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Designing tools for surgeons is on teen's radar

Olympia Fields teen eyes career in biomolecular engineering



Jocelyn Dorney, of Southland College Prep Charter High School, hopes to someday create medical tools that can help surgeons. (John Smierciak / HANDOUT)

By Cheryl Dangel Bartolini, Daily Southtown

October 12, 2015 -- For many ambitious high school students looking to advance their career aspirations early, summer isn't the leisure vacation it used to be.

Summer programs and summer school represent opportunity, and among those taking advantage this year was Jocelyn Dorney, a 17-year-old Olympia Fields resident.

Dorney, a senior at Southland College Prep Charter High School in Richton Park, participated this summer in the Lincoln Laboratory Radar Introduction for Student Engineers program offered by the Massachusetts Institute of Technology. The MIT Lincoln Laboratory is in Lexington, Mass., near Boston, and for two weeks there, Dorney learned how to build radars, create code and do 3D printing.

Dorney also was tasked with using radar to measure the speed and velocity of moving objects. In addition, along with two of her peers, she built a radar during their lab periods, which followed a series of morning lectures.

The experience wasn't all work. The group of 18 students, chosen from hundreds of applicants, got to live in an MIT dorm and take tours of the Boston area, including a trip to Harvard University in Cambridge.

"It was an amazing, amazing experience," said Dorney, who has always loved to build things.

Chiamaka Agbasi-Porter, who was in charge of the program and has a degree in chemical engineering, was Dorney's mentor during the program and continues to inspire her.

"She was our mother there because we were away from home and she took care of the students there," Dorney said. "She helped explain homework and gave us career counseling."

Dorney plans to pursue a degree in biomolecular engineering and chemical engineering.

"I want to build medical tools for surgeries," she said, explaining that her interest originally came from watching the television drama "Grey's Anatomy."

She would like to attend Northwestern University or Vanderbilt University. After earning her bachelor's degree, she wants to pursue a medical degree and eventually work in trauma surgery.

"In order to understand the medical field and know what tools doctors need, I would work in the field to understand how I can create something that can make saving someone's life faster and easier and safer for everyone," Dorney said.

Dorney is a standout student. She ranks second in her senior class with a 4.73 grade-point average. She is president of the school's National Honor Society chapter, and the captain of the school's mock trial team. She also was selected by Rice University in Houston from among 6,000 candidates nationally to participate in September in a weekend SOAR program (Seeking Opportunities at Rice). The by-invitation-only program was designed to introduce select minority students to the programs at Rice.

Dorney, the daughter of Kimberly and Lawrence Dorney, volunteers on Saturdays during the school year at the Museum of Science & Industry in Chicago as part of its Science Minors program. Students who are accepted to the program take an in-depth science course and then are invited to teach what they learn to museum visitors in an interactive exhibit. Last year, Dorney learned about electromagnetism. The program is open to students ages 14 to 18.

Dorney takes her workload in stride.

"I don't want to put economic stress on my family, so I want to do really well," she said. "I worked hard and it became fun. The teachers here at Southland and my friends keep me interested in math and science. There's really great teamwork here that makes the whole package come together."

Cheryl Dangel Bartolini is a freelance reporter for the Daily Southtown.

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