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

Thank you for joining us. Please take this time to mute yourself.

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

PATHWAYS ACCOMPLISHMENTS

Center of Workforce Innovation for Programming & Software Development

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. Mark McCormick

President

Middlesex College

Dr. Jon H. Larson

President

Ocean County College

Dr. Augustine A. Boakye

President

Essex County College

WELCOMING REMARKS

Chris Emigholz

Chief Government Affairs Officer

New Jersey Business & Industry Association

Veda Shamsid-Deen, Esq.

Director, Technology & Innovation, Strategy and Workforce Partnerships

New Jersey Community Colllege Consortium for Workforce Development

WELCOMING REMARKS

Our Education Partners

Middlesex College

Essex County College

Ocean County College

Thomas Edison Energy Smart
 Charter School

Essex County Schools of
 Technology

Rowan University

Camden Dream Center

Lakewood High School

Our Industry Partners

SOLIGENIX

Integris.

CISCO

JASFEL ANALYTICS

1huddle®

Microsoft

bluelabs

amazon

MARKETSMITH
Performance Marketing. Perfected.

Computer Science

Dr. Aslihan Cakmak, County College of Morris

Center of Workforce Innovation for Programming & Software Development
Pathway 1 – Computer Science
Connection to High School (Dual Enrollment)

Essex County College (ECC) partnered with **Essex County Schools of Technology (ECST)** to create computer science a dual enrollment pathway from high school to community college. Students can take dual enrollment **courses embedded with stackable CompTIA industry credentials** including professional certifications for: (1) IT Fundamentals, (2) A+ Core I, and (3) A+ Core II. Students who successfully complete the courses and pass the professional certification examinations **earn 7 college credits** toward the **Associate of Science in Computer Science** degree program.

Middlesex College (MC) partnered with **Thomas Edison EnergySmart Charter School (TEECS)** to create a computer science dual enrollment pathway from high school to community college. Students can take dual enrollment **courses with stackable CompTIA industry credentials** including professional certifications for: (1) CompTIA A+, (2) CompTIA Security +, and (3) Java SE 8 Oracle Certified Associate. Students who successfully complete the courses and pass the professional certification examinations **earn 4 college credits** at MC toward the **Associate of Science in Computer Science** degree program.

Center of Workforce Innovation for Programming & Software Development
Pathway 1 – Computer Science
Prior Learning Assessment (Other)

Essex County College (ECC) reviewed **3 CompTIA industry credentials** and **evaluated each for college credit**. The industry credentials are the following certifications: (1) IT Fundamentals ITF+, (2) A+ Core I, and (3) A+ Core II. Students who successfully attain these industry credentials by passing all corresponding professional examinations **earn 7 college credits toward 2 courses mapped to 4 degree programs and 2 academic certificate programs at ECC**. With these **stackable industry credentials**, students earn college credits toward academic certificate and degree programs and **are equipped with the necessary skills to enter the technology workforce**.

DEGREE/CERTIFICATE	MAJOR COURSE REQUIREMENT	ADDITIONAL COURSE REQUIREMENT
Computer Science AS (2302)	CSC 104	
Computer Network Support-Certificate (3321)	CSC 114	
Cybersecurity & Network Technology AAS (2312)	CSC 104 and CSC 114	
Cybersecurity - Certificate (3322)	CSC 114	
Health Information and Technology AAS (2124)		CSC 104
Software Development Technology AAS (2316)	CSC 104	CSC 114

Middlesex College (MCC) reviewed 3 CompTIA industry credentials, evaluated each for college credit, and embedded them into existing MCC courses. The industry credentials are the following certifications: (1) CompTIA Network+, (2) CompTIA Security+, and (3) Oracle Java SE 8 Certified Associate. Faculty mapped course topics and skills to the professional examinations for the industry credentials and revised college courses to better align with the industry certification content.

Students who successfully attain these industry credentials by passing all corresponding professional examinations **earn 3 or 4 college credits** toward an **Associate of Science in Computer Science** degree program at MC. With these stackable industry credentials, **students earn college credits toward a degree and are equipped with the necessary skills to enter the technology workforce**.

Center of Workforce Innovation for Programming & Software Development
Pathway 1 – Computer Science
Connection to 4-Year College/University

Essex County College (ECC) partnered with **Rowan University (RU)** to create articulation agreements between their Computer Science degree programs. The following articulation agreements are pending final approvals:
- **3+1 articulation agreement** for the Associate of Science in Computer Science degree program at ECC and the Bachelor of Arts in Computing and Informatics degree program at RU, and
- **2+2 articulation agreement** for the Associate of Science in Computer Science degree program at ECC and the Bachelor of Science in Computer Science degree program at RU.

Middlesex College (MC) partnered with **Rowan University (RU)** to create articulation agreements between their Computer Science degree programs. The following articulation agreements are pending final approvals:
- 3+1 articulation agreement for the Associate of Applied Science in Computer Science degree program at MC and the Bachelor of Arts in Computing and Informatics degree program at RU, and
- 2+2 articulation agreement for the Associate of Science in Computer Science degree program at MC and the Bachelor of Science in Computer Science degree program at RU.

These articulation agreements will **ensure that students will not incur additional time nor expense repeating or duplicating course work**.

Center of Workforce Innovation for Programming & Software Development
Pathway 1 – Computer Science
Adult Learners/Pilot

Essex County College (ECC) partnered with the **Camden Dream Center** (NJ's Cisco Networking Academy), to offer non-credit workforce training courses to adult learners. These courses are: (1) CCNA – Introduction to Networking and (2) Introduction to Cybersecurity. The courses will be offered in **Fall 2023**.

Adult learners who successfully complete one or both courses are on the pathway to be **equipped with the necessary skills to enter the technology workforce**.

Middlesex College (MC) developed 5 new non-credit workforce training courses that **prepare adult learners for the corresponding CompTIA certifications professional examinations**. These courses are 40 hours each and will be offered in **Spring 2023**.

The courses are for the following **CompTIA industry certifications**: (1) CompTIA+ Hardware, (2) CompTIA+ Software, (3) CompTIA Network+, (4) CompTIA Security+, and (5) CompTIA Cloud+.

Adult learners who complete one or more of these courses and pass the professional certification examinations will have **stackable industry credentials and are equipped with the necessary skills to enter the technology workforce**.

Center of Workforce Innovation for Programming & Software Development
Pathway 1 – Computer Science
Professional Development

Middlesex College (MC) developed student **preparation content including mock professional certification examinations for industry credentials** for the following professional certifications: (1) Oracle Java SE 8 Certified Associate, (2) CompTIA Network+, and (3) CompTIA Security+.

MC will provide these **training and professional development resources** for courses preparing students and adult learners for these industry credentials **to other NJ education institutions** interested in offering these courses. Additionally, MC will **make adjunct and faculty holding industry certifications available as professional development resources** to other NJ education institutions.

Computer Systems Technology

Dr. Elvira Vieira, Essex County College

Center of Workforce Innovation for Programming & Software Development
Pathway 2 – Computer Systems Technology
Connection to High School (Non-Credit)

Ocean County College partnered with **Lakewood High School** for its dual enrollment program. Lakewood HS will select 25 rising eighth grade students with overall GPAs between 1.85 and 2.4 to participate in the **Lakewood Academy**. **Students will take courses embedded with stackable the following industry credentials: (1) CompTIA industry certification, (2) CompTIA A+ certification, and (3) CompTIA Security A+ certification.**

The goal of the program is to assist participating students to earn a High School diploma, an Associates degree from OCC, and a Bachelor's degree while earning stackable industry credentials which equip them with the necessary skills to enter the technology workforce

Center of Workforce Innovation for Programming & Software Development
Pathway 2 – Computer Systems Technology
Connection to High School (Dual Enrollment)

Essex County College (ECC) partnered with **Essex County Schools of Technology (ECST)** to create computer science a dual enrollment pathway from high school to community college. Students can take dual enrollment **courses embedded with stackable CompTIA industry credentials** including professional certifications for: (1) IT Fundamentals, (2) A+ Core I, and (3) A+ Core II. Students who successfully complete the courses and pass the professional certification examinations **earn 7 college credits** toward the **Associate of Science in Computer Systems Technology** degree program.

Middlesex College (MC) partnered with **Thomas Edison EnergySmart Charter School (TEECS)** to create a computer science dual enrollment pathway from high school to community college. Students can take dual enrollment **courses with stackable CompTIA industry credentials** including professional certifications for: (1) CompTIA A+, (2) CompTIA Security +, and (3) Java SE 8 Oracle Certified Associate. Students who successfully complete the courses and pass the professional certification examinations **earn 4 college credits** at MC toward the **Associate of Science in Computer Systems Technology** degree program.

Center of Workforce Innovation for Programming & Software Development
Pathway 2 – Computer Systems Technology

Ocean County College (OCC) embedded three (3) courses with the following **industry credentials**: (1) CompTIA A+, (2)CompTIA Network +, and (3) Amazon Web Services (AWS) into the Associate of Science in Computer Science degree program. Students who successfully attain these industry credentials by passing all corresponding professional examinations earn up **to 10 college credits.** With these industry stackable credentials, students **earn college credits toward a degree and are equipped with the necessary skills to enter the technology workforce**.

Connection to Community College (Credit)

OCC updated credit curriculum to ensure all content and skills are embedded in credit sequence. The pilot for industry valued credential examinations course preparation will be offered **Spring 2023**. OCC will hold two information sessions with Computer Sciences majors in their 3rd and 4th semesters highlighting opportunities to take industry certification examinations. Students who successfully complete industry enhanced courses are equipped with the necessary skills to enter the technology workforce.

Essex County College (ECC) reviewed and embedded three CompTIA curricula (IT Fundamentals ITF+, A+ Core I & II) industry credentials into the Associate of Science in Computer Science degree program. Students who successfully complete and document content competencies through CompTIA stackable industry certifications in all three (3) curricula (ITF+, A+ Core I & II), are eligible for **seven (7)** Essex County College credits. With these industry stackable credentials, students are ready to enter the workforce.

Center of Workforce Innovation for Programming & Software Development
Pathway 2 – Computer Systems Technology
Connection to 4-Year College/University

Essex County College (ECC) partnered with **Rowan University (RU)** to create articulation agreements between their Computer Systems Technology degree programs. The following articulation agreement is pending final approval:

- 2+2 articulation agreement for the Associate of Applied Science in Cybersecurity and Networking degree program at ECC 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 Computer Systems Technology degree programs. The following articulation agreements are pending final approvals:

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

These articulation agreements will ensure that students will not incur additional time nor expense repeating or duplicating course work.

Center of Workforce Innovation for Programming & Software Development
Pathway 2 – Computer Systems Technology
Adult Learners

Ocean County College (OCC) developed new non-credit workforce training courses that prepare adult learners for corresponding **CompTIA certifications professional examinations**. These courses will be offered in **Summer 2023**.

The courses are for the following CompTIA industry certifications: (1) CompTIA A+, (2) CompTIA IT Fundamentals, and (3) CompTIA Network.

Adult learners who complete one or more of these courses and pass the professional certification examinations will have **stackable industry credentials and are equipped with the necessary skills to enter the technology workforce**.

Center of Workforce Innovation for Programming & Software Development
Pathway 2 – Computer Systems Technology
Adult Learners/Pilot

Ocean County College (OCC) created a pilot for a cohort of 24 adult learners for non-credit workforce training courses utilizing the **Google IT Certifications courses on Coursera**. The courses are: (1) Google Project Management, (2) UX Design, (3) IT Automation with Python Digital Marketing & E-Commerce, and (4) Google Data Analytics.

Adult learners who successfully complete one or more of these courses and pass the professional certification examinations will have **stackable industry credentials**, **earn 12 college credits** toward the Associate of Science in Computer Science and Information Technology and degree programs, **and are equipped with the necessary skills to enter the technology workforce**.

Center of Workforce Innovation for Programming & Software Development
Pathway 2 – Computer Systems Technology
Professional Development

Ocean County College (OCC) hosted a professional development session to inform other education professionals and institutions how to evaluate and map competencies and skills of industry valued credentials to embed them into college credit courses. OCC will share all developed and approved curriculum with other education institutions in Spring 2023.

Q&A

Center of Workforce Innovation for
Programming & Software Development

#NJPATHWAYS

FOLLOW ALONG

🌐 NJPathways.org

f @NJCommColleges

in @NJ Community Colleges

📷 @NJCommColleges

🐦 @NJCommColleges

▶ @NJCommColleges

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