NJ PATHWAYS
TO CAREER OPPORTUNITIES
Aligning Education to Build an Innovative Workforce

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PATHWAYS ACCOMPLISHMENTS

Center of Workforce Innovation for Cybersecurity

Catherine Starghill, Esq.

Vice President

New Jersey Council of County Colleges

Executive Director

New Jersey Community College Consortium for Workforce & Economic Development

WELCOMING REMARKS

Community College Presidents

Dr. Eric M. Friedman

President

Bergen Community College

Dr. Lovell Pugh-Bassett

President

Camden County College

Dr. Jon H. Larson

President

Ocean County College

Dr. Michael J. McDonough

President

Raritan Valley Community College

Dr. Michael A. Cioce

President

Rowan College at Burlington County

Chris Emigholz

Chief Government Affairs Officer

New Jersey Business & Industry Association

WELCOMING REMARKS

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Veda Shamsid-Deen, Esq.

Director, Technology & Innovation, Strategy and Workforce Partnerships

New Jersey Community Colllege Consortium for Workforce Development

Our Education Partners

Bergen Applied Tech High School

Bergen Community College

Camden County College

Camden Dream Center

Collingswood High School

Hunterdon Central High School

Hunterdon County Polytech

Lakewood High School

NJ NEST - New Jersey Ecosystem

Ocean County College

Raritan Valley Community College

Rowan College at Burlington County

Rowan University

Our Industry Partners

SOLIGENIX

Integris.

CISCO

JASFEL ANALYTICS

1huddle

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MARKETSMITH
Performance Marketing. Perfected.

Cisco Network Fundamentals

Dr. Sylvia Riviello, Ocean County College

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Pathway 1 – Cisco Network Fundamentals
Connection to High School (Dual Enrollment)

Ocean County College, partnered with the **Camden Dream Center** (a community-based training provider that is the state's Cisco Academy), to embed the **Cisco industry credential** of (1) Cisco Certified Network Associate **and the CompTIA industry credentials** (1) CompTIA A+, (2) CompTIA Networking+, and (3) CompTIA Security+ into existing Computer Science dual enrollment courses. **Lakewood High School** students **earn 3 college credits** per course. These courses prepare students to take the CISCO and CompTIA industry credential examinations which may afford them immediate employment.

Raritan Valley Community College (RVCC) developed a dual enrollment program with **Hunterdon County Polytech High School** and embedded the CompTIA industry credentials (1) CompTIA A+ and (2) CompTIA Network+ into existing dual enrollment courses. Students earn 3 college credits for each course toward the Associate of Applied Sciences in Computer Networking and Cybersecurity. These courses prepare student to take the CompTIA industry credentials examination which may afford them immediate employment.

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Pathway 1 – Cisco Network Fundamentals
Prior Learning Assessment

Ocean County College (OCC) embedded the industry credentials curriculum for (1) Cisco Certified Network Associate, (2) CompTIA A+, (3) CompTIA Networking+, and (4) CompTIA Security+ into 3 courses that stack toward the Associate of Science in Computer Science (Cyber Information option) degree program. After completion of these courses (Computing Fundamentals, Cisco Networking Fundamentals, and Intro to Cybersecurity), students are prepared to take the industry credentials certifications examinations and are ready to enter the workforce.

Raritan Valley Community College (RVCC) developed a **60 college credit Associate of Applied Science in Cybersecurity degree program, 30 college credit Certificate in Cybersecurity program**, and a **30 college credit Certificate of Computer Support program.** Skills Based Assessment (SBA) documents were also created for the 10 technical courses in the AAS and two certificate programs. The SBAs are designed as Prior Learning Assessments for individuals that have prior experience or industry credential certifications in Cybersecurity.

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Pathway 1 – Cisco Network Fundamentals
Connection to 4-Year College/University

Raritan Valley Community College (RVCC) partnered with **Rowan University (RU)** to create articulation agreements between their Cybersecurity degree programs. The following articulation agreements are under review pending final approvals:

- 3+1 articulation agreement for the Associate of Applied Science in Computer Networking/ Cybersecurity option degree program at RVCC and the Bachelor of Arts in Computing and Informatics with Cybersecurity concentration degree program at RU, and

- 2+2 articulation agreement for the Associate of Applied Science in Computer Networking / Cybersecurity option degree program at RVCC and the Bachelor of Arts in Computer Systems Technology degree program at RU.

Ocean County College (OCC) partnered with Rowan University (RU) to create articulation agreements between their Cybersecurity degree programs. The following articulation agreements are pending final approvals:

- 3+1 articulation agreement for the Associate of Computer Science with Cyber – Infor option degree program at OCC and the Bachelor of Arts in Computing and Informatics with Cybersecurity Concentration degree program at RU, and

- 2+2 articulation agreement for the Associate of Science in Computer Science with Cyber-Infor option degree program at OCC and the Bachelor of Arts in Computer Systems Technology degree program at RU.

These agreements ensure that students will not incur additional time nor expenses repeating or duplicating course work that has already been completed.

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Pathway 1 – Cisco Network Fundamentals

Experiential Learning

Ocean County College (OCC) is will offer **GenCyber Safe**, a 5 day Summer Camp for middle and high school students which increases awareness about cybersecurity careers. **GenCyber Safe builds** a scaffolding of cybersecurity fundamental knowledge in a vibrant, fun, and peer-driven learning environment. GenCyber Safe introduces students to cyber technology through engaging learning activities that connect the basics of security information and related career pathways. This camp will be offered **twice over Summer 2023, with an anticipated 30 students participating in each camp**. GenCyber Safe has the potential to reach students across Ocean County.

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Pathway 1 – Cisco Network Fundamentals
Adult Learners

Ocean County College (OCC) created non-credit workforce training courses that embed curriculum for the following industry credentials: (1) Cisco Certified Network Associate, (2) Cisco Network Security, and (3) Cisco CyberOps Assoc. Adult learners who complete the courses will be prepared to sit for the credential examinations and enter the workforce equipped with the necessary skills to enter the technology workforce.

OCC will give college credit to adult learners who earn the industry certifications toward the Associate of Science degree program.

Raritan Valley Community College (RVCC) created non-credit workforce development training courses that embed curriculum for the following industry credentials: (1) Cisco A+, (2) Cisco Certified Network Associate, and (3) Google IT certificates. Adult learners who complete the courses will be prepared to sit for the credential examinations and enter the workforce equipped with the necessary skills to enter the technology workforce.

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Pathway 1 – Cisco Network Fundamentals
Professional Development

In developing professional development resources, **a Raritan Valley Community College** instructor was trained on the new **Cisco CyberOps Associate certificate course**. The two week industry credential training course was compressed and completed in August 2022. **Videos were generated** so that other education professors can use them to learn the course material.

Ocean County College (OCC) partnered with the **Camden Dream Center (a Cisco Networking Training Academy)** for Train-the-Trainer for **CyberOps and Cisco Certified Network Associate.** OCC had faculty complete these courses so that they may provide professional development on these courses for other OCC faculty and other education institutions.

Rowan College at Burlington County (RCBC) has faculty who have completed cybersecurity industry credentials training for **CyberOps and Instructor Training for Cisco Certified Network Associate.** These faculty may provide professional development on these courses for other RCBC faculty and other education institutions.

NJ-NEST Northern New Jersey STEM Ecosystem at Bergen Community College held **professional development sessions during 2022 and has scheduled** several campus events and programs to host more professional development information sessions at several campus outlets in **Spring/Summer 2023**.

CompTIA Network Fundamentals

Paul Warner, Rowan College at Burlington County

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Pathway 2 – CompTIA Network Fundamentals
Connection to High School (Dual Enrollment)

Camden County College (CCC) embedded the following CompTIA industry credentials: (1) CompTIA A+, (2) CompTIA Network+, (3) CompTIA Security+, and (4) CompTIA CySA+ certifications into existing dual enrollment courses at **Collingswood High School**. Upon completion of the dual enrollment courses, students will be prepared to sit for the CompTIA industry credentials examinations and join the workforce. Students who earn the industry certifications may also **receive college credit toward the Associate of Applied Science in Cybersecurity** degree program.

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Pathway 2 – CompTIA Network Fundamentals
Prior Learning Assessment

Camden County College (CCC) embedded CompTIA industry credentials into existing Cybersecurity courses at CCC. Students who have completed the **CompTIA A+, Network+, Security+, and CySA+ and Microsoft Windows Server 2019 Administration** certifications will receive credit for the associated course at CCC. Correspondingly, students who complete their academic courses will be prepared to sit for the CompTIA certification exam and become employed in the workforce certifications.

CCC has convened an institution-wide task force to define and determine prior learning assessment pathways at the college. CompTIA, Microsoft, and Cisco certifications and their relationship to credit classes will be further defined during this process.

Rowan College at Burlington County developed a **Prior Learning Assessment (PLA) Toolkit** to assist colleges with the noncredit to credit evaluation and or portfolio review options of PLA. The layout for this toolkit is based on the "phases of implementing a project," planning, developing, implementing and launching. In each stage, there is a brief descriptor of the process, important questions for consideration, and sample documents, challenges and questions that should be.

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Pathway 2 – CompTIA Network Fundamentals
Connection to 4-Year College/University

Camden County College (CCC) partnered with **Rowan University (RU)** to create articulation agreements between their Cybersecurity degree programs. The following articulation agreements are pending final approvals:

- 3+1 articulation agreement for the Associate of Applied Science in Cybersecurity degree program at CCC and the Bachelor of Arts in Computing and Informatics (Cybersecurity concentration) degree program at RU, and
- 2+2 articulation agreement for the Associate of Applied Science in Cybersecurity degree program at CCC and the Bachelor of Arts in Computing and Informatics (Cybersecurity concentration) degree program at RU.

Rowan College at Burlington County (RCBC) partnered with **Rowan University (RU)** to create an articulation agreement between their Cybersecurity degree programs. The articulation agreement for the Associate of Applied Science in Cybersecurity degree program at RCBC and the Bachelor of Arts in Computer Systems Technology degree program at RU is pending final approval.

These agreements ensure that students will not incur additional time nor expenses repeating or duplicating course work that has already been completed.

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Pathway 2 – CompTIA Network Fundamentals
Experiential Learning

Raritan Valley Community College (RVCC) partnered with **Hunterdon Central High School** to create and pilot a **3 week Summer Program** that allows high school students to **earn 3 college credits toward the Cybersecurity degree program** and have the opportunity to sit for the CompTIA A+ certification examination. The program will be offered **Summer 2023**.

Rowan College at Burlington County (RCBC) created an **Experiential Learning Guide** for developing or expanding on current experiential learning programs and can be used in its current format or adapted for an institution's unique conditions. Considerations may include program-specific accreditation requirements, institutional priorities, funding access and opportunities, student population (trends/needs), and industry presence in the region. The Guide includes experiential learning definitions, student and supervisor evaluations, employer engagement strategies, experiential learning participation and partnership agreements, experiential learning proposal process, and experiential learning course.

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Pathway 2 – CompTIA Network Fundamentals
Adult Learners

Camden County College (CCC) created a non-credit workforce development training course that embed curriculum for CompTIA industry credentials. **As a CompTIA Approved Training Academy, CCC includes the curriculum for core elements of the industry credential certifications for (1) CompTIA A+ (Computer Repair), (2) CompTIA NET+, and (3) CompTIA SEC+.**

The course, **Computer Technology Support Specialist**, prepares adult learners who complete the course to sit for the credential examinations and enter the workforce equipped with the necessary skills to enter the technology workforce. **Adult learners who earn the industry certifications can also receive college credit toward the Associate of Applied Science in Cybersecurity degree program**.

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Pathway 2 – CompTIA Network Fundamentals
Professional Development

Camden County College (CCC) is offering both the credit and non-credit instructors the opportunity to take the **CompTIA Data+ course and sit for this industry credential certification examination**. Credentialed Instructors will provide training for other instructors. CCC is also planning a **Cybersecurity Professional Development event** to be held at the Rohrer Center in Cherry Hill for **Spring 2023**.

Q&A
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Center of Workforce Innovation for Cybersecurity

Closing Remarks
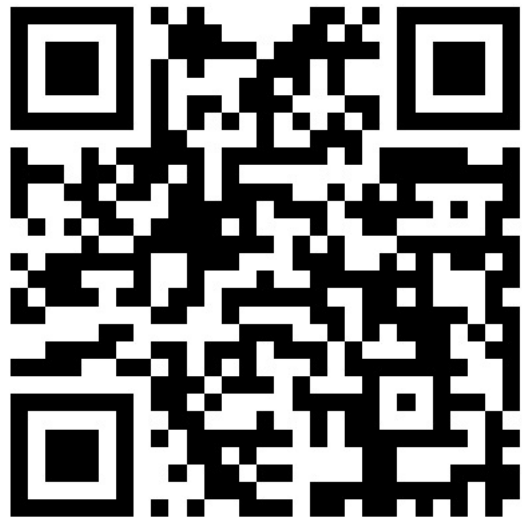
Catherine Starghill, Esq.

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