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More girls 'go for it' in mostly male fields



NFA juniors Kathlene Nicole Perez, 16, left, and Derilian Rivera Bocachica, 16, both from Norwich, will be participating in SHIP, a paid summer internship program at Electric Boat. [AARON FLAUM/NORWICHBULLETIN.COM]

Pair of NFA juniors will be part of Electric Boat's summer internship program

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NORWICH — Derilian Marie Rivera Bocachica, a 16-year-old, is designing a floor plan for her perfect house.

Unhappy with the size of the kitchen she originally drafted in the four-bedroom, two-and-a-half bath home, she converted a closet to add more space — now there's room for a snack bar in the kitchen of her dreams.

Bocachica is a junior at Norwich Free Academy, and the program she's using for the house plans is part of a set of classes she's taking that includes drafting, robotics and problem-solving.

She's found her niche in a world men have typically dominated.

"There are definitely more guys than girls — sometimes in my classes I'll be the only one,"

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Numbers climb

Numbers of female enrollees as a percentage continue to climb as the Manufacturing Pipeline Initiative gains traction: 8 percent of participants in the machinist category are female, compared to 5 percent nationally; 12 percent of participants in welding are female compared to 4.5 percent nationally; and 24 percent of participants in design are female compared to 20.8 percent nationally.

GIRLS

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said Bocachica, a Norwich resident who someday wants a job that combines engineering with drafting. "It bothered me at first, but then realized that it gives me the chance to show myself more. It gives me a challenge."

Bocachica and Kathlene Nicole Perez, also a junior at NFA, are part of a group of 26 students from 13 regional high schools who earned spots in the Electric Boat Summer High School Internship Program, or SHIP. The program is a work-based learning and paid internship. For six weeks, interns work side by side with trained mentors who have years of shipbuilding experience.

"I'm mainly hoping to get real-life experience," Bocachica said. "I know it's going to be a tricky work field for women."

The pair from NFA represents an ongoing change in the industry, said Linda Farinha, NFA's Career & Technology Education Department Head.

"There are an increasing number of women in the field and are well-represented and supported by organizations such as SWE (Society of Women Engineers) as well as local organizations such as EAMA (Eastern Advanced Manufacturing Alliance)," Farinha said.

"One of the ways that we encourage females to consider non-traditional careers includes hosting events that include women who work in the field and experienced great success. In February, we had an engineering panel with several women represented from companies including Pfizer, Spirol and the Connecticut Department of Transportation."

Building experience

Perez, 16, has been interested in woodworking since she started helping her dad build furniture and picture frames when she was 12. She's taking a woodworking class where she's designed a cutting board and coasters and built a toolbox.

"I'm nervous because there are a lot of guys in the field," Perez said. "But I hope to learn a lot. I want to study welding. ... My advice to any girl who wants to go into a field that is mostly guys is to go for it. If you're interested in it, don't let anything stop you."

John Beauregard, president and CEO of the Eastern Connecticut Workforce Investment Board, said he responds often to questions regarding the troubling underrepresentation of women in most of the skilled trade positions of manufacturing — the main ones are machinist, welding, design and sheet metal.

He said part of the solution includes making jobs and training available, then "you can proceed, in earnest, with an aggressive strategy using marketing, social media, mentor development, and other recruitment and retention approaches."

"Unfortunately, this has been building up over time," Beauregard said. "We're going to be missing out on a lot of talent. It take a dedicated strategy and a mindset that we're going to make a difference in this."

It's already happening locally — participation in the Eastern Connecticut Manufacturing Pipeline Initiative exceeds national and state averages in the four main skilled trades of the program.

Numbers of female enrollees as a percentage continue to climb as the program, nearing its third year, gains traction: 8 percent of MPI participants in the machinist category are female, compared to 5 percent in the national workforce; 12 percent of MPI participants in welding are female compared to 4.5 percent nationally; and 24 percent of MPI participants in design are female compared to 20.8 percent nationally.

"Due to the quality of MPI instructors, the support services participants receive, and the participants' hard work, the initial skills gaps shrink during the course of MPI training, and female participants complete training at basically the same rate as males," Beauregard said, "secure jobs at EB and supply chain employers at the same rate or higher following training completion, and earn at the same scales as males upon entering employment."

The investment board co-manages a STEM scholarship program for high school seniors in the region related to leadership in STEM careers (science, technology, math and engineering.) The applicants in the scholarship program plan to pursue a career in a STEM field in college, Beauregard said. Of the applicants in the program, 73 percent are female.

Role models

Although the number of female engineers today has greatly improved since the early 1980s, when only 5.8 percent of engineers in the U.S. were women, it's still surprisingly low. Currently, only 14 percent of engineers are women, according to the Congressional Joint Economic Committee. Reasons that have been suggested for low female graduation rates include lack of female engineering role models and misconceptions of what it is like to be an engineer.

Bocachica doesn't have to look far for a role model — her mother worked at Electric Boat for seven years.

"I always knew about EB because of my mom," she said. "That, the fact I know they hire younger people, my guidance counselor ... it all sparked my interest."