

Shrinking the Cybersecurity Workforce Gap through Collaborative Upskilling and Reskilling Programs

Dr. Eman El-Sheikh, University of West Florida

Dr. Sharon Kerrick, University of Louisville

Dr. Adel Elmaghraby, University of Louisville

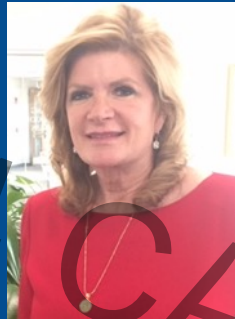
Dr. Michael Tu, Purdue University Northwest

Dr. Tarek Saadawi, City University of New York,
City College

Swizzle

The
GALTHOUSE
LEGENDARY •  • LOUISVILLE

WALKER'S
Exchange



Dr. Eman El-Sheikh

Associate Vice President and Professor, Center for Cybersecurity, University of West Florida

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Assistant Vice President, Digital Transformation Center, and Associate Professor, Human Resource Organizational Development, University of Louisville

Dr. Adel Elmaghraby

Director of Research and Innovation, Digital Transformation Center, and Winnia Professor, Computer Science and Engineering, University of Louisville

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Dr. Tarek Saadawi

Cybersecurity Master's Program Co-Founder, City University of New York, City College

Symposium

University of West Florida

- ✓ 10 CAE-C Coalition
- ✓ Trained 3250+ learners over 5 years
- ✓ Free for transitioning military, veterans, first responders, women, underrepresented minorities, & govt. employees
- ✓ 200+ learning objects shared on clark.center
- ✓ Employers Network



22 TRAINING
PATHWAYS



13 CYBERSECURITY
WORK ROLES



17 CORE INDUSTRY
CERTIFICATIONS



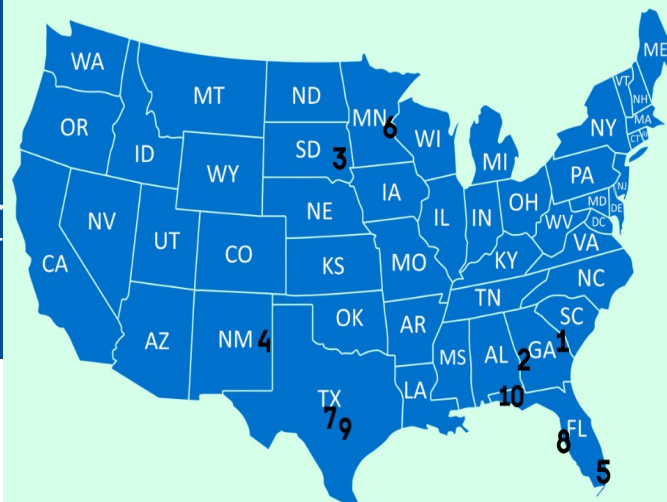
10 NCAE-C
INSTITUTIONS

CYBERSECURITY WORK ROLES

- Cyber Defense Analyst
- Cyber Defense Forensics Analyst
- Cyber Defense Incident Responder
- Cyber Defense Infrastructure Support Specialist
- Exploitation Analyst
- ICS Threat/Warning Analyst
- Security Architect
- Systems Security Analyst
- Technical Support Specialist
- Threat Warning Analyst
- Threat/Warning (OSINT and Dark Web) Analyst
- System Administrator
- Vulnerability Assessment Analyst

INDUSTRY CERTIFICATIONS

- AWS Certified Cloud Practitioner
- CompTIA A+
- CompTIA Advanced Security Practitioner CASP+
- CompTIA Cybersecurity Analyst CySA+
- CompTIA IT Fundamentals ITF+
- CompTIA Linux+
- CompTIA Network+
- CompTIA PenTest+
- CompTIA Security+
- EC-Council Certified Ethical Hacker (CEH)
- EC-Council Certified Incident Handler (ECIH)
- EC-Council Certified SOC Analyst (CSA)
- EC-Council Disaster Recovery Professional (EDRP)
- eLearnSecurity Junior Penetration Tester
- ISACA Certified Information Security Manager (CISM)
- MITRE ATT&CK Micro-Certification
- Splunk Micro-Certification



PARTICIPATING NCAE-C INSTITUTIONS

1. Augusta University
2. Columbus State University
3. Dakota State University
4. Eastern New Mexico University-Ruidoso
5. Florida International University
6. Metro State University
7. San Antonio College
8. University of South Florida - Cyber Florida
9. University of Texas at San Antonio
10. University of West Florida (Lead Institution)





CityU
of Seattle



DIGITAL
TRANSFORMATION
CENTER



CYBERSECURITY

WORKFORCE CERTIFICATE PROGRAM

Explorer
(Badge/s= AI Fundamentals & Design Thinking Practitioner)

- DB Management
- Security Principles & Foundations
- Network Foundations
- Artificial Intelligence
- IT Basics
- Privacy/Legal Foundations and Ethics
- Coding
- Cryptography

Practitioner
(Badge/s= Cloud Foundations, Cisco and Blockchain)

- Cyber threat hunting
- Information Security
- Network Security
- Cognitive Computing
- Data Mining
- Cloud Foundations
- Blockchain
- Forensics

Professional
(Badge/s=Artificial intelligence + others)

- DB Security
- Cloud security
- IoT
- Post Quantum Cryptography
- Risk Analysis
- Robotics Process Automation Analysis
- Healthcare Capstone Project
- Logistics Capstone Project

Healthcare
Logistics
Cybersecurity
(Certificate)
6 months/
8 week
courses/online
instructor led—
Cohorts of 35-40

PATHS to:

- *Associate
- *Bachelors
- *Graduate Degrees And/or Certificates

Curricula developed as core foundational with tracks in Healthcare industry and Logistics (Labs, Datasets)

Tech Industry badges earned throughout (IBM, Microsoft, Google etc.)

Train the Trainer and Open Source modules available- please inquire

Success Coaches assigned to each student

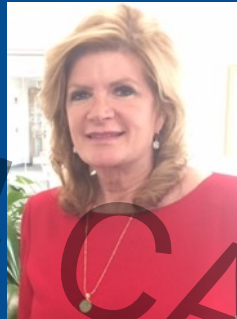
2024 Purdue University Northwest



- Two CWCT certificate programs and 3 training tracks
 - Artificial Intelligence
 - Digital Forensics
 - System Administration
- Six non-credit, college level courses per learning path
 - non-credit transcripts and program completion certificate
 - Offered through **live virtual lectures**
 - Virtual Live lectures recorded
- 8-week sessions-terms
 - 6 hours per week
 - Take 1-2 courses per session
 - 5 sessions per year
- Industry certifications
 - A+, Security+, Linux+, CEH, etc
 - 1-3 voucher for certifications
- Placement
 - Career development workshops
 - Virtual job fairs

Tracks	Core Courses (CWCT-Entry)	3 Remaining Courses Specific to Each Track of CWCT-Professional
System Administration	1. CompTIA A+	4. Linux System Administration 5. Ethical Hacking 6. Cloud System Administration
Digital Forensics	2. CISCO Cyber Ops	4. Linux System Administration 5. Computer Forensics 6. Digital Forensic Investigator 7. Optional: IoT & Mobile Forensics
AI	3. CompTIA Security+	4. Python Essentials 5. Machine Learning in Cybersecurity 6. IoT & Hardware Security

Questions for the Panel



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Dr. Tarek Saadawi (moderator)

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Symposium

Connect with Us



University of West
Florida

University of
Louisville

Purdue University
Northwest

CyberSkills2Work
Program

Pathways Coalition

CWCT

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engineering.louisville.edu/cybercenter/homepage/workforce-program

www.pnw.edu/cybersecurity/cwct/

2024 CAE Community Symposium