2024 CAE Community Symposium

Cybersecurity Curriculum Task Force

https://cyberedtaskforce.org

This project is supported by the NSA National Centers of Academic in Excellence in Cybersecurity Program (NCAE-C) under Grant H98230-21-1-0175.

NCAE-C Curriculum Task Force

2024 CAE Community Symposium

- 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 Haven - Tirthankar Ghosh

https://cyberedtaskforce.org

2024 CAE Community Symposium

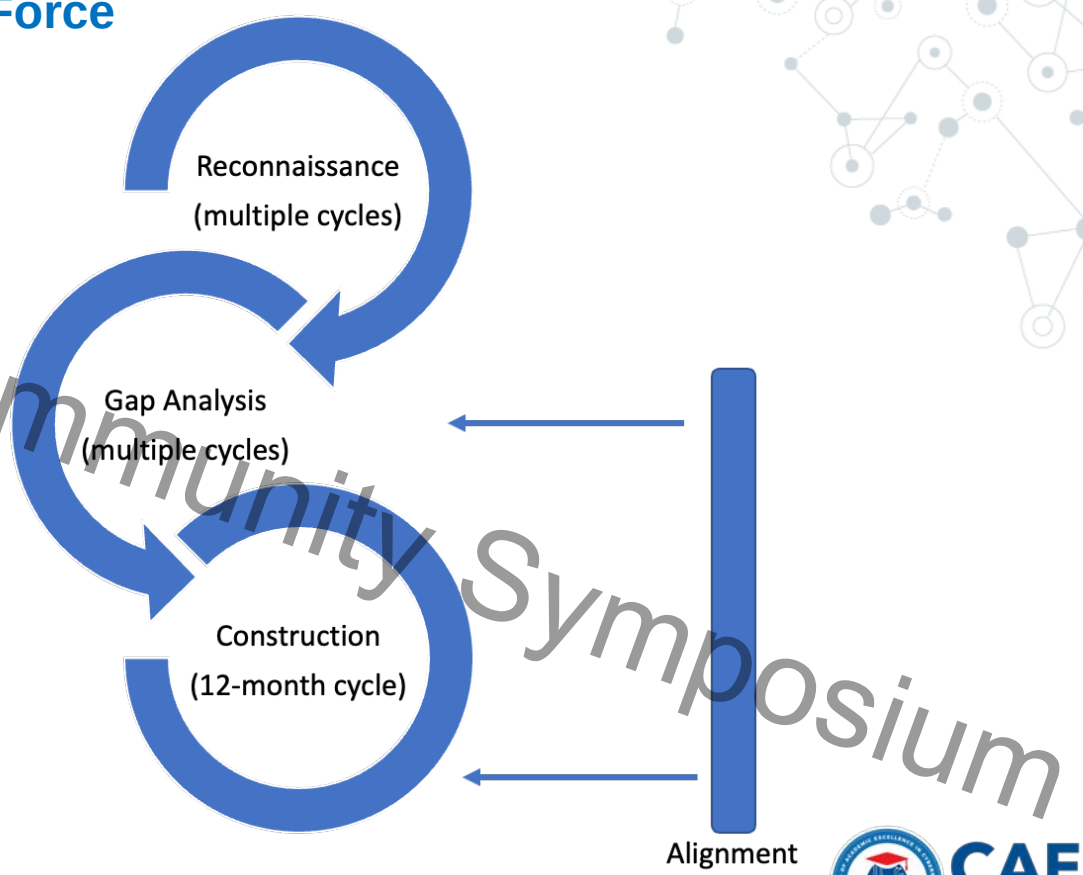
Mission

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

NCAE-C Curriculum Task Force

2024 CAE Community Symposium

Organization

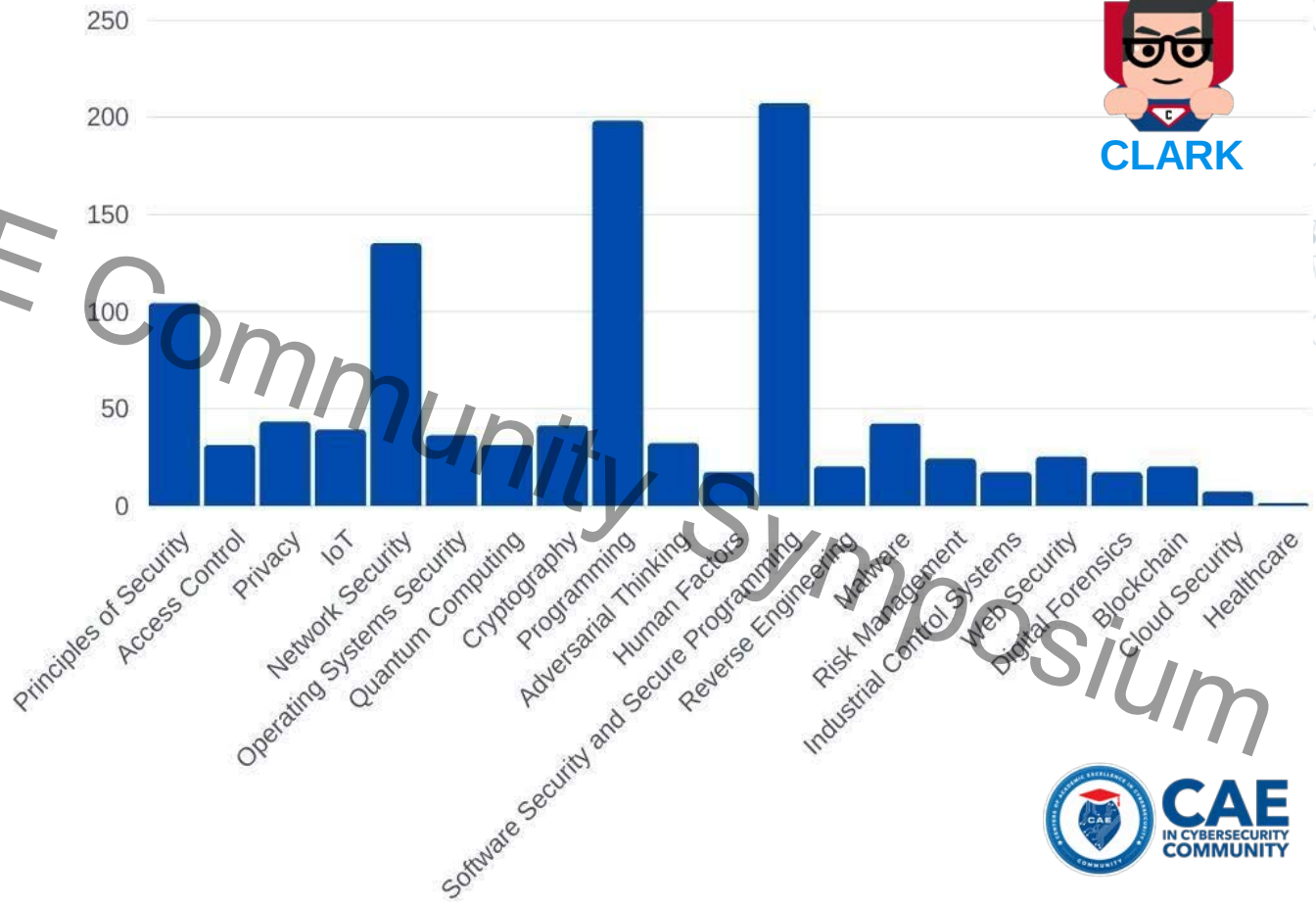


https://cyberedtaskforce.org

Reconnaissance

- 1,098 learning objects
- 25 topics
- 3000+ resources

Future plans: Look outside the community



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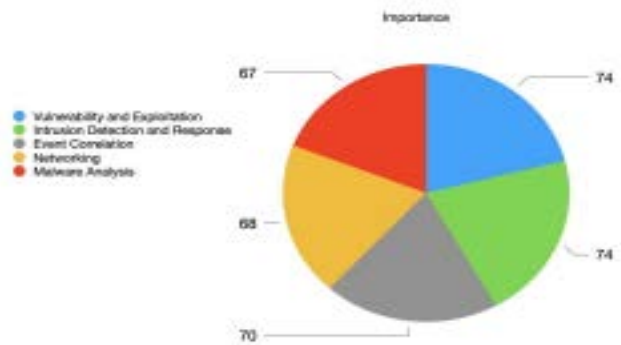
Gap Analysis



2024 CAE Community Symposium

- 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

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Construction

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

CLARK

Construction Topics

CLARK

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- 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

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Institutions Funded (over 600K awarded)

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Part of the NSA NCAE-C Initiative collection

Zero Trust Security

Last Updated 9/5/23

Course

Parent of Zero Trust Architecture in Government Networks. + 9 more

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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

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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.

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Authors

Part of the NSA NCAE-C Initiative collection

Zero Trust Security

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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

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Hierarchy

Children

NSA NCAE-C Initiative

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 …

NSA NCAE-C Initiative

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…

NSA NCAE-C Initiative

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…

NSA NCAE-C Initiative

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

Construction

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SEED LABS

MAX POWER

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https://clark.center

Cybersecurity Labs and Resource Knowledge-base

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- **Bloom's Based Outcomes**
- **Modularized Content**
- **Search and Filter Browsing**
- **Compressed Downloads**

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Content Intake

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NCYTE CENTER
National Cybersecurity Training & Education Center

CyberSkills2Work

Cyber Heroes

GenCyber

THE 502 PROJECT

- Curriculum
- Best Practices
- Feedback
- Resources

CLARK

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What's available on CLARK?

FILTERS Clear all filters

Collection

Length

- Nanomodule
- Micromodule
- Module
- Unit
- Course

Topic

- AI/Machine Learning
- Access Control
- Adversarial Thinking
- Blockchain
- Cloud Security
- Cryptography
- Cyber Law and Policy
- Cyber Physical Systems
- Digital Forensics
- Ethics
- Healthcare
- Human Factors
- 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

RESULTS (1557) Clear Search Search with CARD Sort By: Newest

NSA Funded Curriculum

Hardware security and trust

NANOMODULE UP TO ONE HOUR

Gang Qu at Univ. of Maryland
Updated Mar 11, 2024

This nanomodule describes the roles of computer hardware in security and trust. The key message we wa…

NSA Funded Curriculum

Physical attacks to hardware and countermeasures

MICROMODULE 1 - 4 HOURS

Gang Qu at Univ. of Maryland
Updated Mar 11, 2024

In this micromodule, we study various ways of physical attacks to hardware and chips. Through such stud…

NSA NCAE-C Initiative

Anomaly and Novelty Detection

MODULE 4 - 10 HOURS

Edoardo Serra at Boise State University
Updated Mar 8, 2024

This module offers a comprehensive foundation in the field of anomaly and novelty detection. It delves in…

NSA Funded Curriculum

Introduction to combinational digital logic design

MICROMODULE 1 - 4 HOURS

Gang Qu at Univ. of Maryland
Updated Mar 8, 2024

This micromodule gives a review of the fundamentals of digital systems and the design of combinational …

NSA NCAE-C Initiative

Challenge 3

MODULE 4 - 10 HOURS

Bilge Karabacak at University of North Carolina, Wilmington and 2 more
Updated Mar 4, 2024

In this challenge, studens will develop a ransomware variant with an improved persistence capability.

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Search...

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About CLARK Collections Resources Topics

FILTERS Clear all filters

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

RESULTS (1326) Clear Search Sort By: Newest

CyberSkills2Work
National Cybersecurity Workforce Development Program

Contingency Strategies for IR, DR, BC
MODULE 4 - 10 HOURS
Stephen 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 1 - 4 HOURS
Dipankar Dasgupta at The University Of Memphis and 1 more
Updated Aug 18, 2023
Course name: CECIP-Zero 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

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Module 1 - Introduction to Networks

Last Updated 1/24/23

Module ☆☆☆☆☆

Child of CyberSkills2Work - Intro to Networks (DSU-0012) ;

CyberSkills2Work

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

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Course Professionalism & Soft Skills Development

Last Updated 2/14/24

Course

2024 CAE Community Symposium

Description

Ethics in cyber is a hugely important step, but it isn't the entire solution to developing a trusted and competent workforce. Professionalism is also critically important and much of the higher education community can improve how they prepare students for careers in the government and industry. Students need to be prepared to join the workforce with the skills required to present a professional image, including how to present themselves to senior leadership, communicate ideas effectively and succinctly and engage with multiple stakeholders from various backgrounds that hold various opinions of proper office standards. What might be acceptable at an IT company in Silicon Valley might be wholly inadequate for work in the NSA regarding dress, behavior, etc. This curriculum is designed to develop professionalism as part of preparing to enter the cybersecurity workforce.

https://clark.center/details/greg.sayadian/0dee5cda-5839-4b8c-9da0-345c7148c1d6

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Part of the Intro to Cyber collection

Security Awareness Training

Last Updated 9/5/23

Nanomodule ★★★★★ (3)

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Description

1. Recognize common security threats and vulnerabilities: Identify various types of security risks, including phishing attacks, social engineering tactics, malware, and physical security breaches. Understand the potential impact of these threats on organizational systems, data, and personal privacy.
2. Apply best practices for protecting sensitive information: Understand the importance of data privacy and confidentiality. Learn how to safeguard sensitive information, including passwords, personal data, and company assets. Implement secure practices such as password management, encryption, and secure file handling.
3. Understand the role of employee responsibility in maintaining security: Recognize that security is a shared responsibility among all employees. Comprehend the significance of following security policies and procedures, reporting suspicious activities, and adhering to access control measures. Develop a sense of personal accountability for maintaining a secure work environment.

https://clark.center/details/vanom007/3db0f198-5031-4206-a0a4-4254ad0745fe

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Which resources are available?

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CARD

LOGIN REGISTER

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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

Search Organizations

Search Resources

Sort

Total Results: 3014

Grant Deliverable **Montreat College Cybersecurity Oath**

There are no notes associated with this resource.

Montreat 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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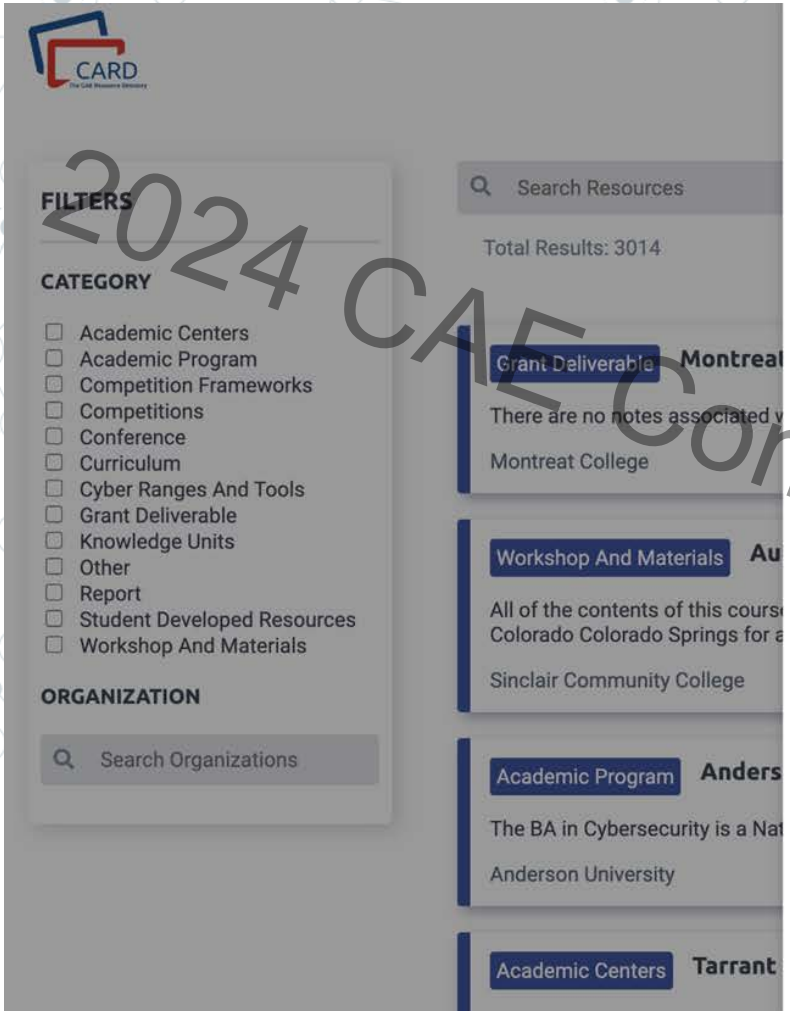

Grant Deliverable: Montreat College Cybersecurity Oath

Montreat College

Notes

There aren't any notes associated with this resource.

Go to Resource

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Cybersecurity Curriculum Task Force

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https://clark.center

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