



2026 IRWECA SPRING & SUMMER PROGRAM EVALUATION

A workforce development and professional learning opportunity specially designed for CTE educators throughout Connecticut

Prepared by the Southern Connecticut State University (SCSU) Innovation Hub

About IRWECA and Forthcoming in 2027

The Institute for Real-World Education and Curriculum Advancement (IRWECA) Spring and Summer Industry Experiences provided 37 Connecticut (CT) educators with several unique opportunities to engage directly with representatives from leading companies in biopharma, environmental engineering, food and beverage manufacturing, chemical industries, and aerospace manufacturing. Through site visits, guided tours, and employer presentations, participants observed real-world applications of many of the concepts taught in schools. They also gained valuable perspectives and insights into how students might apply the knowledge and skills in their future careers.

In addition to the spring and summer experiences, individualized, year-long support for curriculum development in Chesire and New Haven schools continues to make great progress (see page 8). Participating schools are developing advanced manufacturing pathways by building new and updating existing courses while training teachers on industry-standard equipment.

Thanks to our leading IRWECA-model, and in partnership with UConn and Yale, we successfully earned multiple awards from the National Science Foundation, which will amplify the CSDE-funded IRWECA program: extending our reach to more companies, expanding the program for the 2026 Emerging Technologies Forum (ETF), and supporting a new, state-wide industry needs assessment.

The recent awards from NSF through the Engines and NQVL programs will further complement the scope of IRWECA allowing an expansion of the scope of ETF (planned for October 23), and attracting the attention of more companies. At the conference, those additional company representatives will connect with participating teachers, further democratizing the teacher - industry network. The additional awards will also enable us to engage in another, state-wide industry needs assessment in partnership with the CT Office of Workforce Strategies, AdvanceCT, and QuantumCT (among others), which will focus on emerging technologies like AI and Quantum. The goal of this forthcoming needs assessment will be to provide teachers, particularly those in CTE fields (especially the HVAC, manufacturing, and electrical engineering fields expected to be at the forefront of Connecticut's burgeoning Quantum-ecosystem), with up-to-date insights provided by companies at the breaking-edge of those emerging technologies.

More information about our recent NSF awards:

1) NSF Engines award <https://news.southernct.edu/2026/07/14/southern-advances-connecticuts-quantum-future-through-major-nsf-investment/>

2) NSF NQVL award https://www.nsf.gov/awardsearch/show-award/?AWD_ID=2547175

About IRWECA *(continued)*

The IRWECA program continues to bring together CTE, STEM, business, educators in other disciplines, school support staff, and administrators from across the state to engage in meaningful in-person experiences with industry partners at their facilities. During each visit, educators explore workplace environments, learn about the qualifications and preparation necessary for diverse roles at various levels, and reflect on how these experiences can inform career-readiness curricula in their classrooms. The IRWECA team explicates the shared dialogue and then fosters the development of instructional modules aligned with current industry needs. Together, we serve to broaden educators' understanding of the diverse skill sets needed for future employees of companies across CT.

Question-and-answer sessions with the industry and lead educators enabled participants to synthesize their observations, share perspectives, and identify actionable strategies to enhance their teaching and learning – translating industry exposure into meaningful classroom practices.

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Program Administrator

Division of Research & Innovation

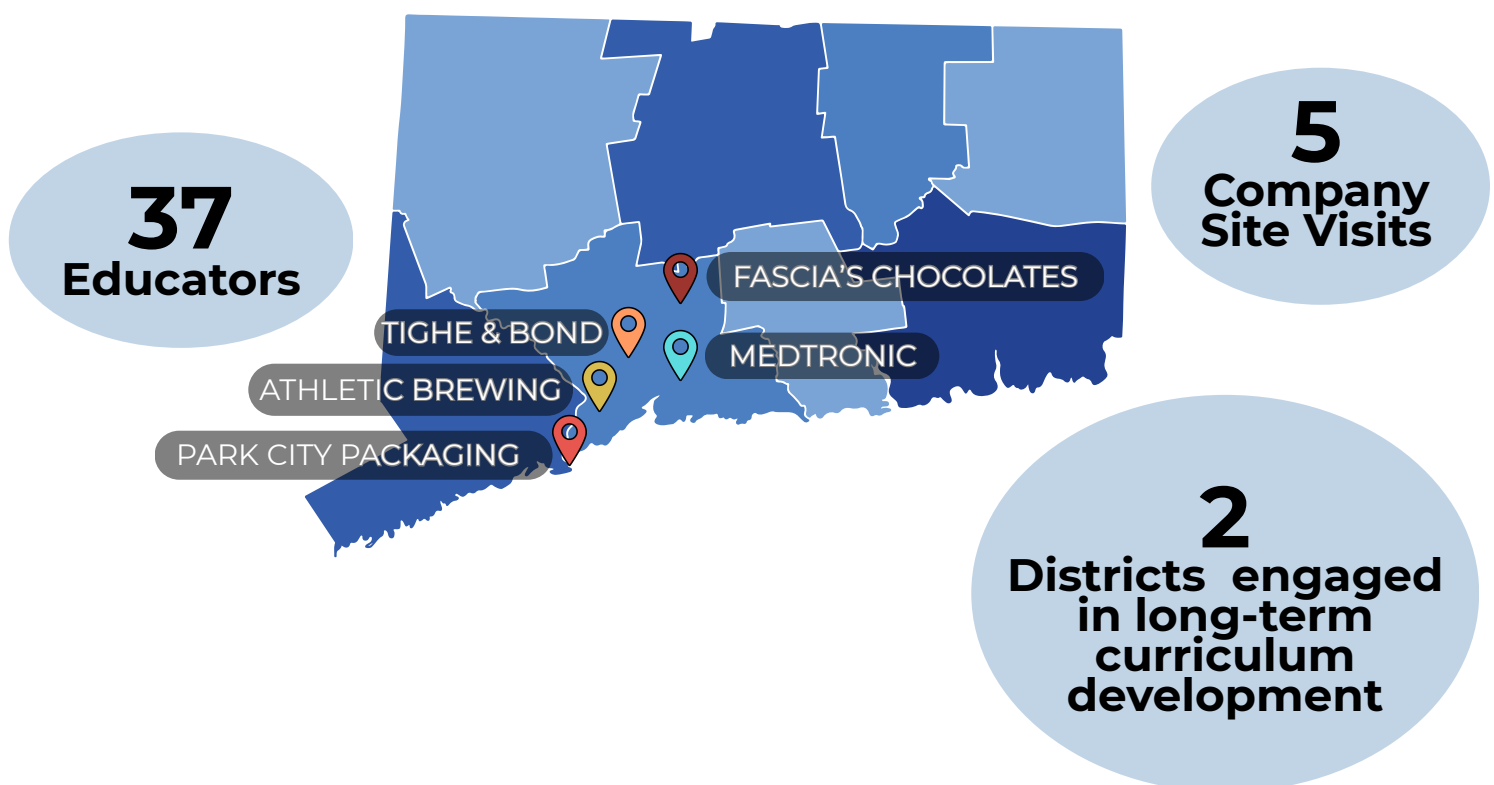
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Goals and New Logo

IRWECA's Program Goals

1. Increase educator awareness of academic and career opportunities in Connecticut.
2. Support educators' development and implementation of new teaching and learning aligned with the needs of those companies.



The IRWECA program and its operations, are inspired and guided by the principles put forward by Dr. Michael Fullan's work on change leadership and the "instructional core." The instructional core emphasizes that meaningful change most impact teaching and (student) learning. Furthermore, all those not directly involved in teaching and learning are on the periphery providing insight, resources, and support. In our logo, the instructional core is represented by the "hollow" core, with surrounding circles representing teachers, administration and community partners (e.g., the IRWECA team), respectively. The lines radiating from each respective circle represent the means or modes of effecting change within and ever closer to the core.

https://michaelfullan.ca/wp-content/uploads/2016/06/11_TheSkinny_US.compressed.pdf



More About the Logo

The Gear: The heart of the logo, the gear is the symbolic archetype of the teacher, educational providers, and supporters who are ever-eager to pursue new learning and experiment with new ideas. Furthermore, the gear also represents the scaffolding of learning and the interconnected mechanisms that guide educators to reconceptualize static concepts into dynamic, responsive ones, anticipating the future needs of their students.

The Circle: The circle serves as a protective boundary, defining parameters and orbit, helping to contain the focus of the educator's mission to enhance the learning experience for their students.

The Rays: The rays represent the dual path of inputs and outputs. Guiding the learning (again, represented by the core or center) through innovation and illumination while providing an outlet of creativity which then turns the proverbial “flywheel” of change and the advance of student learning in line with the needs of their respective communities and the world at large.

Spring Engagements

Tighe & Bond

March 18, 2026

Tighe & Bond is the Northeast's leading engineering, environmental, planning, and design consulting firm. The firm's staff showcased how they utilize technical expertise to solve complex infrastructure and conservation challenges such as improving safety for highway ramps and using Geographic Information Systems to protect freshwater from lead and other pollutants.

Takeaways:

- Technical proficiency is only one part of a successful career, collaborating with a team drives success forward.
- Future engineers need to shift from being mere users of technology to become creators and problem-solvers.

Athletic Brewing Co.

May 21, 2026

Athletic Brewing Co., the sixth-largest craft brewer in the United States, produces only non-alcoholic beverages, and commands 10% of the European market. The company's core mission is to positively impact customer health, fitness, and happiness while benefiting local communities and the environment. The core pillars anchor its operations' growth and sustainability.

Takeaways:

- Foster fun, hard-working environments where staff members take pride in their roles.
- Connecting authentically and honestly is integral for a trusting work environment.

Park City Packaging

April 22, 2026

A leader in specialized logistics, Park City Packaging provides critical, military-compliant packaging and warehousing for the aerospace and defense industries. This third-generation, family-owned business meets the Department of Defense's strictest standards for packing and shipping.

Takeaways:

- Employees should have a genuine sense of ownership on the shop floor to empower them in their work.
- Finding creative ways to show their value to a company makes students marketable as future employees.
- Local innovation can flourish when operating in a high-stakes environment like defense work.



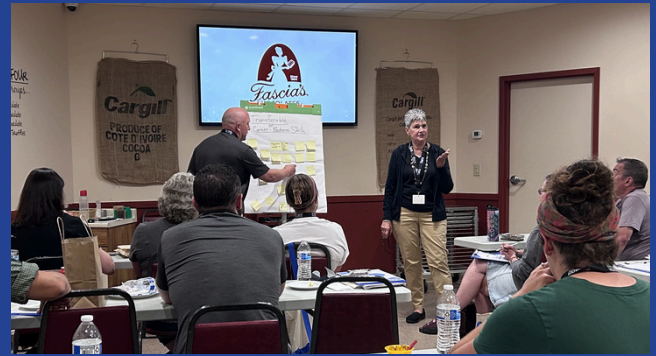
Summer Engagements

Medtronic

Medtronic is a foundational pillar of 21st-century medical innovation, producing cutting-edge technology ranging from calipers, X-rays, MRIs, and specialized cameras to advanced syringes and surgical robotics. Guided by Ashley Leung, the Community Outreach Lead and Product Engineer Lead, we embarked on an immersive visual and in-person journey into how Medtronic translates its mission—to alleviate pain, restore health, and extend life—into global community impact.

The day began with Medtronic's history and mission before educators got to test out several pioneering devices. We met with lead engineers in manufacturing, testing, and research & development to learn more about their expertise and their career journeys. Educators got an extraordinary hands-on opportunity with the Hugo™ Robotic-Assisted Surgery (RAS) system, experiencing firsthand how human inputs translate into precise, robotic cutting and cauterizing at a simulated surgical station.

Following an insightful Q&A session with Ashley's team, the team synthesized a list of essential career-readiness soft skills required by students to become the future workforce at companies like Medtronic. The list included communication, mindset, resilience, and collaboration.



Fascia's Chocolates

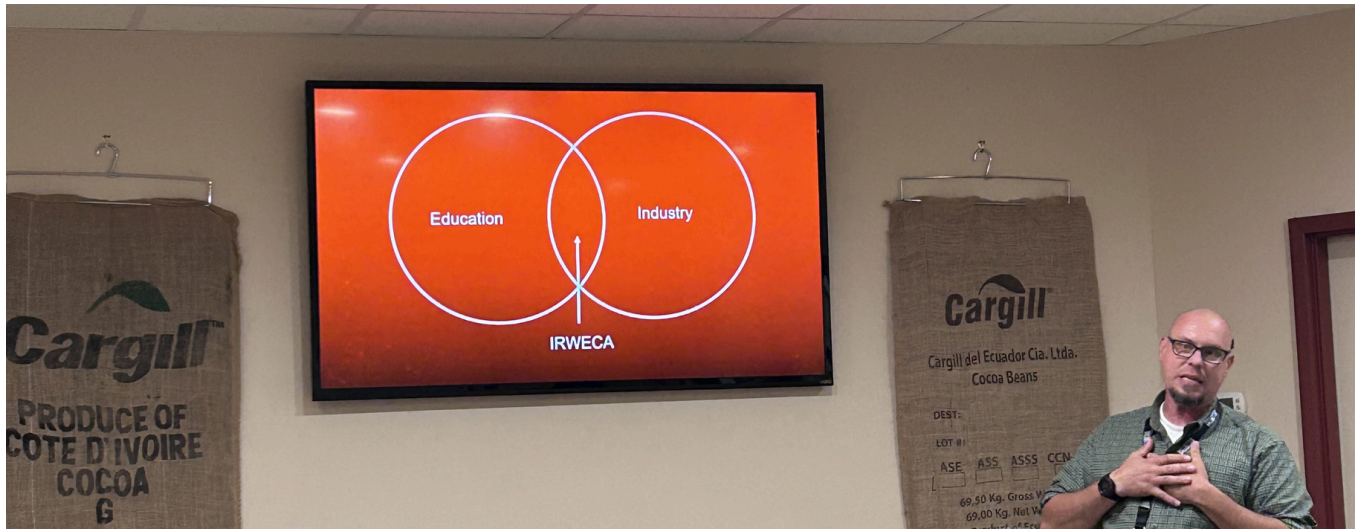
Fascia's Chocolates is a masterclass in how science, technology, and engineering can turn a small family business into a highly organized, scalable enterprise. Run by Carmen Romeo, this three-generation family business employs 40 people, serves 130 retail outlets, and has welcomed over 70,000 visitors to date. Romeo remains hands-on with branding, evolving his label design process from Microsoft Publisher to Canva AI to keep up with modern technology.

Working on the production line means constantly using practical academic skills. Employees must regularly use rapid mental math, precise measurements, and data collection while troubleshooting, experimenting, and managing their time effectively to ensure batch-to-batch consistency.

The team identified key curriculum integration points to align student learning with actual employer demands:

- Applied Mathematics & Chemistry (ie experiential lessons on tempering & crystallization)
- Business, Geography, & Global Studies (ie project-based learning modules on topics including global history & botany of cacao production)
- Work-Based Soft Skills (ie dependability, self-direction, natural curiosity, problem-solving under constraint, and collaborative communication)

District & School-Based Curriculum Development



Tom Lewoc, Cheshire High School Tech Ed. Coordinator, presenting his academic year support work to IRWECA teachers at Fascia's Chocolates.

Cheshire High School

Support continues for Tom Lewoc, Tech Ed Coordinator at the HS, from Steve Orłowski, department head of Precision Machining Technology at Emmett O'Brien HS. Steve, a master teacher, has given tremendous support to Tom from spring 2025 to the present.

Steve continues to assist in sharing manufacturing class management and the use of CNC equipment, such as the Lathe and Mill. The training on the ProtoTrak K3 for milling included counter bores and slots. Tom and Marjorie Drucker were also able to visit Steve's manufacturing class to observe the structure and classroom organization. After observing, the team practiced using the Lathe and began creating exercises for student instruction.

Marjorie, Steve, and Tom will continue working with the ProTrak to create hexbolts in the fall.

Wilbur Cross and Hillhouse High Schools

After the success with Cheshire Public Schools, support will now be provided to Hillhouse HS and Wilbur Cross HS in New Haven. The team will develop a program that integrates skills associated with manufacturing other than use of equipment. Examples include finish work, quality assurance, process planning, safety protocols, and OSHA 10 training.

Teachers will collaborate with Steve Orłowski during Fall 2026. They will visit Emmet O'Brien HS and plan to schedule visits at the New Haven schools as well.

In addition, Marjorie Drucker and the IRWECA team will be working with Hillhouse HS's lead teacher Vinny Squeglia to plan for the 26/27 school year.

Evaluation & Feedback for Industry Engagements

Spring

15

Teachers
Participated

93%

Teachers intend to
incorporate the
program's elements to
address the needs of
local companies

Summer

22

Teachers
Participated

88%

Teachers intend to
incorporate the
program's elements to
address the needs of
local companies

Spring & Summer

100% of teachers

- Gained valuable insight that will impact their own and their school's teaching and learning.
- Feel that what they learned through IRWECA will benefit their students.
- Would recommend the IRWECA experience to a colleague.

Evaluation & Feedback for Industry Engagements

"In my role, I am looking at impact on both adult/teacher and student learning. **This experience connected the focus areas in school with the needs of industry.** I plan to share my learning and possible opportunities to further connect with Fascia's Chocolates...whether it be professional learning, field trip, or bringing someone to speak with staff and students." -Curriculum Director

"I think it has helped me to understand what the workforce is in need of as far as skills and that will help to mold my instruction." -Family and Consumer Science Teacher

"All of the people on the panels are so thoughtful, caring, professional and passionate about sharing their work (as is IRWECA staff)." -Science Teacher

As an engineering and science school it is already important for us to implement industry driven lessons. **The workshop has helped to strengthen our perspective of what the workforce is looking for** regarding our students and how we can better assist students in being both college and career ready." -STEM Teacher

"Overall, I strongly believe that what I learned through IRWECA will have a positive impact on my students because the program introduced me to practical, research-based strategies that can be incorporated into my classroom curriculum. I gained new ideas for creating engaging lessons, incorporating more real-world applications, and using technology to support student learning." -Math Teacher

"I had never heard of Tighe & Bond before but this was inspirational and knowing exactly how such skills will help the kids succeed is great. It was also great to hear that different personalities are encouraged." -Technology Education Teacher

"Many of the skills discussed have given me a great set of ideas to modify my classes!" -Career and Technical Education Department Head

"In addition to gaining new instructional strategies, **I developed a deeper understanding of how mathematics is applied across a variety of industries.** The workshop provided valuable opportunities to collaborate with other educators, exchange ideas, and learn from different perspectives and teaching experiences." -Math Teacher

Thank You

The SCSU Innovation Hub is a unique team at Southern Connecticut State University serving students, faculty, and community members throughout Connecticut. Our mission is to advance awareness of, experiences and skill development for, and access to jobs and internships with companies in STEM and Emerging Technology fields. IRWECA achieves this by helping to build capacity among the teaching corps, especially CTE educators.

IRWECA is made possible by a partnership with the Connecticut State Department of Education (CSDE) through the federal Perkins program. Thanks to CSDE's support, we are pleased to continue to increase educator awareness of career opportunities in Connecticut, broaden their networks and access to industry partners, and support their development and implementation of new teaching and learning aligned with the needs of those companies.

Thanks to our industry partners Tighe & Bond, Park City Packaging Inc., Athletic Brewing Co., Medtronic, and Fascia's Chocolates for hosting and engaging teachers regarding what they do and what they need among graduates.

The SCSU Innovation Hub and the IRWECA team that makes these engagements come to life for teachers includes our curriculum facilitators, Marjorie Drucker and Dr. Jeffrey Levinson as well as Nina Musco, Dr. Christine Broadbridge, Peter Dimoulas, Derek Faulkner, Sage Maier, Ellie Lamkhanter.

Thank you again to the Connecticut State Department of Education for their continued partnership and support. It is because CSDE's support that we have accomplished so much and continue to help more teachers impart industry-aligned skills and knowledge for their students. When educators are more supported, capable, and prepared, then student outcomes improve, which subsequently helps to provide companies throughout the state with the talent they need to not only stay in the state but thrive.



