

A high-angle, wide shot of a large industrial manufacturing facility. The space is filled with complex machinery, including conveyor belts, large storage tanks, and various pipes. The floor is concrete, and the walls are light-colored. The lighting is bright, coming from large windows or skylights. The overall scene depicts a busy, large-scale industrial environment.

MANUFACTURING & SUPPLY CHAIN MANAGEMENT COLLABORATIVE



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

AGENDA

- Raritan Valley Community College's Advanced Manufacturing Program
- Sussex County Community College's Optics Technology Program
- Pathways of the Center of Workforce Innovation for Manufacturing Production and Engineering
- Industry Panel Discussion



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

WELCOME:



**Dr. Michael J.
McDonough**
President,
Raritan Valley
Community College



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

OPENING REMARKS



Dr. Aaron Fichtner

President
(NJCCC)



**Catherine Starghill,
Esq.**

VP & Executive
Director, Strategy and
Partnerships (NJCCC)



Chris Emigholz

VP, Government
Affairs (NJBIA)



Kyle Sullenger

Director of
Economic Policy
Research (NJBIA)

HOSTED BY:



Glenn Best

Director, Manufacturing and
Supply Chain Management
Sectors Strategy & Workforce
Partnerships (NJCCC)

ADVANCED MANUFACTURING

Raritan Valley Community College



Conrad Mercurius

Director, Center of Advanced
Manufacturing (RVCC)



Fred Carden

Director of Engineering
(Triad Tools)



Sam Lee

Apprentice, Center of Advanced
Manufacturing (RVCC)





Partner: **TRIAD Tool**

Represented by **Sam Lee (Apprentice)**

Apprenticeship

- TRIAD employs Graduates from The RVCC Advanced Manufacturing program
- All candidates are registered apprentices via RVCC registered Machinist program
- Apprentices complete their Related Technical Instructions (RTI)
- Apprentices earn 10 or more NIMs Level I Machining Credentials

Students have multiple on and off ramps.

- 1) Returning to RVCC for additional training/skills
- 2) Continuing with their education part time or full time
- 3) Completing apprenticeship and becoming a journeyman

High School
Early College
Experience

RVCC's
Advanced
Manufacturing
NIMS Certified
Program

6 credits applied
to Mechanical
Engineering
Technology AS
Degree
(In final
development
stage)

Apprenticeship
Machinist Level 1
RTI completed

Bachelor Degree
at NJIT (Renew
interest)



- Proud members of the RVCC Advanced Manufacturing Technology Advisory Board
- Trained mentors for apprentices
- Facilitates tours for students enrolled in the RVCC Advanced Manufacturing program
- Donates crucial equipment to the RVCC Advanced Manufacturing program
- Facilitates on-site training for students at their facility



Industry Partners





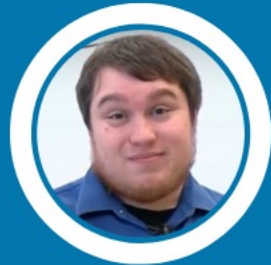
OPTICS TECHNOLOGY

Sussex County Community College



Navid Entezarian

Production Manager
(Thor Labs)



Brian Lake

Optics Technology Supervisor
(Sussex County Community College)



Sarah Hobough

Quality Control Technician (Thor Labs) and
Sussex County Community College Alumni





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CENTER OF WORKFORCE INNOVATION FOR Manufacturing Production & Engineering



Glenn Best

Director, Manufacturing and
Supply Chain Management
Sectors Strategy & Workforce
Partnerships (NJCCC)



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TO CAREER OPPORTUNITIES
Aligning Education to Build an Innovative Workforce

PATHWAY: **Machinist/CNC**

- Connection to High Schools (Non Credit)
- Connection to Community Colleges (Non Credit)
- Experiential Learning
- Connection to 4-Year Universities
- Adult Learners/Pilot
- Professional Development



NJ PATHWAYS
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Aligning Education to Build an Innovative Workforce

PATHWAY: **Machinist/CNC**

Connection to High Schools (Non Credit)

Develop model career awareness program and campaign for high school students, including a Summer Institute for non-college bound students, to introduce them to CNC/Machinist pathway.



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PATHWAY: **Machinist/CNC**

Connection to Community College (Non Credit)

Embed industry credential
(National Institute for Metalworking
[NIMS] Level 1) into the Mechanical
Engineering Technology (MET) AS.

PATHWAY: **Machinist/CNC**

Experiential Learning

Develop experiential learning program into the Mechanical Engineering Technology (MET) AS.



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PATHWAY: **Machinist/CNC**

Connection to 4-Year Universities

Develop model articulation agreement for Raritan Valley Community College Mechanical Engineering Technology (MET) AS to NJIT's Science in Manufacturing Engineering (BSME) BS.

PATHWAY: **Machinist/CNC**

Adult Learners / Pilot

Pilot two existing apprenticeship programs (NIMS Certified CNC Machining Milling and online NIMS Certified Welding).

Develop non credit workforce program embedding industry credential (National Institute for Metalworking [NIMS] Level 1) in partnership with the Greater Raritan Workforce Development Board.



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PATHWAY: **Machinist/CNC**

Professional Development

Develop train-the-trainer resources and workshops.

Implement full review of instructor sourcing and credentialing process for instructor skills enhancement.

PATHWAY: **Industrial Maintenance Technician**

- Connection to High Schools
(Non Credit)
- Connection to Community Colleges
(Non Credit)
- Experiential Learning
- Connection to 4-Year
Universities
- Prior Learning Assessment
(Credit)
- Adult Learners/Pilot
- Professional Development



PATHWAY: **Industrial Maintenance Technician**

Connection to High Schools (Non Credit)

Develop model career awareness program and campaign for high school students, including a Summer Institute for non-college bound students, to introduce them to Industrial Maintenance Technician pathway.



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PATHWAY: **Industrial Maintenance Technician**

Connection to Community College (Non Credit)

Embed industry credential
NIMS into the Manufacturing
Engineering Technology
(MET) AS.

PATHWAY: **Industrial Maintenance Technician**

Experiential Learning

Develop experiential learning program to embed into the Manufacturing Engineering Technology (MET) AS.



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PATHWAY: **Industrial Maintenance Technician**

Connection to 4-Year Universities

Establish agreement for the
Industrial Maintenance AAS to
Applied Business Analytics
William Paterson University.



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PATHWAY: **Industrial Maintenance Technician**

Prior Learning Assessment (Credit)

Evaluate non credit workforce program (online industrial maintenance training) for credit and embed into the Manufacturing Engineering Technology (MET) AS.



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PATHWAY: **Industrial Maintenance Technician**

Adult Learners / Pilot

Pilot online industrial maintenance training for incumbent workers training in partnership with the Camden County Workforce Development Board.

Pilot the pre-apprenticeship Manufacturing Bootcamp for adult learners at the Morris County Organization of Hispanic Affairs (MCOHA).

PATHWAY: **Industrial Maintenance Technician**

Professional Development

Develop train-the-trainer resources and workshops.

Implement full review of instructor sourcing and credentialing for instructor skills enhancement.



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PATHWAY: **Optics Technology**

- Connection to High Schools (Non Credit)
- Develop Apprenticeship
- Connection to Community Colleges (Non Credit)
- Industry Research
- Prior Learning Assessment (Credit)
- Adult Learners
- Professional Development
- Expand Industry Partnerships



PATHWAY: **Optics Technology**

Connection to High Schools (Dual Enrollment)

Develop advanced dual enrollment program in Optics Technology including instructional materials.



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PATHWAY: **Optics Technology**

Develop Apprenticeship

Using the existing USDOL Optics Technician Apprenticeship as a guideline, work with existing employer partners to create an Optics Technology Apprenticeship Program.

PATHWAY: **Optics Technology**

Connection between Community Colleges (Credit)

Develop model 1+1 agreement
between Community Colleges
for the Optics Technology AS.



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PATHWAY: **Optics Technology**

Industry Research

Partner with Adelphi University for optics research to support the optics manufacturing industry in NJ.

PATHWAY: **Optics Technology**

Prior Learning Assessment (Other)

Evaluate Precision Optics
Manufacturing Technician
industry credential for credit and
embedding into Optics
Technology AS.



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PATHWAY: Optics Technology

Adult Learners

Develop model recruitment events, tours, and programs, as well as an engagement plan that increases enrollment for unemployed and underemployed adults.

PATHWAY: **Optics Technology**

Professional Development

Develop and host professional development opportunities for high school and Community College instructors.



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A woman with dark hair in a bun, wearing a plaid blazer, is smiling while looking at a laptop. A man in a dark suit is sitting behind her, also smiling. They are in an office with a whiteboard and a small plant in the background.

PATHWAY: Optics Technology

Expand Industry Partnerships

Expand Sussex Optics Technology Advisory Board membership through marketing and targeted outreach.

Develop and host model jobs fairs, education institution open houses, and recruitment events to expose students, professionals, and the community to expose them to optics industry job placement resources.

MANUFACTURING PRODUCTION & ENGINEERING Industry Panel



Gail Friedberg

CEO & Founder
(Zago Manufacturing)



**Sam
Thevanayagam**

President & CEO
(Parts Life, Inc.)



Clifford Lindholm

President & CEO,
(Falstrom Company)





Scan Me!



**Additional Dates From
September 27 Through
November 16, 2022**

REGISTER FOR Upcoming Collaboratives

Manufacturing & Supply Chain Management Collaborative

October 19, 2022 | 10 AM - 1 PM
Union College | Roy Smith Theater and Victor M.
Richel Student Commons
Networking Lunch



THANK YOU

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