SCVTS ADULT POST-SECONDARY EDUCATION DEPARTMENT



THE FUTURE OF MECHATRONICS IN SALEM COUNTY

SIEMENS

SCVTS served as a national training ground this summer for technical instructors from across the United States. The instructors successfully earned their Siemens Level 1 Instructor Certification in order to deliver Siemens Mechatronic Systems Certification Program (SMSCP) at their own institutions.

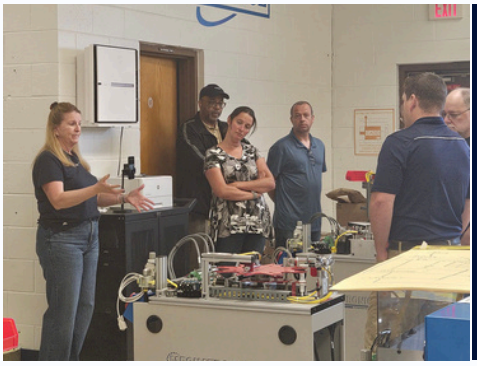
The main objective of holding this training program here at SCVTS, was to enhance mechatronic education in New Jersey. As Siemens is a global superpower in both automation and mechatronics technology, it was invaluable to Salem County and the state of New Jersey to be instrumental in delivering this valuable instruction and training. Educators came from as far as Washington state to attend!

One of the key objectives for these participants was to help them build relationships that can support students through their career and educational pathways. Through the SMSCP, they have created more opportunities for educators to strengthen their network.

WHO IS SIEMENS?

Siemens a global technology company and the largest in Europe. They focus on automation, digitalization, and smart infrastructure for industries worldwide.

To learn more, go to: siemens.com



BUILDING RELATIONSHIPS

We had instructors from New Jersey, Washington, Ohio, Pennsylvania, and Virginia participate in this training.

A list of their titles and institutions can be found on Page 4.

An Interview with - Siemens U.S. Program Manager: Emily Howarth



What was this program designed for?

Siemens is a global leader in automation and mechatronics technology, and SMSCP reflects that industrial perspective. While Siemens offers broad, deep technical training on its products, services, and automation technologies through SITRAIN, this certification program is different: it is designed to build a systems approach to troubleshooting and problem solving that can transfer across equipment, industries, and technologies.



What made the SCVTS campus the right fit for Siemens?

SCVTS was an excellent host because it already has an active mechatronics program and a well-equipped mechatronics training lab that provided an ideal environment for hands-on instructor development.

The facility offered the equipment, classroom space, and supporting resources for an intensive two-week certification program. Equally important was the support provided by the SCVTS team and the broader educational community that helped make the program successful.

How did SCVTS and the community benefit from this?

The program helped strengthen connections among educators, workforce organizations, industry partners, and community leaders who share a common interest in developing New Jersey's future technical talent pipeline.

The event also demonstrated the strong regional commitment to industrial technology education. The participation of local government representatives, workforce leaders, educational administrators, university partners, and industry stakeholders highlighted the importance of supporting students, instructors, and talent development initiatives throughout the state.

Were there any features of the campus that made the event successful?

Participants were able to work directly with the types of systems and equipment that support the instructional goals of the certification program.

The campus also provided the space and flexibility needed to support group discussions, resource development activities, and visits from educational leaders, workforce development professionals, univeristy representatives, industry partners, and community stakeholders.

The welcoming environment encouraged collaboration among participants while helping foster conversations about workforce development, educational pathways, and student success.

"Technical training is important, but long-term success depends on strong connections among schools, colleges, universities, workforce organizations, industry, and government stakeholders."
- Emily Howarth



Were there any standout moments and/or people from the program you'd like to mention?

One of the highlights was the diversity of experience represented in the classroom: over 100 years of technical education and training expertise. While New Jersey was the primary focus, the participation of instructors from across the country enriched the experience by bringing different educational perspectives, instructional approaches, and program experiences into the discussion.

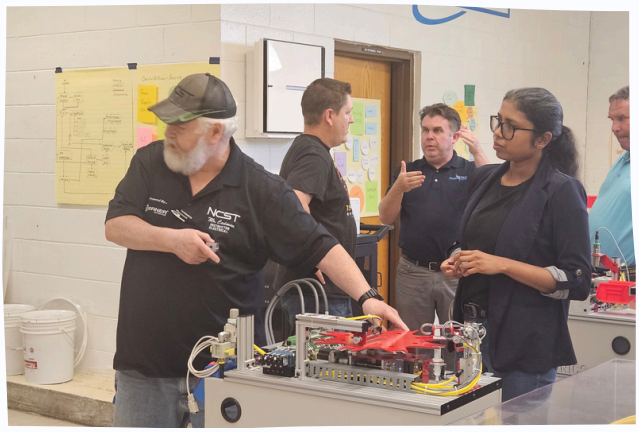
NJEDA, our team of educators, and community members from Salem County deserve special recognition. They were energetic supporters of industrial technology education, workforce development, and regional partnership-building throughout New Jersey. The leadership, advocacy, and commitment to expanding technical education opportunities helped connect key players across education industry, workforce development, and the community. Salem County and its supporters have also done the sustained work required to identify, pursue, and support funding opportunities that strengthen SCVTS programs and create more college and career pathways for students.

Emily Howarth also noted: Joe Alexander, the SCVTS instructor who graciously hosted the program in his mechantronics lab, was also instrumental in helping create a successful learning environment. His ongoing commitment to technical education and support for the program contributed greatly to the experience.

Another standout experience was the industry visit to Dwyer Omega. Participants were able to see firsthand how technical knowledge, troubleshooting skills, communication, teamwork, and problem-solving are applied in a modern manufacturing environment. The visit reinforced many of the concepts discussed throughout the training and provided valuable insight into workforce expectations.







Additional insights from Emily Howarth:

What impressed me most was the collaborative spirit surrounding the entire program. Participants were engaged, thoughtful, and genuinely interested in learning from one another. Equally impressive was the support demonstrated by the broader community. I believe one of the most valuable outcomes was the continued growth of relationships among educators and community partners.

The two weeks at SCVTS demonstrated what is possible when those groups work together around a common goal. By supporting instructors, recognizing local program champions, strengthening pathways between education and industry, and fostering collaboration across instituitions, we create more opportunities for students while helping employers build the skilled workforce they need.

The program was about more than certifying instructors. It was about building a stronger network of educators, partners, and advocates who are committed to expanding opportunities for students and advancing technical education throughout New Jersey and beyond.

Final Words from Emily Howarth:

What skills do you hope the attendees walked away with? How is Siemens helping bridge the gap betweeen academics and workforce demands?

I hope participants left with both stronger instructional strategies and practical approaches that they can immediately apply within their own classrooms and training programs.

Throughout the two-week certification program, educators explored foundational concepts related to electrical systems, mechanical systems, fluid power, and the role of control within integrated mechatronic systems. A major focus was helping instructors understand not only how to approach technical problems, but how to teach students an effective process for solving them.

Participants created and used a variety of troubleshooting resources, diagrams and other techniques that help students organize knowledge, analyze system behavior, and approach technical challenges in a structured way.

One of the key themes throughout the program was the creation and effective use of resources. Successful technicians are not expected to rely solely on memory. They must know how to locate information, use technical documentation, communicate findings, leverage available resources, and apply structured troubleshooting processes to solve unfamiliar problems.

Dwyer Omega reinforced this message during a visit to their facility. Participants saw firsthand that employers value far more than technical knowledge alone.

Siemens helps bridge the gap between education and industry by providing globally recognized certifications, industry-aligned curriculum frameworks, professional development opportunities, and practical teaching methodologies that help educator prepare students for real-world technical careers.



Participants of the Siemens Mechantronic Systems Certification Program (SMSCP) Level 1 Instructor Certification

- Emily Howarth - U.S. Program Manager at Siemens Digital Industries Learning - SITRAIN
- Irving Brown - Training Team Leader and Skills Manager at Siemens Digital Industries Learning - SITRAIN
- Charlotte de Vries - Associate Teaching Professor at Rowan University
- Adam Fifth - Associate Teaching Professor at Rowan University
- Subashini Thuiyahannadi - Program Director of Siemens and Smart Manufacturing at Cuyahoga Community College (Tri-C)
- Ronald Cadman - Electrical Department Chair at New Castle School of Trades
- Joseph Haase - Advanced Manufacturing Teacher at Gloucester County Institute of Technology
- Matthew Woodrow - Advanced Manufacturing Teacher at Gloucester County Institute of Technology
- Christopher Peters - Associate Teaching Professor at Gloucester County Institute of Technology
- Benjamin Saunders - Tenure Track Professor at Clark College
- A.J. Scherman - Mechatronics Technician and Instructor at Phillips Corporation - Workforce Education Division
- Ryan Bray - Mechatronics Instructor at Phillips Corporation - Workforce Education Division

Thank You!!

We wanted to extend a huge thank you to everyone who had a hand in making this training program at SCVTS possible!

- Edward Ramsey, Salem County Commissioner, Liaison to: Tourism, Cultural & Heritage, and Economic Development; Public Works
- Paul Collier, Salem County Commissioner, Liaison to: Health and Human Services
- Sean Sepsey, Director of Economic Development for Salem County
- Jake Buganski, Director of Cultural Affairs and Tourism Information Services of Salem County
- Jack Swain, Superintendent/President of NJ Council of Vocational Schools
- Jason Helder, Principal of SCVTS
- Maria Alleva, Director of Adult Post-Secondary and ABE/HSE/ESL Programs
- Joe Alexander, Instructor, CADD/Mechatronics

Salem County NEW JERSEY

Salem County CHAMBER of COMMERCE

SALEM COUNTY VO-TECH SCHOOLS SCVTS

SALEM COMMUNITY COLLEGE

NJ EDA ECONOMIC DEVELOPMENT AUTHORITY

SALEM COUNTY ECONOMIC DEVELOPMENT

SCBSS Salem County Board of Social Services *Committed to Serving Salem County Residents* ONE STOP CAREER CENTER

MID-ATLANTIC STATES We grow people. CAREER & EDUCATION CENTER ®

Being the host of the Siemens Mechatronic Systems Certification Program (SMSCP) has opened up opportunities to bring programs like robotics, coding labs, and other advanced STEM applications to the forefront of SCVTS and Salem County. We are grateful for the connections that we were able to make! The future possibilities are endless for participants of all ages.

Thank you!



