chains.



Watch this short video on the cybersecurity workforce and career opportunities:
<http://www.youtube.com/watch?v=wV2jmiS3oNE>



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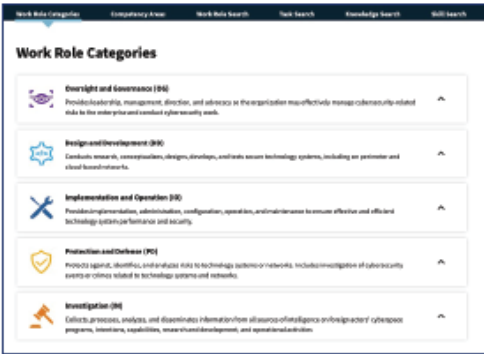
Career Counselors and Academic Advisors Cybersecurity Careers Toolkit

NICE WORKFORCE WORKFORCE FRAMEWORK 2.0

As the nation focuses on growing the cybersecurity workforce, a framework was developed to clarify the types of work and skills cybersecurity professionals need.

The *National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework (CWF)* is the foundation for increasing the size and capability of the U.S. cybersecurity workforce.

NIST released CWF 2.0 (NIST SP 800-181r2) in 2023, significantly restructuring and modernizing the original framework. CWF 2.0 establishes a common lexicon that describes cybersecurity work and workers regardless of where or for whom the work is performed. It applies across public, private, and academic sectors.

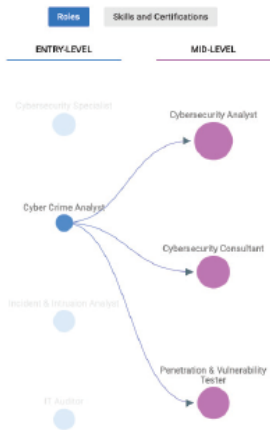


Source: <https://nccsc.cisa.gov/tools/nice-framework>

Note: CWF 2.0 replaced the previous version's 7-category, 33-specialty-area, 52-work-role structure with a streamlined 5-category, 41-work-role structure. If you have used earlier versions of the framework, note that two categories — Collect and Operate, and Investigate — have been consolidated into the remaining categories. Always reference CWF 2.0 (SP 800-181r2) going forward.

CYBERSEEK WEBSITE

CAREER PATHWAYS TOOL



Cyberseek is a joint initiative between the National Initiative for Cybersecurity Education (NICE), led by the National Institute of Standards and Technology (NIST) in the U.S. Department of Commerce and Lightcast, a leading provider of job market analytics and strategic intelligence.

The *CyberSeek Pathway Tool* identifies entry-, mid-, and advanced-level cybersecurity jobs and applies the NICE CWF to help individuals identify the knowledge, skills, and abilities necessary for career advancement.

CyberSeek supports employers, educators, guidance and career counselors, students, current workers, and policy makers.

CyberSeek Career Pathway Tool:
<https://www.cyberseek.org/pathway.html>



Have your student lookup the following jobs roles:

- Cybersecurity Specialist
- IT Auditor
- Cyber Crime Analyst
- Cybersecurity Manager

[Explore Here!](#)



Join the Cyber Guides Community of Practice

Our purpose: a lasting network where counselors, advisors, and educators learn from each other and guide students with confidence.



Collaborate and share

Swap strategies, activities, and resources with peers across institutions



Stay current

Hear from industry experts on trends, programs, scholarships, and careers



Belong and connect

Build a network of advisors, counselors, educators, and industry experts



Improve and extend

Shape the toolkit with your feedback and bring it to your own campus

How we connect



Resource hub at explorecyber.org



Online forum for sharing



Quarterly webinars and meetups



Quarterly newsletter

info@explorecyber.org

Free resources and ways to partner



Explore Cyber Toolkit

- Career guide for counselors and advisors
- Education pathways, certifications, scholarships
- NICE, DCWF, CyberSeek, CYBER.ORG tools
- Personality and work role matcher

explorecyber.org | i.explorecyber.org



Partner with us

- Free on-site or virtual training
- Pilot toolkit resources at your events
- Review drafts and join validation studies
- Join our Community of Practice

Christensen@morainevalley.edu



**Security is a process,
not a product.**

-Bruce Schneier

Neither is a career path.

Every student deserves someone
who helps them see it.

Thank You!



Kristine Christensen, Ph.D.

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Q&A



Submit an event survey!

https://survey.nist.gov/jfe/form/SV_3jYj7osMnd5dIAS





CYBERSECURITY CAREER WEEK

OCTOBER 19 – 24, 2026

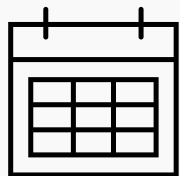
#CyberCareerWeek #MyCyberJob #ChooseCyber



www.nist.gov/nice/ccw

CCW is supported by the NICE Program Office at NIST.

CCW Events & Activities



2026 Cybersecurity Career Week event held by
SANS in coordination with NICE

Tuesday, September 22, 2026 | 2:30 - 6:00 PM ET
Location: U.S. Capitol Visitors Center, SVC 212-10
**Register by Sept 18*

**Networking Like a Leader: Building Authentic
Connections That Create Opportunities**

October 14, 2026 | 1:00 - 2:00 PM ET



**Challenge: Six Day #mycyberjob Media
Challenge**

October 19-24, 2026

X, Instagram, Facebook, LinkedIn and other
Tag: @NISTCyber

X Chat: NIST Chat #CyberCareerChat
#CyberCareerWeek #MyCyberJob

October 19, 2026 | 12:00 - 12:30 PM ET

**Breaking Into Cybersecurity: Real Stories from
Recent Graduates (Webinar)**

October 20, 2026 | 1:00 - 2:00 PM ET

**NICE Webinar: Helping to Chart the Course -
Unlocking Student Pathways into Cybersecurity
Careers**

October 21, 2026 | 1:00 - 2:00 PM ET



**Cyber Career Realities Revealed: Panel Across
NICE Framework Work Role Categories**

October 22, 2026 | 1:00 - 2:00 PM ET

nist.gov/nice/ccw

CCW is supported by the NICE Program Office at NIST.

NICE Webinar Series

NICE Webinar:

Breaking into Cyber: Gateway Roles and the Skills that Matter

December 2, 2026, 2:00-3:00PM ET



