Beyond the Bell: Catholic High robotics team raises the bar

By Melody Simmons
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If a small group of juniors at The Catholic High School of Baltimore have their way, they will design robots that will lift and roll their way into a successful new chapter for the all-girls' school on the city's northeast side.

The five young women are part of a budding robotics program at the school that is getting ready to enter a series of competitions over the 2014-15 school year.

The goal is to better learn how to apply their math and science lessons in a high-tech way – and be among a group of female students to challenge what has long been a status quo in math and science education.

"There was a time not too long ago that young ladies were hearing that they were not good in math and science and they somehow fell short," said Steven A. Cole, who heads the STEM (Science, technology, engineering and mathematics) program at Catholic High. "Well that's not true, and has never been true. We're out there showing them that."

Cole directs Catholic High's three-year-old robotics team, which will go up against similar groups from public and private schools in the Baltimore area Oct. 4, when this school year's robotics competitions begin at Calvert Hall College High School in Towson.

Teams will create and present robots that they will then direct to lift a specific amount of weight to a certain height, all within a designated space.

"A lot of the objective is problem-solving and teamwork," Cole said. "As a by-product of that you learn how to program and to build structures that move. There are a lot of 21st-century skills that our young ladies are going to need in their STEM careers that they are learning through that.

"And it's competition, but it's friendly competition."

Abby Timmel, 16, joined the robotics team because she aspires to study physics in college.

"When we started out, we didn't know anything about designing robots to meet these requirements," Timmel said, "so you kind of have to figure out how to make moving parts that can lift that high (up to four feet). That can be kind of challenging; there's a lot of engineering involved in this."

She said that team members from other schools such as Calvert Hall and Baltimore Polytechnic Institute have been helpful.

“Robotics is a very gracious and professional sort of competitive atmosphere,” Timmel said, “so all of the teams work together while at the same time engaging in friendly competition.”

Emily Schallmo, 16, is involved in fine arts at Catholic High, but joined the robotics team last year because of her friendship with Timmel.

“The problem-solving experience I have had in robotics helps in all aspects of my life,” she said.

Schallmo said she was impressed that Timmel taught herself AP statistics last year, and earned a top score on the exam.

“I don’t know too many boys who can do that,” she said.

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