



2020-2022 COLORADO CEDI HSI Partnership

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**MSU Denver and Trinidad State College
– Alamosa Valley Satellite Campus**



WHAT IS THE COLORADO CEDI COALITION?

CEDI STANDS FOR
CYBERSECURITY
EDUCATION
DIVERSITY
INITIATIVE.



CAE
IN CYBERSECURITY
COMMUNITY



METROPOLITAN
STATE UNIVERSITY
OF DENVER



COLORADO



WHO IS FUNDING THE
COLORADO CEDI
COALITION?

**NCAE-C is Funding
CEDI for Two Years**



CAE
IN CYBERSECURITY
COMMUNITY

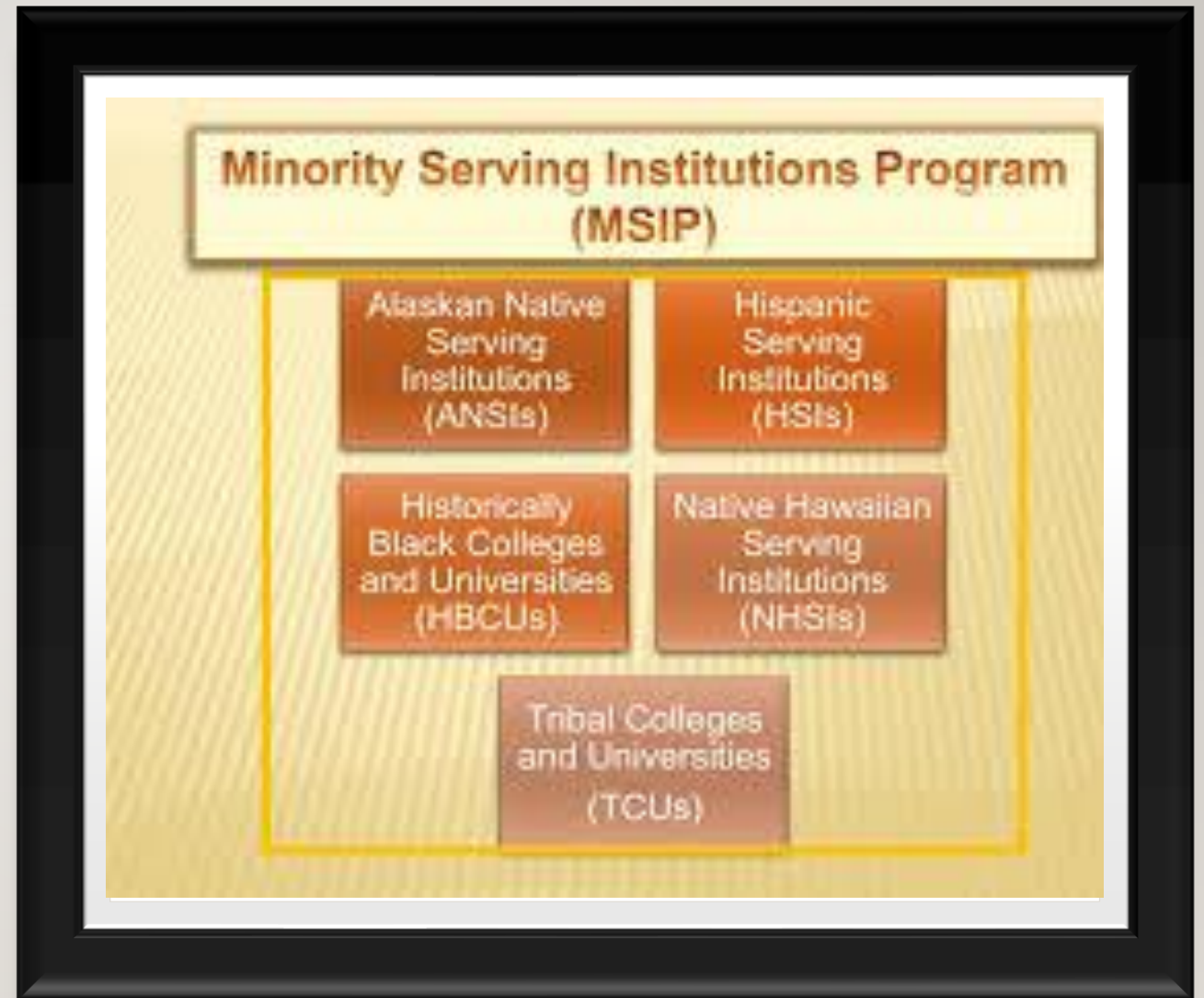
WHAT ARE THE INSTITUTIONS OF HIGHER EDUCATION THAT MAKE UP THE NATIONAL CEDI COALITION?

The **CEDI Coalition** is composed of a diverse set of eleven colleges and universities. The eleven schools that make up the **N-CAE CEDI community** are as follows:

- **Fordham University (3 million)**
- **Excelsior College (subaward)**
- **Polytechnic University of Puerto Rico (subaward)**
- **Metropolitan State University of Denver (subaward)**
- **Bluegrass Community and Technical College (subaward)**
- **North Carolina Agricultural & Technical State University (subaward)**
- **New Jersey City University (subaward)**
- **University of North Florida (subaward)**
- **Tennessee Tech University (subaward)**
- **University of Tennessee at Chattanooga (subaward)**
- **University of North Texas (subaward)**

ARE ALL THE CEDI SCHOOLS MSIs?

While most of the CEDI schools are HBCUs, some schools are HSIs. All these schools, including MSU Denver, are Minority Serving Institutions (MSIs).



WHAT ARE THE HISPANIC SERVING INSTITUTIONS (HSI & NAS-NTI) COLLEGES AND UNIVERSITIES IN COLORADO?

Adams State - Alamosa (Pub 4yr)

Colorado State University - Pueblo (Pub 4yr)

Community College of Aurora – Denver (Pub 2yr)

Metropolitan State University of Denver – Denver (CEDI subaward & Pub 4yr)

Fort Lewis College -Durango (Pub 4yr)* Native American-Serving Non-Tribal Institution

Lamar Community College – Lamar (Pub 2yr)

Trinidad State College – Trinidad (Pub 2yr)

University of Colorado – Denver (Pub 4yr)

Community College of Denver (Pub 2yr)

AIMS Community College (Pub 2yr)

Emily Griffith Technical College

Morgan Community College (Pub 2yr)

Otero Junior College (Pub 2yr)

Pueblo Community College (Pub 2yr)

COLORADO'S CEDI KU MAPPING TEAM:

CEDI 2YR HSI Cybersecurity **Instructor**

Director of Technology at Trinidad State College
Dr. Serena "Sully" Sullivan



CEDI 4YR CAE HSI Cybersecurity **Mentor**

Mr. Joe Murdock (University of Colorado-Denver)



CEDI 4YR HSI Cybersecurity **Student**

MSU Denver Graduating Senior
Nikolaus "Klaus" Streicher (MSU Denver's
Senior Cyber Range Instructor)



NEW “**SYSTEM ADMINISTRATION**” CERTIFICATION FOR TSC ALAMOSA CAMPUS IS AS FOLLOWS:

New TSC “System Administration” Certification

CNG 120 A+ Certification Preparation (4 credits)

CNG 124 Networking I (3 credits)

CNG 125 Networking II (3 credits)

CNG 131 Principles of Information Assurance (3 credits)

CNG 201 Linux Configuration (3 credits)

CNG 212 Configuring Windows Server (4 credits)

CSC 119 Introduction to Programming-Python (3 credits)

Total Credits 23

THE NEWLY CREATED “**CYBERSECURITY**” CERTIFICATION FOR TSC ALAMOSA CAMPUS IS AS FOLLOWS:

New TSC “Cybersecurity” Certification

CNG 132 Network Security Fundamentals (3 credits)

CNG 136 Guide to IT Disaster Recovery (3 credits)

CNG 256 Vulnerability Assessment I (3 credits)

CNG 257 Network Defense and Countermeasures (3 credits)

CNG 258 Digital Forensics (4 credits)

CNG 259 Enterprise Security (4 credits)

Total Credits 20

MAPPING TSC'S TWO NEW CERTS

Employ three different perspectives (i.e., **student** experience, **instructor** experience, and **mentor** experience) or three different perspectives of analysis to successfully negotiate and align KUs to TSC-Alamosa Valley CLOs.

VALUE THE STUDENT EXPERIENCE IN THE KU MAPPING PROCESS

Colorado CEDI: Three Different Levels of Analysis (**Micro, Mezzo, and Macro**) to Align KUs to TSC-Alamosa Valley CLOs

Students experience curriculum from the **micro** perspective of the **individual subject** undergoing transformation.

Instructors experience curriculum from the **mezzo** perspective and work with **groups of subjects** undergoing transformation.

Mentors experience curriculum with a **macro** (or statewide) perspective and work with multiple programs or **institutions (of subjects)** undergoing transformation.

1) THE INSTRUCTOR/MENTOR DYAD OFTEN IGNORES THE UNDERGRADUATE STUDENT'S (FROM THE INSIDE) PERSPECTIVE.

2) INTRODUCING THE UNDERGRADUATE STUDENT'S PERSPECTIVE INTO THE MAPPING PROCESS CAN IMPROVE THE VALIDITY AND RELIABILITY OF THE ANALYSIS.

3) TEACHING THE UNDERGRADUATE STUDENT TO ENGAGE IN KU MAPPING WITH THE INSTRUCTOR AND THE MENTOR CAN PROVIDE THE STUDENT WITH A MORE HOLISTIC VIEW OF THE SUBJECT MATTER.

BOTH TSC-ALAMOSA VALLEY CERTIFICATIONS WERE ALIGNED WITH THE FOLLOWING FOUNDATIONAL KUs

All course learning outcomes (CLOs) associated with both certifications were closely examined.

KUs: Foundations: Cybersecurity Foundations (Foundations-1: CSF)

KUs: Foundations: Cybersecurity Principles (Foundations-2: CSP)

KUs: Foundations: IT Systems Components (Foundations-3: ISC)

BOTH TSC-ALAMOSA VALLEY CERTIFICATIONS WERE ALIGNED WITH THE FOLLOWING TECHNICAL KUs

Recommendations for aligning CLOs to Technical Core KUs were also made.

KUs: Technical Core: Basic Cryptography (Technical Core-1: BCY)

KUs: Technical Core: Basic Networking (Technical Core-2: BNW)

KUs: Technical Core: Basic Scripting and Programming (Technical Core-3: BSP)

KUs: Technical Core: Network Defense (Technical Core-4: NDF)

KUs: Technical Core: Operating System Concepts

TSC'S COMPTIA COURSE EQUIVALENCIES

CNG120	A+ Certification Prep	4 credits	CompTIA A+	The A+ can be used for both CNG116 and CNG120
CNG124	Network I	3 credits	CompTIA Net+ CISCO CCNA or higher	A single certification can be used for both CNG124 and CNG125
CNG125	Network II	3 credits	CompTIA Net+ CISCO CCNA or higher	A single certification can be used for both CNG124 and CNG125
CNG131	Principles of Information Assurance	3 credits	CompTIA Security +	Certification applies to CNG131 and CNG 132
CNG132	Network Security Fundamentals	3 credits	CompTIA Security + AND Network+ or CISCO CCNA or Higher	Must have BOTH certifications
CNG201	Linux Configuration	3 credits	CompTIA Linux+ LPI LPIC-1 or Higher	
CNG256	Vulnerability Assessment I	3 credits	CompTIA PenTest+ Certified Ethical Hacker	
CNG257	Network Defense and Counter Measures	3 credits	CompTIA PenTest+ Certified Ethical Hacker	

NEXT STEPS FOR COLORADO?

1) SCALE UP TSC “2 CERT” MODEL TO INCLUDE ALL CO 2YR HSI INSTITUTIONS (VIA CCCS ONLINE)?

2) TRI- INSTITUTIONAL COLLABORATION WITH OUR HSI NEXT-DOOR NEIGHBORS ON AURARIA CAMPUS?

CCD IS AN HSI THAT IS SEEKING CAE
UC-D IS AN HSI THAT IS SEEKING CAE
MSU DENVER IS AN HSI WITH CAE

GOOD NEWS!

MSU Denver is now a brand new CAE

and...

TSC-Alamosa Valley

is interested in becoming a CAE