

A background network diagram consisting of interconnected nodes and lines, rendered in light gray, covering the entire slide.

Cybersecurity Curriculum Task Force

This presentation was given at the 2023 National Cybersecurity Education Colloquium

<https://cyberedtaskforce.org>

NCAE-C Curriculum Task Force

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- ◎ Towson University - Sidd Kaza, Blair Taylor
- ◎ Portland Community College - Cara Tang
- ◎ United States Naval Academy - John Doherty
- ◎ Cedarville University - Seth Hamman
- ◎ Coastline Community College - Tobi West
- ◎ Metropolitan State University - Faisal Kaleem
- ◎ University of New Hampshire - Tirthankar Ghosh

<https://cyberedtaskforce.org>

NCAE-C Curriculum Task Force

Mission

Catalog and create high-quality and relevant curricula on emerging cyber topics, mapping to curricular and workforce guidelines, and make them freely available.

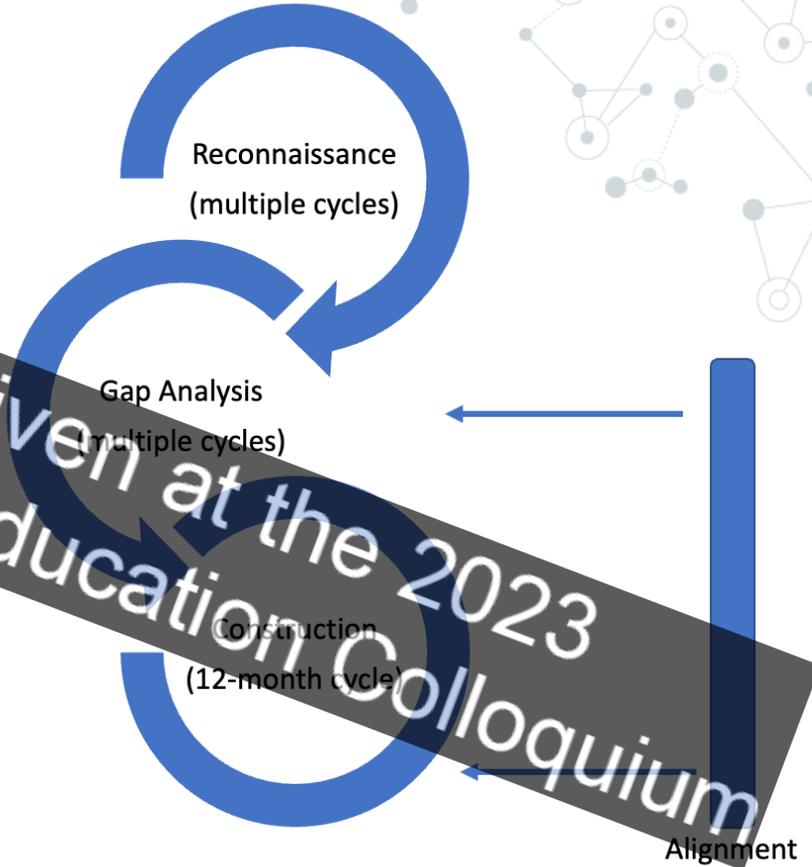
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<https://cyberedtaskforce.org>

NCAE-C Curriculum Task Force

This presentation was given at the 2023 National Cybersecurity Education Colloquium

Organization

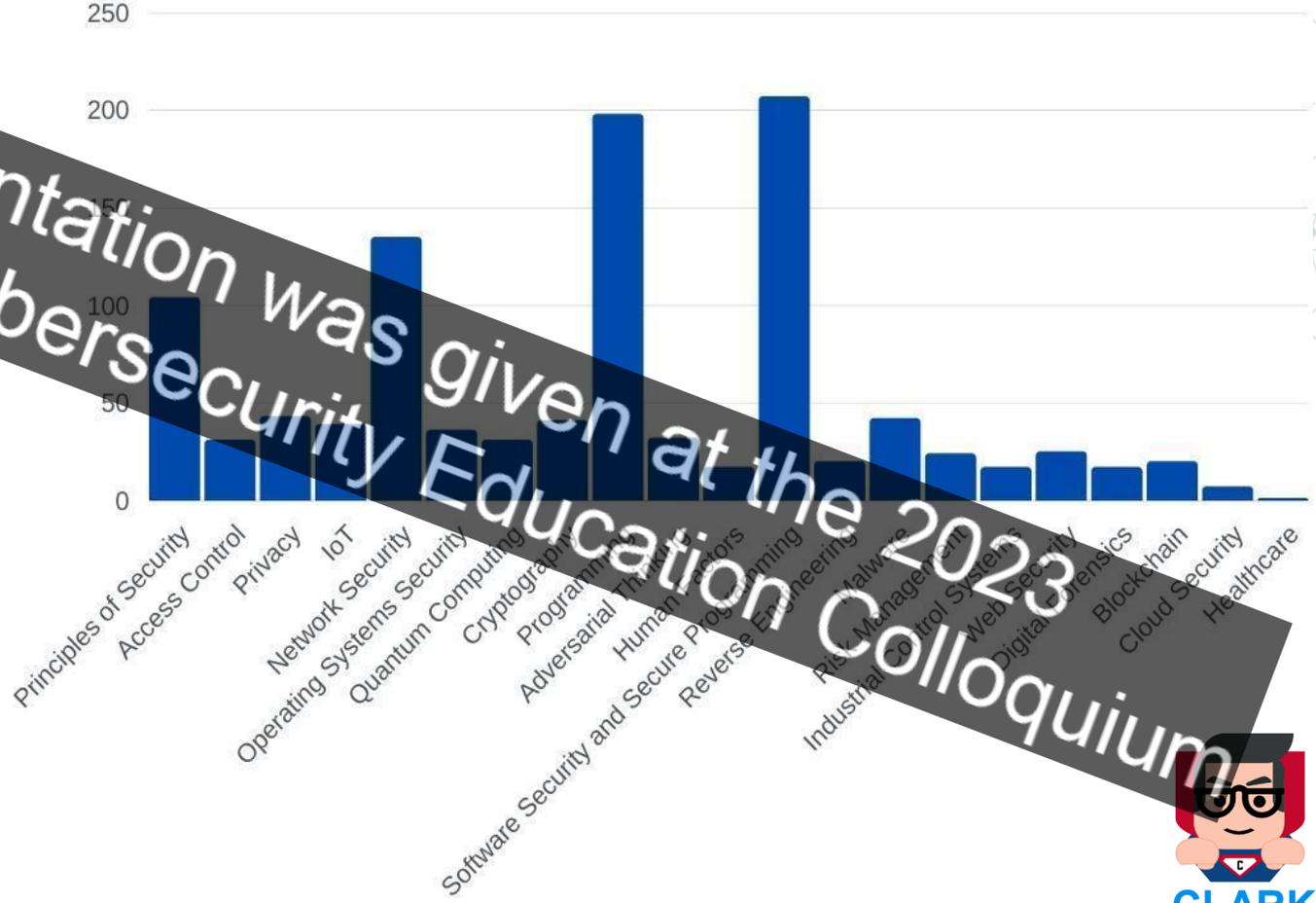


<https://cyberedtaskforce.org>

Reconnaissance

- 951 learning objects
- 22 topics
- 3000+ resources

Future plans: Look outside the community



Gap Analysis

- This presentation was given at the 2023 National Cybersecurity Education Colloquium
- Industry focus groups
 - Survey to identify top knowledge & skills in each area
 - Quantum resistant cryptography
 - Autonomous / self-driving vehicle security
 - Zero trust
 - Software supply chain security
 - Ransomware



Construction



CAE
IN CYBERSECURITY
COMMUNITY



This presentation was given at the 2023 National Cybersecurity Education Colloquium

Several rounds of proposals funded
Most with a 1-year timeline.
Mid-term check.
Technical and editorial review.

- Zero trust security
- Ransomware
- Quantum Resistant Cryptography
- Software Supply Chain Security

Construction Topics



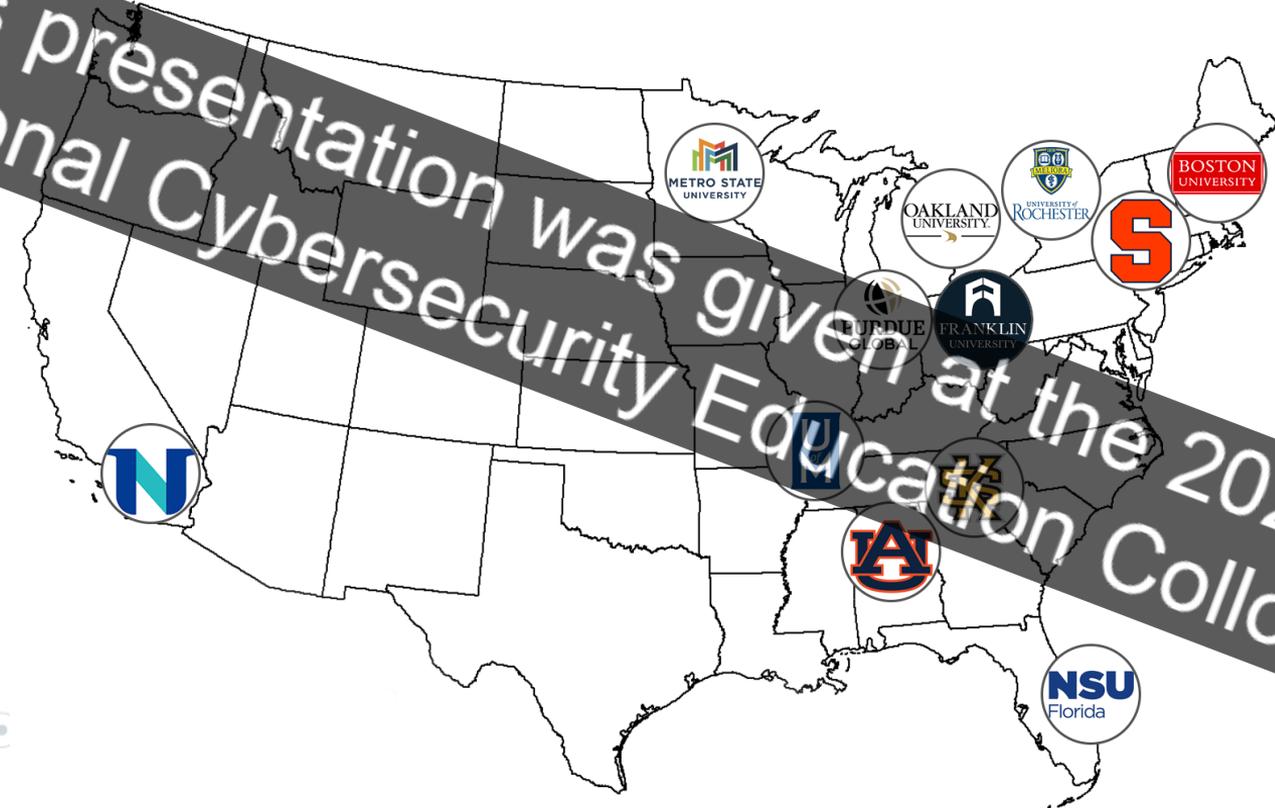
CAE
IN CYBERSECURITY
COMMUNITY

- Zero trust security
- Ransomware
- Quantum Resistant Cryptography
- Software Supply Chain Security
- AI and LLMs for Cybersecurity
- Security for AI
- Autonomous and Connected Vehicles
- DevSecOps and Secure Software development
- Autonomous Vehicle Security
- Medical Device Security
- Ransomware: Prevention, Detection, and Recovery

This presentation was given at the 2023 National Cybersecurity Education Colloquium

Institutions Funded (over 600K awarded)

This presentation was given at the 2023 National Cybersecurity Education Colloquium



Zero Trust Security

Last Updated 9/5/23

Course ★ ★ ★ ★

Parent of [Zero Trust Architecture in Government Networks](#), [+ 9 more](#)

Description

This course will explore the concepts of zero trust architecture. Students will learn the underlying concepts of zero trust. Students will learn how to plan and implement a zero trust architecture that meets regulatory requirements.

Learning Outcomes

 Define zero trust principles No Mappings	0 Mapped Outcomes
 Configure a zero trust architecture No Mappings	0 Mapped Outcomes
 Manage a zero trust architecture No Mappings	0 Mapped Outcomes
 Analyze the different aspects of zero trust No Mappings	0 Mapped Outcomes

No revisions have been made since last release.

Review Pending

DOWNLOAD NOW

DOWNLOAD ▾

MAP AND TAG

EDIT SUBMISSION

0 saves 8 downloads

Attribute this Object

"Zero Trust Security" by Chris Simpson, James Jaurez, Nancy Jones, Debra Bowen, Bill Reid, and Randy Velliquette, NSA NCAE-C initiative is licensed under [CC BY-NC-SA 4.0](#).

Share



Authors

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Part of the NSA NCAE-C Initiative collection

Zero Trust Security

Last Updated: 2023

Part of Zero Trust Architecture in Government Networks. [+ 9 more](#)

Description

This course will explore the concepts of zero trust architecture and how to plan and implement a zero trust architecture that meets your organization's needs. Students will learn how to plan and implement a zero trust architecture that meets your organization's needs.

Learning Outcomes

-  Define zero trust principles
No Mappings 0 Mapped Outcomes
-  Configure a zero trust architecture
No Mappings 0 Mapped Outcomes
-  Manage a zero trust architecture
No Mappings 0 Mapped Outcomes
-  Analyze the different aspects of zero trust
No Mappings 0 Mapped Outcomes

Academic Levels

Hierarchy

Children



Zero Trust Architecture in Government Networks.

MODULE 4 - 10 HOURS

Randy Velliquette at National University and 5 more
Updated Aug 30, 2023

This module explores the use of ...



Security Operations to Support a Zero-Trust A...

MODULE 4 - 10 HOURS

James Jaurez at CYB Team and 5 more
Updated Jun 30, 2023

This module explores the condu...



Deploying Zero Trust in the Cloud

MODULE 4 - 10 HOURS

James Jaurez at CYB Team and 5 more
Updated Sep 1, 2023

The module explores the deploy...



Regulatory Requirements for Zero Trust Architectures

MODULE 4 - 10 HOURS

Chris Simpson at National University and 5 more
Updated Sep 4, 2023

This module explores the regulat...

Threats to Zero Trust

This presentation was given at the 2023 National Cybersecurity Education Colloquium

Construction



CAE
IN CYBERSECURITY
COMMUNITY

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SEED LABS

SEED LABS



MAX POWER



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<https://clark.center>

<https://caeresourcedirectory>



NCYTE CENTER



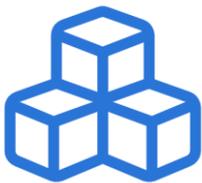
NICE Challenge PROJECT





Cybersecurity Labs and Resource Knowledge-base

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Bloom's
Based
Outcomes



Modularized
Content



Search and
Filter
Browsing



Compressed
Downloads



This presentation was given at the 2023 National Cybersecurity Education Colloquium



CAE
Resource
Hub



Cyber
Education
Resources



Community
Supported

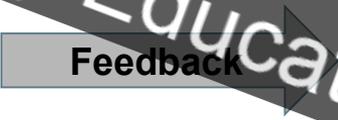
Content Intake

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CAE
INDUSTRY
COMMUNITY

NCYTE
CENTER
National Cybersecurity Training & Education Center



Cyber Heroes





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What is available on
CLARK?

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FILTERS

[Clear all filters](#)RESULTS (1326) [Clear Search](#)

Sort By: Newest ▾

Collection ▾

Length ▾

Topic

- Access Control
- Adversarial Thinking
- Blockchain
- Cloud Security
- Cryptography
- Cyber Law And Policy
- Digital Forensics
- Healthcare
- Human Factors
- Industrial Control Systems
- IoT
- Malware
- Network Security
- Operating Systems Security
- Principles Of Security
- Privacy
- Programming
- Quantum Computing
- Ransomware
- Reverse Engineering
- Risk Management
- Software Security And Secure Programming
- Software Supply Chain
- Web Security
- Zero Trust

Type of Material ▾

Level ▾

Guidelines ▾



Contingency Strategies for IR, DR, BC

MODULE 4 - 10 HOURS

National Cybersecurity
Workforce Development
ProgramStephen Miller at Eastern New Mexico University-Ruidoso
Updated Aug 18, 2023

This lesson provides an introduction to the process of planning for business resumption following an inci...



NSA NCAE-C Initiative

Cybersecurity Education for Critical Infrastructure...

MICROMODULE 3 - 4 HOURS

Shankar Dasgupta at The University of Mississippi and 1 more
Updated Aug 18, 2023

Course name: CECIP 2023 Trust Model Prerequisites: This course is designed for undergraduate and grad...



Cyber Heroes

Graph-based Cyber Risk Quantification

MODULE 4 - 10 HOURS

Unal Tatar at University at Albany - SUNY and 1 more
Updated Aug 18, 2023

The purpose of this module is to propose a method for quantifying the impact propagation of cyber risk e...



Cyber Heroes

Functional Dependency Network Analysis for Cy...

MICROMODULE 1 - 4 HOURS

Unal Tatar at University at Albany - SUNY and 1 more
Updated Aug 18, 2023

This micromodule provides a method for impact propagation analysis for cyber risk events, Functional D...



Buffer Overflow - CS0 - C++

NANOMODULE UP TO ONE HOUR

This presentation was given at the 2023 National Cybersecurity Education Colloquium

Part of the NSA NCAE-C Initiative collection

Module 1 - Introduction to Networks

Last Updated 1/24/23

Module

Child of CyberSkills2Work Initiative Networks (DSU-6J10)



NATIONAL
CYBERSECURITY
WORKFORCE
DEVELOPMENT
PROGRAM

Description

This module covers the introduction to network fundamentals. Each module will consist (typically) of a set of PowerPoint slides and assessment questions pertaining to the module topic.

<https://clark.center/details/cmwelu/cf9aae74-be9d-43ff-8981-a66efe685bbe>

This presentation was given at the 2023 National Cybersecurity Education Colloquium

Part of the GenCyber collection

Researching Cybersecurity Careers

Last Updated 11/17/2023

Micromodule



Description

Lesson plan designed by George Washington University for K-12 as part of the GenCyber program.

Researching cybersecurity careers is designed to engage the campers in research into one of 4 or 5 cybersecurity careers. This team guided research project is undertaken over the entirety of the camp and teams present their findings on the closing day of camp. The activity builds teamwork, research/evaluation skills and oral/visual presentation skills.

<https://clark.center/details/ssmith142/273d0e03-59ad-4478-88dc-8b6bbd3f04c2>

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What's available on CARD?

Sort 

Total Results: 3014

FILTERS

CATEGORY

- Academic Centers
- Academic Program
- Competition Frameworks
- Competitions
- Conference
- Curriculum
- Cyber Ranges And Tools
- Grant Deliverable
- Knowledge Units
- Other
- Report
- Student Developed Resources
- Workshop And Materials

ORGANIZATION

Grant Deliverable Montreal College Cybersecurity Oath

There are no notes associated with this resource.

Montreal College

[Go to Resource](#) **Workshop And Materials** Autonomous Systems Cybersecurity

All of the contents of this course were created for a professional workshop in collaboration with the University of Colorado Colorado Springs for an instructor camp regarding Autonomous System Security.

Sinclair Community College

[Go to Resource](#) **Academic Program** Anderson University - Cybersecurity

The BA in Cybersecurity is a National Security Agency (NSA) validated Program of Study.

Anderson University

[Go to Resource](#) **Academic Centers** Tarrant County College-Cyber Hub

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Grant Deliverable: Montreat College Cybersecurity Oath

Montreat College

Notes

There aren't any notes associated with this resource.

[Go to Resource](#)

FILTERS

CATEGORIES

- Academic Centers
- Academic Program
- Competition Frameworks
- Competitions
- Conference
- Curriculum
- Cyber Ranges And Tools
- Grant Deliverable
- Knowledge Units
- Other
- Report
- Student Developed Resources
- Workshop And Materials

ORGANIZATION

Search Organizations

Search Resources

Total Results: 3014

Grant Deliverable

There aren't any notes associated with this resource.

Montreat College

Workshop And Materials

All of the contents of this course are available in the course materials. Colorado Colorado Springs for a

Sinclair Community College

Academic Program

The BA in Cybersecurity is a National Security Agency (NSA) approved program.

Anderson University

Academic Centers

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How are submissions reviewed?

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Overview of Review Process for Curriculum and Resources

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Submission

Utilize CLARK model to build curriculum or submit resources to CARD

Revision

Continuously identify updates to the curriculum and resources

Review

Conduct a review of materials for editorial and technical issues

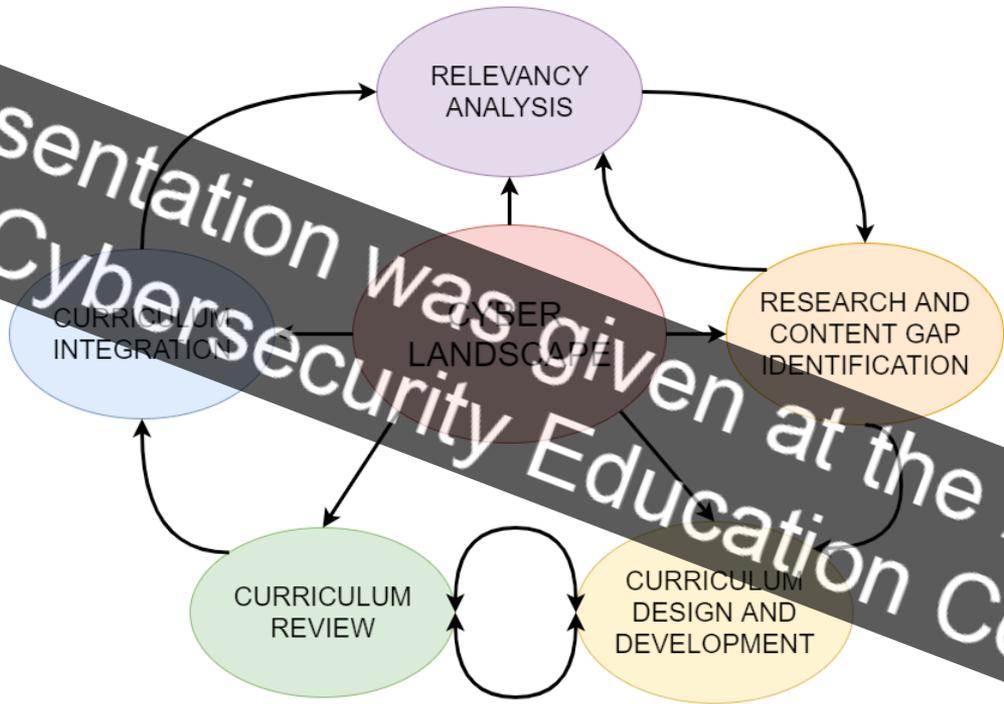
Proofing and Release

Proof material for final release on CLARK or CARD

Author Engagement

Collaborate with authors to ensure quality curriculum

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“Resilient” Cybersecurity Curriculum In Higher Education

- Is pedagogically and technically correct
- Has a topic that is relevant to classroom or workforce needs
- Is mapped to curricular standards or guidelines
- Provides learning experiences directly applicable to the learners’ interests, aspirations, and cultural experiences
- Addresses real-world problems and contexts
- Is resilient against rapidly advancing threats and changes
- Provides materials in a format that is usable in a classroom environment



Relevancy: CAE KUs and beyond

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- **ABET Cybersecurity Program Criteria**
- **Cyber Security Education Consortium (CSEC)**
- **Computing Curricula (CC 2023)**
- **Centers of Academic Excellence in Cybersecurity Knowledge Units (CAE KUs)**
- **National Initiative for Cybersecurity Education Workforce Framework (NICE)**
- **Department of Defense Workforce Framework (DCWF)**
- **Secondary School Guidelines (CSTA, AP CSP)**

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Action on CLARK

240+ Learning Objects reviewed for relevance as of April 3, 2023



1,442
Released Learning Objects

A white card with a blue cube icon at the top. The text displays the number 1,442 and the label "Released Learning Objects".

14
Quality-Assured Collections

A white card with a red cube icon at the top. The text displays the number 14 and the label "Quality-Assured Collections".

42,707
Downloads

A white card with a blue eye icon at the top. The text displays the number 42,707 and the label "Downloads".

16,735
Users

A white card with a purple group of people icon at the top. The text displays the number 16,735 and the label "Users".

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Our team of faculty and students have developed
a resource to provide educators with a solution



Stay in Touch!



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Contact us to come and demo CLARK and/or CARD at your GenCyber Teacher Post Camp Activities!