

Engaging Community College and High School Students in Research, Service, and Real-World Experiences

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This material is based upon work supported by the National Science Foundation under NSF ATE Grant # 1801062

Engaging Students from Classrooms and Camps to College and Technical Careers

Your Community. Your College.



CT STATE
COMMUNITY COLLEGE

Engaging Students from Classrooms and Camps to College and Technical Careers

The goal of our project is to build a technical career pathway from the high school to the community college and into industry.



Background



College Programs

Engineering Technology

Industrial Technology

Data Science

Engineering Science

Natural Resource

Biomolecular Sciences



Natural Resources
Students in the
Madrivier

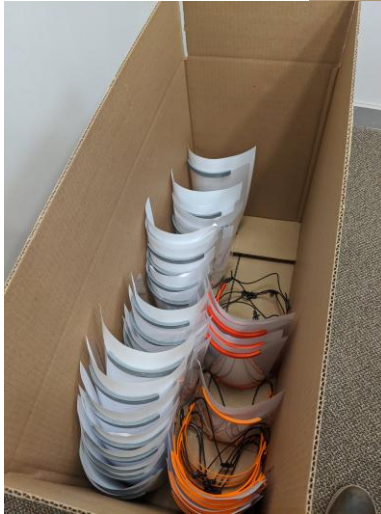
“Tell me and I forget.

Show me and I remember.

Involve me and I understand.”

Xun Kuang a Chinese Confucian philosopher 312–
230 BC

Project-based Learning



Engineering Technology Face Shields during the Pandemic



Quad Copter



Data Science

Data Science students spent the spring semester working with owner of Great Fall Brewing Company to determine the financial impact that the market forces have had on the brewery's bottom line.

Other Data Science projects included working with a local town and with a health care company.



Start at 1:19





Raised Gardens for Food Bank



Antibiotic Resistance Research

We participate in three student –sourcing research projects:

The Tiny Earth: University of Wisconsin Discovery Center

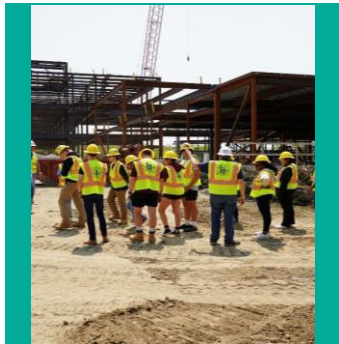
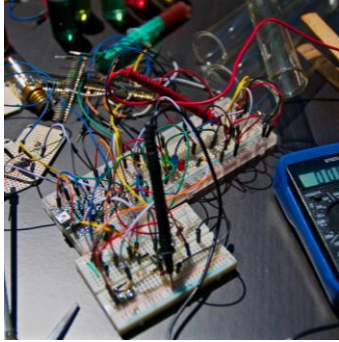
SEAPHAGES: Howard Hughes Medical Institute

The PARE Project : Tufts University Center for Science Education

Engaging High School Teachers and Students



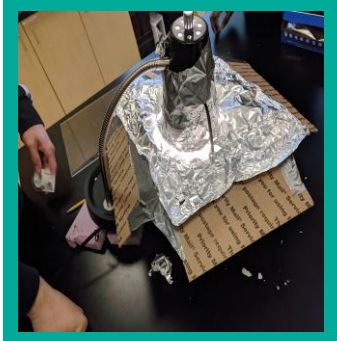
Professional Development for High School Teachers to develop courses and units with Industry Partners



Wittman Battenfeld: Robotics and Injection Molding

- AlTek Electronics: Soldering
- The Jackson Laboratory, and The Bioscience Core Skills Institute: Biotechnology
- Beckton Dickinson: Injection Molding and Microbiology
- The Shelter Institute: Construction

High School Technical Courses Developed by through this project and with Industry Partners



- Soldering
- Engineering
- Robotics
- Drones
- Integrated Plant Science and Engineering
- Construction Technology
- Applied STEM
- Biotechnology

Biotechnology



Wittmu

f the Torrington High School Science Club at the Expo Fest in Wallingford, Conn.

Hydroponics



Soldering

Students will demonstrate the ability to hand solder through hold and surface mount components and to wire terminals.

They will also become knowledgeable of the methods and acceptance criteria for soldering electronic assemblies.

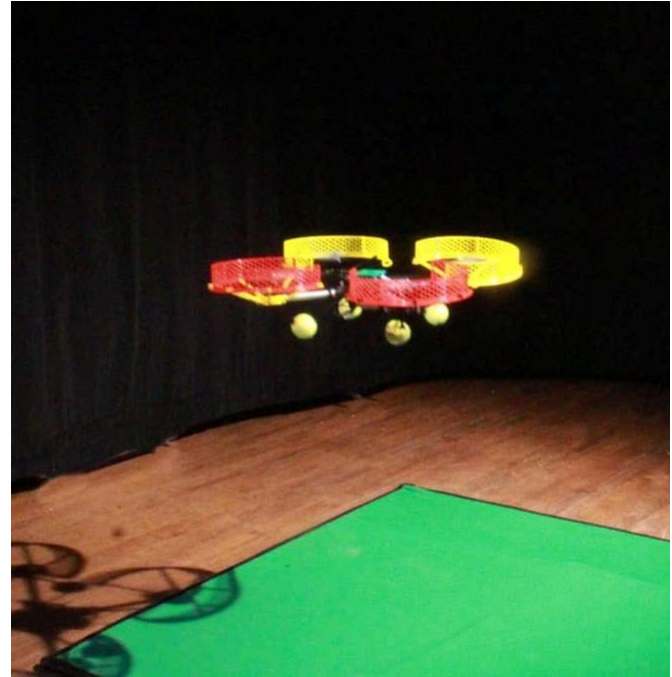
This course and experience may lead to employment with local manufacturers. Students can earn college credit for this course through the dual enrollment program.



Drones

This semester-long course focuses on the technology and innovation surrounding drones. Students will learn about the use, ethics, and operation involved in this technology, along with exploring the real world application of these devices.

Students will be involved in both independent research and hands-on learning experiences such as coding and flying specific missions



Robotics

Are you a problem solver and have a natural curiosity of how things work? Are you creative and interested in innovation? Are you a team player and love learning? You just might have an engineering mindset

In this year-long course, students will focus on four core areas: engineering design process, performing essential engineering calculations, coding, and discovery while building a robot.



Construction Technology

This course involves students with the tools, materials, and technologies used in the construction industries. Students will develop skills required to be an informed homeowner and provide a base from which to build the expertise necessary to compete in this thriving environment. **Students will be given hands-on practice in the design and building of construction projects.**



Data

Research

21 High School students
and 9 Community
College Students are co-
authors on the GenBank
Publications

36 High School and 12
Community College
students participated in
independent wet-lab
research projects

400 CC students
participated in courses
embedded research
projects

Dual

Tutoring

HS Student Participation

*What activities do you use to help your students
gain real world experiences?*



Go to [Mentimeter.com](https://www.mentimeter.com) and use code to share your responses

The background is a dark blue field filled with white line-art illustrations. These include various campus buildings labeled 'NAUGATUCK VALLEY', 'HOUSATONIC', 'TUNXIS', 'THREE RIVERS', 'QUINEBAUG', 'MANCHESTER', 'GATEWAY', 'MIDDLESEX', 'NORWALK', 'CAPITAL', 'ASNUNTUCK', and 'NORTHWESTERN'. There are also icons of a graduation cap, theater masks, a book, a bus, a person at a whiteboard, a tree, a cell, and the 'CT' logo on a banner.

Thank you

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