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

YEAR 2
END-OF-YEAR REPORT OUT

Center of Workforce Innovation for Manufacturing & Supply Chain Management

WELCOMING REMARKS

Aaron Fichtner

President

New Jersey Council of County Colleges

AGENDA

Manufacturing & Supply Chain Management Pathway Projects Year 2 End-of-Year Report Out

1. Machine Tool Technology
2. Machinst
3. Mechatronics - Repair and Maintenance of Industrial Equiptment
4. Optics Technology and Manufacturing
5. Robotics and Automation
6. Diesel Mechanic Registered Apprenticeship
7. IET Essentials of Supply Chain Management
8. ScPro: Connection to Community College (Credit) and to 4 Year Universities
9. Stackable Credentials

Q&A

Upcoming Events

Our Education Partners

- Adelphi University
- Brookdale Community College
- Camden County College
- Essex County College
- High Point Regional High School
- Hunterdon Central High School
- Hudson County Community College
- Middlesex College
- County College of Morris
- Morris County Organization for Hispanic Affairs (MCOHA)
- Morris County Vocational School District
- Newton High School
- Project Self Sufficiency
- Raritan Valley Community College
- Red Trucking Inc.
- Rutgers School of Business - Newark
- Sussex County Community College
- Sussex County Technical School
- Thorlabs
- UCNJ Union College of Union County, NJ
- Wallkill Valley High School
- West Side High School – Newark Public Schools
- William Paterson University

Center of Workforce Innovation for Manufacturing & Supply Chain Management

Jason Fruge, Lead Institution Representative
Sussex County Community College

Machine Tool Technology

Jason Fruge, Sussex County Community College

EDUCATION PARTNERS:

Sussex County Community College

County College of Morris

High Point Regional High School

Newton High School

Sussex County Technical School

Wallkill Valley High School

Project Self Sufficiency

Thorlabs

Machine Tool Technology

The Machine Tool certificate program expands on a one-year certificate program, providing students an opportunity to gain a broader knowledge of and to achieve a higher skill level in machining. Students are required to develop advanced skills in planning, designing, producing CAD prints, and setting up and operating machine tools to produce precision parts to specifications. The students receive training in programming, setting-up and operating CNC turning and machining centers.

There is also a general education component integrated into the program to satisfy demands for appropriate workforce skills. Upon completing the certificate program, students have the necessary skills to become employed as an entry-level machinist or a CNC technician.

PATHWAY CONNECTIONS:

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PLA for Apprenticeship RTI

PLA

Connection between Community Colleges (1+1)

Experiential Learning

Connection to CBOs

Adult Learners

Adult Literacy

Connection to 4-Yr College/University

Professional Development

Pilot

Machine Tool Technology

Sussex County Community College (SCCC) launched a series of high school workshops focused on enhancing pathways into manufacturing (Spring & Summer 2024).

Each workshop concludes with students earning an industry-recognized credential from Tormach, an industry leader in manufacturing and CNC Machining. This certification will transfer into SCCC as a three-credit elective in the one year Machine Tool Technology Certificate program.

In June of 2024, SCCC hosted a two day professional development workshop to support high school staff in Machine Tool Technology concurrent course offerings. Local high schools from the tri-state attended this event.

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Machine Tool Technology

Sussex County Community College (SCCC) established concurrent course offerings with designated high school partners.

Matching high school STEM curriculum to SCCC course outcomes. Shared effort in refining curriculum for better alignment.

SCCC will offer Machine Tool Technology I (MCHT), as this course has the greatest potential to align with current high school partners' STEM and robotics programs. In Fall 2025, a new partner school (High Point Regional High School) will offer Machine Tool Technology I to their high school seniors.

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Machine Tool Technology

During the Summer and Fall of 2023, Sussex County Community College worked to refine an existing Prior Learning Assessment (PLA) process for the assessment of Industry-Valued Credentials for credit. This expands on the college's existing PLA process to allow for enhanced transferability.

In manufacturing, sharing supportive evidence for PLA review is mostly proprietary, thus limiting available documentation.

The new process is currently available.

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Machine Tool Technology

With the development of an AAS in Machine Tool Technology, we have worked to seek out 4-year colleges and universities to develop articulation agreements.

Ancillary Outcomes:

Sussex County Community College revised existing curriculum in similar areas of Robotics and Engineering to improve transferability to 4-year colleges and universities.

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Machine Tool Technology

During the Summer of 2024, Sussex County Community College offered a 2-day CNC based professional development workshop to better prepare concurrent faculty in offering more advanced level courses in high school.

Ancillary Activities:

- **Additional local high schools have reached out to establish concurrent course offerings.**
- **Current students in other technical programs attended this workshop and have started a new career path.**

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Machine Tool Technology

Continue working with the local tri-county Labor and Workforce Development boards to promote opportunities for training.

Continuously update program offerings within the NJ Workforce databases, such as, but not limited to the NJ Careers training explorer and the newly migrated AOSOS/ETPL training website.

Increase industry outreach to new potential partners and develop employment and training collaborations.

Machinist

Carol McCormick, Camden County College

EDUCATION PARTNERS:

Camden County College

Overbrook High School

Timber Creek High School

William Paterson University

Machinist

Pre-Apprenticeship Machinist Boot Camp - Direct Pathway to a Career

Camden County College (CCC) is piloting the Pre-Apprenticeship Machinist Boot Camp. Following the College's Career Now model, rising 2024-2025 seniors participate in a career program during their final year of high school.

The curriculum aligns with the college's 13 credit Precision Machining Technology Certificate program (PMT.CA).

Additionally, it follows the National Institute for Metal Working Skills (NIMs) Level One Machinist Certification designed to meet the entry-level requirements for employment.

The Boot Camp began on August 28, 2024.

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Machinist

Activities:

- **Team planning meetings regarding Boot Camp Implementation:**
  - **Created the program class schedule**
  - **Established the process and time line for program**
  - **Created a Boot Camp program check list**
- **Marketing meetings:**
  - **Designed the program flyer**
- **Recruitment to high school:**
  - **Program flyer distributed to all of the Camden County High School guidance counselors**
  - **Virtual Information Sessions**
- **Requirements for the program:**
  - **Letter of Recommendation**
  - **Current Resume**

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Machinist

Activities:

- New Student Orientation Session - 2 weeks prior to start of class
  - Class schedule/attendance requirements
  - Student Portal/Canvas and Handshake
  - Campus Tour
- Program began on August 28
  - Monthly check-in calls with the Guidance Counselors to review students' progress
- Resume writing, job search, and interviewing skills
  - Group sessions
  - One-on-one sessions
- Employer Class Visits | Employer Facility Tours
- USDOL Apprenticeship Representative
- Class Presentation

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Machinist

The Pre-Apprenticeship Machinist Boot Camp curriculum aligns with Camden County College's 13 credit Computer Aided Manufacturing Certificate program (CAM.CA) enabling students to articulate into the Precision Machining Technology AAS.

- **National Institute for Metal Working Skills (NIMs) Level One Machinist Certification – Measurement, Materials and Safety**

Transfer Agreements:

Precision Machining Technology (PMT.AAS) to Bachelor Degree

- **William Paterson University - PMT articulates into the Bachelor of Science in Management.**

Mechatronics – Repair and Maintenance of Industrial Equipment

Conrad Mercurius, Raritan Valley Community College

EDUCATION PARTNERS:

Raritan Valley Community College

Salem Community College

Hunterdon Central High School

Bound Brook High School

Manville High School

Mechatronics – Repair and Maintenance of Industrial Equipment

This program prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, and production machinery. It also develops technical skills, including circuit construction, microcontroller programming, and the application of sensors and actuators.

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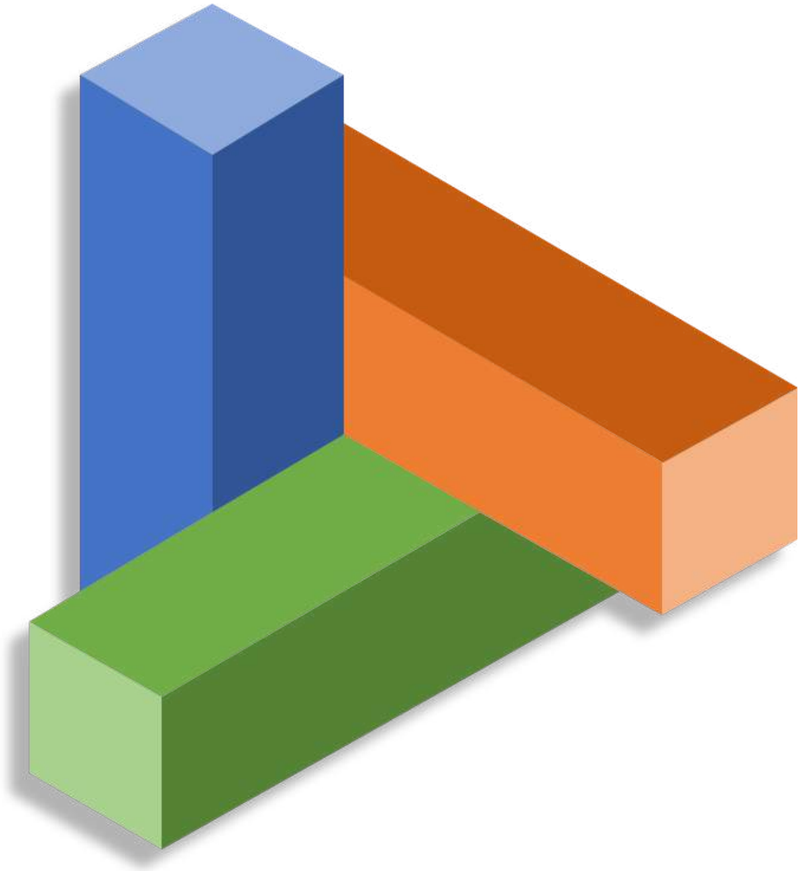
Mechatronics – Repair and Maintenance of Industrial Equipment

Year 2 built on the success of Year 1, strengthening the program's foundation and positioning it for continued growth and future expansion.



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Mechatronics – Repair and Maintenance of Industrial Equipment

Industrial Maintenance High School Impact

The pathway project has immensely impacted the K-12 system by inspiring and equipping students with the skills and knowledge needed to pursue careers in advanced manufacturing and industrial technology

During the second year of NJ Pathways, the Center of Workforce Innovation for Manufacturing and Supply Chain Management trained and successfully equipped rising high school seniors with the knowledge and skills to pursue mechatronics and industrial maintenance careers.

Many students expressed a newfound passion for the field, and several plan to continue their education in related disciplines.

The program, by providing technical training, high school credits, and certificate opportunities, played a crucial role in inspiring a future generation of engineers and technicians. These students are now ready to innovate and excel in the rapidly evolving world of industrial technology.

Students are eligible for exciting opportunities, including internships and entry-level positions with our industry partners. These opportunities will allow graduates to apply their newly acquired skills in real-world settings, gain valuable work experience, and take the first steps toward a rewarding career.

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Mechatronics – Repair and Maintenance of Industrial Equipment

Launch of Approved Registered Apprenticeship Training

The success of the Year One pilot led to the launch of an approved Mechatronics – Industrial Maintenance and Repair Apprenticeship Pathway.

This milestone marks a significant achievement in our ongoing efforts to build a skilled workforce in mechatronics and industrial maintenance.

Successful Completion:

Six more incumbent workers have completed the training. As a result, they will now be promoted to a higher level within their respective operation company. These participants have earned industry-recognized credentials that enhance their qualifications.

Registered Apprenticeship Launch:

Success from the previous year has directly contributed to the formal launch of an apprenticeship training program designed to further advance the skills of our workforce.

This achievement has led to Prior Learning Assessment (PLA) for apprenticeship's Related Technical Instruction (RTI) component. This program will continue to provide our industry partners with well-trained, competent employees.

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Mechatronics – Repair and Maintenance of Industrial Equipment

Empowering Education: Support from Community-Base Organization (CBO)

The Transformative Impact of the Center's partnership with CBOs

The support from CBOs that provide crucial tuition assistance played a significant role in making the Pathway Project accessible to a broader range of participants.

Advisory Board Formation:

The creation of an advisory board has been instrumental in guiding the program's direction and ensuring its alignment with industry needs.

Train-the-Trainer:

Professional development through a train-the-trainer format has ensured that educators are well-equipped to deliver high-quality instruction that enhances the program's effectiveness.

The Center has excelled in forming strong partnerships with CBOs that have been instrumental in the success of these programs. The collaboration with CBOs has not only strengthened our community ties but also enhanced the overall impact and sustainability of these efforts.

Optics Technology and Manufacturing

Jason Fruge, Sussex County Community College

EDUCATION PARTNERS:

County College of Morris

Hopatcong High School

Sussex County Technical High School

Newton High School

Lenape Valley High School of Project Self Sufficiency

Optics Technology and Manufacturing

This project is designed to create a pathway for students to enter the optics manufacturing industry in New Jersey, an incredibly important sector that has a strong presence in the state. Currently, only three programs at the Community College level exists for optics technology of which Sussex County Community College's Optics Technology A.A.S. is one. This project expands and bolsters the Optics Technology program in a way that that enrollment, reach, and job placement will all increase. This important pathway provides optics companies across the state with a skilled workforce needed.

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Pilot

Optics Technology and Manufacturing

Sussex County Community College (SCCC) created new dual-enrollment courses in Optics Technology with local high schools that connect to already-existing high school curriculum and promote matriculation into the Optics Degree/Certificate program.

SCCC will continue its work with Newton, Hopatcong, and Sussex Tech High Schools to establish satellite lab space in the high schools to offer more advanced optics technology courses. SCCC will also engage with other high schools in the county to established Fundamentals of Optics courses. Additional schools within the region have expressed interest, and starting in Fall 2024 Lenape Valley High School will offer Optics 101.

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Optics Technology and Manufacturing

Activities:

During the Summer and Fall 2023, SCCC worked to refine an existing PLA process for credit assessment of an industry valued credential, thus expanding on the college's existing PLA process to allow for enhanced transferability.

Outcomes:

In manufacturing, sharing supportive evidence for PLA review is mostly proprietary, thus limiting available documentation.

SCCC will work with Thorlabs, Special Optics, Esco Optics, and Inrad Optics to conduct prior learning assessments for current workers in the industry.

PATHWAY CONNECTIONS:

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Optics Technology and Manufacturing

SCCC will structure curriculum with Adelphi University, RIT, and University of Arizona to establish 2+2 articulation agreements for optics technology pathways.

We Created a 1+1 articulation between the County College of Morris and Sussex County Community College to allow students in a generalized manufacturing track to specialize in Optics Technology manufacturing.

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Optics Technology and Manufacturing

In collaboration with Americom and NJ Pathways, Sussex County Community College (SCCC) has designed a professional development event that bolsters understanding of Optics Technology in the region (June 2024 at SCCC).

SCCC will continue the momentum from the three-day professional development event to work one-on-one with high school faculty from Newton High School, Hopatcong High School, and Sussex County Technical School, as well as other interested partners to get faculty acclimated to teaching in Optics Technology.

SCCC continues its work with Thorlabs, Special Optics, Esco Optics, Inrad Optics, and Satisloh North America to develop other PD opportunites.

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Optics Technology and Manufacturing

Continue partnering with HSE/GED programs to offer free college-level coursework in Optics Technology, specifically OPTC101: Fundamentals of Optics (3 cohorts of 20 students).

Partner with industry partners such as ThorLabs and Esco Optics to offer students who participate in the HSE/GED Optics program an internship upon completion of their high school diploma program.

Robotics and Automation

Tom Roskop, County College of Morris

EDUCATION PARTNERS:

County College of Morris

Morris County Vocational School District

Morris County Organization for Hispanic Affairs (MCOHA)

Robotics and Automation

With the world becoming increasingly connected, staying on top of the latest technological trends in robotics and automation is essential. Currently, training at the level needed to be competitive in the job market is relegated to 4-year degree options and/or job training in a specific automation technology. However, the entry point does not require such extensive education. Targeted technical training can be provided at various entry points to allow for multiple opportunities to engage in this area.

The Robotics and Automation pathway project has provided stakeholders with the opportunity to collaborate on advanced manufacturing and industrial automation initiatives across a spectrum of opportunities.

The Robotics and Automation pathway project established a certificate program in emerging technologies focused on integration and implementation of industrial automation and robotic systems relating to manufacturing and adjacent sectors.

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Robotics and Automation

Partnered with Morris County Vocational School District (MCVSD) to host and provide workshops for a Career Exploration Day on March 22, 2024, which served 16 students in robotics.

Met monthly with shareholders to plan, develop workshop curriculum and content in controller programming, and designed associated lab activities. The high schoool partner was responsible for marketing the programing throughout the county as a recruitment tool to 9th and 10th graders who may be interested in the share-time pathways.

Challenges:

- Targeting a suitable demographic to attract and introduce into the pathway.
- Logistics for transportation.
- Coordination of registration.
- As MCVSD has experience with recruitment for the above age bracket and with their assistance we coordinated marketing and registration.

Ancillary outcome:

- Career Exploration Day serves as a strong recruitment tool for current share-time programs on campus, particularly the Engineering share-time program.

CCM's Summer institute, held in the last week of June 2024, recruited students into the dual-enrollment program.

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Robotics and Automation

County College of Morris has an established share-time program with high school partner, Morris County Vocational School District, in Engineering called “Engineering Design & Advanced Manufacturing (EDAM)”:

- To connect the Robotics and Automation Pathway to our dual-enrolled programs, we identified suitable course elective slots in the curriculum to insert our robotics options.
- Beginning with the AY24-25, students enrolled in the EDAM program will be taking our new course “Robotics & Automation I” in the spring semester of their second year in the program.

Challenges:

- Working with the appropriate steering committee to identify where robotics courses could be applied, given the scheduling restrictions (AM or PM attendance)

Solutions:

- Remove a course in the program (Statics) which was low-interest and shown to be difficult for high school students who were not initially college math ready.

Ancillary outcome:

- Interest by both parties to discuss splitting up the EDAM program into separate tracks, allowing students to take more electives across various technical areas (such as Robotics).

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Robotics and Automation

Non-credit courses were created that align with the SACA (Smart Automation Certification Alliance) C-101 Certified Industry 4.0 Associate I certification.

Additionally, in order to offer the certification, CCM joined the Smart Automation Certification Alliance (SACA) as an educational institution:

- Content from the SACA C-level certificate was mapped with learning outcomes for alignment to the certification assessment. This allows for self-contained courses that will culminate in a certification, using the SACA criteria as a summative assessment tool.

Challenges:

- Mapping the overlap with our experiential learning activity of developing a boot camp program. A major differentiator was instructional length and scope of student.

Courses were delivered in Summer 2024 and aligned to the SACA C-101 Associate level certificate.

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Robotics and Automation

A certificate program has been submitted for review by our Curriculum Committee that incorporates courses developed in the robotics and automation area, such as Mechanical Drives, Hydraulics, Pneumatics, and Programming.

New courses (Robotics and Automation I & II) were developed and submitted to curriculum. They will serve as content area electives in robotics, as well as capstone for the certificate.

- Students who complete the 19-credit certificate program will receive the SACA C-101 and C-102 Associate level certification.

Continued research of the viability of instruction at the associates level and are currently assessing creating a robotics option to our Engineering Technology AAS degree.

Challenges:

- Mapping certification requirements and reconciling with robust course and program outcomes.

Solutions:

- Certification outcomes are distributed among the course sequence and evaluated in summative assessments in the Robotics & Automation I/II courses.

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Robotics and Automation

County College of Morris offered Robotics Technician as a pre-apprenticeship pathway, which was piloted in Summer 2024.

Workforce Development group is currently working with employers to confirm Robotic OJT and RTI compatibility. Currently, 2-3 employers have already been identified, who employ robotics technicians.

Challenges:

- Securing employer partners for robotics is a challenge when looking for pure robotics companies.

Solutions:

- Expanding into adjacent sectors who utilize robotics and automation, and that have a need for technicians in the implementation and maintenance of such systems, has provided a pool of employers to explore partnership opportunities.

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Adult Learners

Adult Literacy

Connection to 4-Yr College/University

Professional Development

Pilot

Robotics and Automation

In order to embed the Smart Automation Certification Alliance (SACA) certification into the program, a curriculum map was developed that maps the content of the SACA C-101 certification to the courses in the program:

- The SACA certification content also informed the development of the Robotics and Automation Bootcamp which aligns with articulated courses on the credit side.
- SACA outcomes will be used for assessment.

An internal articulation agreement was established enabling students in the bootcamp to articulate two (2) courses, or seven (7) credits towards the Certificate of Achievement in Robotics, Automation, and Control.

PATHWAY CONNECTIONS:

Big Idea Different than the Work Done in Year 1

Connection to High School (Non-Credit)

Connection to High School (Dual Enrollment)

Community College (Non-Credit)

Community College (Credit)

Apprenticeship Development

PLA for Apprenticeship RTI

PLA

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Pilot

Robotics and Automation

The recruitment of industry partners for advisory board and work-based structured learning opportunities for college credit is a critical component of the project.

CCM, with advisory board support, is developing experiential learning outcomes for use with job placements. Industry input, along with CCM's alignment with SACA credentialing, helps define experience-based 'levels' that reflect workplace readiness.

Another key component involves securing internship opportunities for students, identifying suitable placements, and tracking both student and employer outcomes. This process is currently in progress with assistance from CCM's Career Services office. Once students are placed their performance in the field is monitored.

- CCM is extrapolating of the level of skill mastery needed for an internship opportunity. Additional data is needed to improve efficacy in this area.

Challenges:

- Not many companies are heavily into robotics and/or are not yet engaged in the technology, even though this is a consistent goal in their planning.

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Robotics and Automation

The development of a non-credit pre-apprentice boot camp for students in the robotics and automation field leading to the SACA C-101 Certified Industry 4.0 Associate 1 credential has been completed.

CCM also developed bilingual marketing materials to be shared with Workforce Development Boards, non-profits, and other community partners.

Pilot:

- Recruitment of veterans, and their family members, adults and underrepresented students for the Robotics and Automation Boot Camp.
- Deliver non-credit pre-apprentice boot camp to 8–10 adults.

Challenges:

- Recruiting those interested in entering that sector.
- Formalizing employer partners for placement.

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Robotics and Automation

Currently identifying potential partnerships. Conversations with New Jersey Institute of Technology (NJIT) have shown favorable promise, as CCM currently articulates with NJIT in various engineering programs.

As work progresses toward the development of an associates track, these conversations will help formulate an articulation to a baccalaureate program, such as Industrial Engineering, with a true 2+2 in mind.

Challenges:

- The integration due to timeline constraints, accreditation reviews, and various curricular options that can be used.

Solutions:

- Discuss the challenge with potential transfer partners, work backwards and try to make holistic changes to the various program curriculums. Some of these proposals will be discussed with our upcoming reaccreditation visit, which will give us sustainability insight towards transfer.

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Robotics and Automation

In order to have adequate training for faculty, instructors, and high school partners, professional development needs were identified in the area of robotics and automation in manufacturing. Some of these areas are:

- PLC programming using Rockwell/Allen-Bradley controllers
- Visual programming using Universal Robots
- Introduction to Robotic Imaging using MIR and FANUC Robots
- Microcontroller programming using Arduino

In order to provide this professional development, CCM developed curriculum and identified training providers for both remote and in-person instruction.

CCM hosted its local robotics partner, Robotics EXPO, at the end of the Summer Institute. This event in late June brought employers, vendors, students, and educators together to see what type of industrial robotics are out there!

- Over 100 attendees
- Workshops, demonstrations, and case study presentations

Diesel Mechanic Apprenticeship Program

Sean Kerwick, Hudson County Community College

EDUCATION PARTNERS:

Hudson County Community College

Diesel Mechanic Apprenticeship Program

Working with the logistics industry in NJ Pathways Year 1 helped Hudson County Community College (HCCC) identify critical needs for specific skills in the transportation sector, as well as the demand for particular positions, specifically Diesel Technicians.

HCCC developed the Diesel Mechanic Apprenticeship Program in collaboration with a local industry partner, Coach USA.

PATHWAY CONNECTIONS:

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Diesel Mechanic Apprenticeship Program

Big Idea is different from the work done in Year 1:

HCCC established the need for this apprenticeship program after a round of consultative sessions with a local transportation service provider, Coach USA. Coach USA is one of North America's leading providers of ground passenger transportation and mobility solutions and the country's largest privately owned, U.S.-based bus company. HCCC met with senior Coach USA staff to discuss the labor shortage issue for Diesel Mechanics.

Apprenticeship Development:

As a result of these meetings, it was agreed that HCCC and Coach USA would jointly develop a Diesel Mechanic Apprenticeship program to address the skills gap for technicians in this sector and provide family-supporting careers for New Jersey residents. Demand for diesel mechanics is high in New Jersey, and wages are competitive.

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Diesel Mechanic Apprenticeship Program

Challenges:

High demand for qualified Diesel instructors necessitated a wider approach than posting of job listings on college website, job boards and hiring platforms e.g. Indeed.

Attempted Solutions:

- **Outreach was conducted with local business, community and trade associations, and unions.**
- **Focus on employers with direct association with the diesel industry other than transportation.**
- **Additional resources such as Zip recruiter and NEOGoV (HR Recruitment Tool) were employed.**
- **Utilize Center of Workforce Innovation to reach partner colleges (e.g., Sussex County Community College).**
- **Development of in-house training.**

PATHWAY CONNECTIONS:

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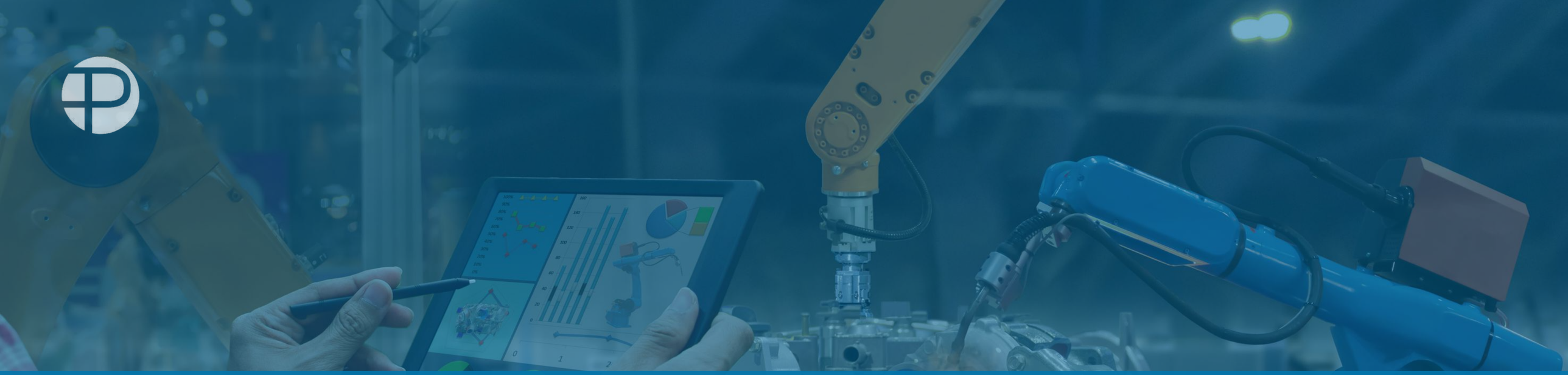
Diesel Mechanic Apprenticeship Program

While the project remains incomplete at the conclusion of Year 2, HCCC made significant progress in developing the program. Beneficial outcomes include:

- **Relationship with a leading member of the transportation industry.**
- **Model curriculum.**
- **Relationship with the Department of Labor (DOL) Office of Apprenticeship.**

Ancillary Outcomes:

- **On-the-ground outreach has provided opportunities to promote the NJ Pathways initiative within the local business community.**
- **Networking opportunities with community organizations and unions, (e.g., participation in Port Authority of New York & New Jersey's Council on Port Performance).**
- **Attendance at supply chain management industry events & job fairs.**
- **Establishment of the Supply Chain and Logistics Employer Advisory Board.**
- **Providing additional instruction to develop skills needed for job. Those can include customer service, English as a second language, computer skills, essential work readiness skills, basic supply chain management principles, or record-keeping.**



IET Essentials of Supply Chain Management

Dr. Lisa Hiscano,
UCNJ Union College of Union County, NJ

Joanie Coffaro, Middlesex College

EDUCATION PARTNERS:

UCNJ Union College of Union County, NJ

Middlesex College

IET Essentials of Supply Chain Management

This project is the implementation of the Integrated Education and Training (IET) Essentials of Supply Chain Management (ESCM) program for English language learners. Students were able to attain four industry credentials through the Council of Supply Chain Management professionals (CSCMP) while also participating in contextualized English language instruction developed during NJ Pathways Year 1.

PATHWAY CONNECTIONS:

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Professional Development

Pilot

IET Essentials of Supply Chain Management

UCNJ Union College of Union County, NJ

Implement the Integrated Education and Training (IET) Essentials of Supply Chain Management (ESCM) program for English language learners

Eight students completed the program, each earned three SCPro Fundamentals Certificates: Principle of Supply Chain Management, Inventory Management and Customer Service.

Challenges:

- Managing the course materials and learning management systems with ESL students.
- Encouraging student participation and strengthening student test taking skills.

Solutions:

- Daily integrated, in-class review of on-line systems, course materials and previous day's program.
- Extension of time for each module and removed one of four modules.
- Increased presence and availability of the student support team.

Words of Advice:

- Conduct a hands-on pre-program orientation of on-line systems and student access.
- Utilize diverse learning methods such as presentations, active participation, and on-line resources.
- Continued reinforcement of student supports available.

PATHWAY CONNECTIONS:

Big Idea Different than the Work Done in Year 1

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Professional Development

Pilot

IET Essentials of Supply Chain Management

Middlesex College

Implement the Integrated Education and Training (IET) Essentials of Supply Chain Management (ESCM) program for English language learners

Nine students enrolled in the program which concluded on August 16th. Four successfully completed the three components of the program (Supply Chain Management Principles, Warehousing Operations, and Customer Service) and are preparing to take the credential exam for each of the three components.

Challenges:

- Revitalize student participation in light of inconsistent attendance stemming from individual challenges.
- English Language Learner (ELL) students struggle with vocabulary and understanding course material.

Solutions:

- Increase outreach and availability to students.
- Tailor educational content and test readiness approaches for English language learners.

Words of Advice:

- Offer classes in person and not to exceed 15 hours per week
- Adopt a preliminary evaluation system to assess candidates' capacity to meet course requirements

SCPro: Connection to Community College (Credit) & to 4 Year University

Mitra Choudhury, Essex County College
Germaine Albuquerque, Essex County College

EDUCATION PARTNERS:

Essex County College

Brookdale Community College

West Side High School – Newark Public Schools

Rutgers School of Business - Newark

SCPro: Connection to Community College (Credit) & to 4 Year University

This project provided opportunities to both credit and non-credit students for advancement in the Supply Chain Management sector and improve their employability profile. Certifications were offered through the Council of Supply Chain Management Professionals (CSCMP), which is all inclusive, representing the integrated end-to-end supply chain.

- **A pilot program for 20 students to assist them in acquiring Industry Recognized SCPro™ certification while they are enrolled in the Supply Chain Management Associate Degree program. The project included test prep as well as paid vouchers for the certification exam. This prepares students to become more viable in the current job market with not only an associate degree, but industry recognized credentials as well.**

- **A pilot program for 15 students to transfer their non-credit certification in Supply Chain Management to three credits at Essex County College (ECC). The non-credit to credit pathways can be an alternative option and encourage higher education amongst underrepresented students.**

PATHWAY CONNECTIONS:

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Apprenticeship Development

PLA for Apprenticeship RTI

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Professional Development

Pilot

SCPro: Connection to Community College (Credit) & to 4 Year University

Activities:

- **20 students enrolled in the Supply Chain Management AS degree program had the opportunity to receive test prep through CSCMP online courses to prepare for the corresponding certification exam. Test prep and paid vouchers were provided for the course and certification exam.**
- **Vetting and selection process of students and courses were completed in March 2024 for the first Pilot cohort. Students registered for the SCPro™ Fundamentals Certifications program/test prep in the following:**
  - **Transportation Operations**
  - **Supply Chain Management and Procurement**
- **This cohort had the option to use their certification exam as their SCM credit course final exam.**
- **Students opted to complete the course after the spring semester ended and during the summer months 2024.**

PATHWAY CONNECTIONS:

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Professional Development

Pilot

SCPro: Connection to Community College (Credit) & to 4 Year University

Activities:

- ECC's Business Division faculty completed the evaluation process of non-credit certifications through SCPro™ Fundamentals Certification program.
- Non-credit students who have completed and received SCPro™ certifications will now have the option to receive credits for SCM 101, if they register as an Essex County College Student, declare Supply Chain Management as their major, and proceed to LOG 101, 102 or 103 where the student will be processed to receive one credit per certification. If the student completes all three certifications, they will receive 3 credits for SCM 101.
- Non-credit students are enrolled in the Pilot certification program. Once certification is achieved, students will be eligible for credit option.
- West Side High School considered expanding their Dual Enrollment program to include the Supply Chain Management AS Degree, with a potential cohort start in the Spring 2025.

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SCPro: Connection to Community College (Credit) & to 4 Year University

Activities:

- **Brookdale Community College (BCC) partnered with ECC to explore expanding their Supply Chain offerings, aligning with ECC's program.**
- **BCC registered for the APICS CPIM Certification Course for Train-the-Trainer outcomes.**
- **Development of an articulation agreement with Rutgers Business School, Newark, is ongoing. Rutgers continues to review ECC's courses for transferability to their BS degree in Supply Chain Management.**

Stackable Credentials in Supply Chain Management Program

Dr. Gabriel Onabote,
UCNJ Union College of Union County, New Jersey

EDUCATION PARTNERS:

UCNJ Union College of Union County, NJ

Red Trucking Inc.

Stackable Credentials in Supply Chain Management Program

This project was the implementation of providing students with stackable credentials in Supply Chain Management. UCNJ Union College of Union County, NJ (UCNJ) worked with partners to integrate industry courses into its Supply Chain Management curriculum. This project also provided experiential learning opportunities that increased students' awareness and knowledge about supply chain and the industry in total. The project adds value by increasing critical thinking skills, internship opportunities, and employment marketability for UCNJ students.

PATHWAY CONNECTIONS:

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Community College (Credit)

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PLA for Apprenticeship RTI

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Professional Development

Pilot

Stackable Credentials in Supply Chain Management Program

Implement the Stackable Credentials in Supply Chain Management Program for and UCNJ students

Challenges:

- Finding new partner(s) for Stackable Credentials project
- Students in SCM pipeline
- Developing internships

Solutions:

- Partner with Red Trucking
- Research other avenues for internships and apprenticeships in supply chain management

PATHWAY CONNECTIONS:

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Stackable Credentials in Supply Chain Management Program

Implement the Stackable Credentials in Supply Chain Management Program for and UCNJ students

Accomplishments:

- 12 business/supply chain students visited four Red Trucking warehouses.
- Industry panel of supply chain professionals presented on supply chain topics to students (in-bound logistics, purchasing, manufacturing, warehousing, transportation, distribution, and customer service).
- Six Sigma certification was embedded in supply chain management courses starting Fall 2024.

Words of Advice:

- Attend Supply Chain Management conferences and seminars.
- Organize field trips to other companies.
- Join New Jersey Motor Truck Bi-State Association.
- Develop working relationships with the Ports in New Jersey

Q&A

Center of Workforce Innovation for Manufacturing & Supply Chain Management

Closing Remarks

Catherine Starghill, Esq.

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Year 2 End-of-Year Report Out

Center of Workforce Innovation for Film and TV Production

TUESDAY, SEPTEMBER 24

2:30 - 3:00 PM

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