



Joe Vargo
Executive Director
Partners For Education & Business

PEB Works with Member Companies to Inspire Future Female Engineers

WOMEN IN ENGINEERING DAY – MARCH 24, 2017

PEB has had an ongoing collaboration with Jordan-Elbridge High School for this annual event, now in its fifth year. The original format was attended only by J-E female students. Beginning in year three, the school began to reach out to other districts that are part of the Cayuga-Onondaga County BOCES. The addition of more female students reached a new high this year, totaling 76 students from six school districts.

The event opened with presentations from female engineers from five companies or institutions of higher learning. Technology teacher, Elisabeth Woodford, spoke first, discussing her early interest in discovering how things work. Students heard from 13 representatives from area employers including **Anaren, C&S Companies, GE Inspection Technologies, SUNY ESF's Paper & Bioprocess Engineering Dept., and Welch Allyn.**

These female engineers had backgrounds in Chemical Engineering, Mechanical Engineering, Structural Engineering, Civil Engineering, Bioengineering, Electrical Engineering, Computer Engineering, and Paper Engineering. The students were inspired by their personal stories of what first sparked their interest and how many of them were led to a different career path than what they had planned. They were amazed to hear how some were not top Math and Science students, yet are now using those skills daily.

Students' evaluations were summarized and some of the results included:

- 100% stated the event was More Than Satisfactory or Excellent
- 100% are now considering a career in Engineering due to this event
- 100% now realize that their high school math and science will impact their career options and plan to increase the number of these courses they take
- 100% had not realized how many different types of Engineering careers there are, how few female Engineers are in the workplace, and how interesting a career in Engineering could be

Thank you to the outstanding female Engineers who provided a positive impact on these students: Casey Hennigan and Nithya Mandala from Anaren; Jessica Fadden and Melissa Kehoe from C&S Companies; Jenny Genovese and Jackie MacDavitt from GE Inspection Technologies; Erika, Marisa, and Laura from SUNY ESF; and Corrie Baum, Jennifer Bergstrom, Kimberly Coon, and Michele Kwarta from Welch Allyn.



Top: Students attending Women in Engineering Day try to build the tallest tower using cups and rubber bands at C&S Companies' table. **Bottom:** Anaren engineers, Nithya Mandala and Casey Hennigan display the new Anaren Atmosphere, a cloud-based development platform to enable IoT capabilities on Bluetooth® Low Energy devices.

P-TECH Update

Syracuse

4/4/2017 - Syracuse sophomore P-TECH students visited **OCWA** (Onondaga County Water Authority) and heard from several employees who spoke about their careers as a Water Systems Chemist, I.T. Specialist, Water Systems Construction Engineer, and H.R. Assistant.

Andrew Weiss, Executive Engineer, described the Authority's coverage area and ability to serve up to half a billion people. The students had not been aware that 38 million gallons of water from Lake Ontario and/or Otisco Lake are processed through filtration plants and delivered to customers daily. OCWA has 2,100 miles of water main piping that it monitors and maintains in addition to filtration stations, dams, pump stations, water towers, and a new solar field. The students also learned about how to apply for civil service tests, beginning at age 18, and how those jobs will provide them with a stable income, benefits, and a pension. Many thanks to the OCWA staff who participated: Darlene Pettersen, Tavia Gilbert, John Palamara, Ken Beckering, and Will Bianchini.



OCWA Executive Engineer, Andrew Weiss, gives an overview of the Water Authority to P-TECH students.



ZF TRW hosts Auburn P-TECH freshmen students. The students had to don anti-static suits before touring the facility.

Auburn

ZF TRW in Auburn welcomed Auburn High School 9th-grade P-TECH students in February to visit their facility. Students got suited up into their antistatic gear and took a safety test, which all passed. Products manufactured at the plant were examined by the students as they learned about the process of how they were constructed. After all questions were answered students were split into three groups and toured the facility with an engineer to go over all the progression a piece goes through. Once the tour was completed, ZF TRW's Human Resources representative spoke to the students about different levels of job opportunities with higher education and pay benefits, which drew the students' interest and motivation to further explore these jobs.

Syracuse City High School Students Participate in the American Chestnut Research & Restoration Project

The CNY Biotech Accelerator Center (CNYBAC), a nonprofit partner of Upstate Venture Connect, hosted a speaker series event on April 13th, featuring Allison Oakes, Postdoctoral Research Associate for the American Chestnut Research and Restoration Project at SUNY ESF's Dept. of Environmental and Forest Biology. She gave a PowerPoint presentation to 33 science students from Corcoran, ITC, and Fowler PSLA High Schools, describing the research being conducted to save the American Chestnut Tree.

The lab at CNYBAC will be the main production facility to grow genetically engineered, blight resistant American Chestnut plantlets, with a goal of producing 10,000 American Chestnut trees in five years. The students were able to view the plantlets and learn about how they are being acclimated from sterile culture conditions to newly installed, state of the art, high-humidity, high-light growth chambers. The students concluded the morning by creating terrariums using canning jars, colored stones for drainage, potting soil, and the addition of a variety of small plants, such as ferns, moss, and carnivorous seedlings.

