Community College Catalyst intern Christine Savala, right, and Naval Postgraduate School research professor Mark Karpenko stand behind a satellite they are working on inside the Control and Optimization Laboratories at NPS.
COMMUNITY COLLEGE INTERNS GET REAL-WORLD EXPERIENCE IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATH AT NPS

By DANNY FUNT
Herald Correspondent

If Luana Sanchez wasn't working at the Naval Postgraduate School this summer, she says she'd probably be baby-sitting. Instead, the 16-year-old from Castroville is helping to design three-dimensional human holograms for military training.

Sanchez is one of 28 students participating in the eight-week NPS program “Community College Catalyst,” which is run in conjunction with Hartnell College. The students, most of whom study at Hartnell, are hired to assist NPS faculty on a variety of projects involving “STEM” — science, technology, engineering and math.

Students began their paid internships on June 11, having completed a semester of once-a-week preparation at Hartnell. Among them is Stephen Olivarez, 21, who is working on mathematical computations for satellites. “Ever since I was 4 years old it’s been my dream to work for NASA,” said Olivarez, who recently transferred from Hartnell to study mechanical engineering at California State Polytechnic University, Pomona. “Now, it’s so exciting to be working for former astronaut Jim Newman.”

The Hartnell-based program is coordinated in large part by Alison Kerr, operations manager of the Cebrowski Institute at NPS. In addition to the participants from Hartnell, there are close to 100 other interns working at NPS this summer.

Community College Catalyst students work 8 a.m. to 5 p.m. for five days each week, which earns them $3,800 — about $11.75 per hour. Funding comes from a variety of public and private sources and includes grants from the U.S. Department of Education that are available to institutions educating racial minorities in STEM disciplines. The NPS internship, however, is available to students of all backgrounds.

“Theres no pressure that at night after my internship I have to go to work because I get paid for working at NPS,” explained Claudia Garcia, 21, a third-year computer science major at Hartnell. “Instead of having an overload of responsibilities this summer, I can be comfortable knowing that this is helping me earn money for tuition.”

Garcia is among three young women who are helping with the construction of an emergency operations center, which would transmit vital information to responders in the event of a natural disaster. The project was assigned by the U.S. Department of Homeland Security.

“I can teach you all day long,” said NPS lecturer Buddy Barrato, who oversees the girls’ work on the project. “But if you don’t get your hands dirty and if all you see is pictures, you’re not going to be as useful. I immerse them in as much technology as possible so that they can develop a skill set going forward.”

The number of American students studying STEM subjects has declined across the country in recent decades. In response, greater emphasis and government dollars have been given toward encouraging students to explore these fields.

Students in the Hartnell internship who lack Social Security numbers — there are four such students this summer — cannot receive compensation from federal funds. Their paychecks are covered by private donations to Hartnell.

“Hartnell has a remarkable STEM program, and students come out of there ridiculously prepared,” said Craig Martell, an associate professor of computer science at NPS and one of the first involved with Community College Catalyst. Martell recalls being impressed by questions from visitingpiel.

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Andy Newton
Hartnell Science & Math Institute

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Hartnell students at one of his lectures, which motivated him to offer a few summer internships.

“The first year there were students from MIT interning as well,” Martell explained, “and I found that Hartnell students were at least as good mathematically.” These students’ performance inspired the current program, which is now in its fifth year.

Although the internships provide an educational opportunity for students, Andy Newton, director of the Science & Math Institute at Hartnell and a coordinator of the NPS program, noted, “The professors aren’t there to baby-sit.” He explained, “Our students have to be assets to the work that gets done in the lab, and they have to be able to contribute to the research.”

Although most of the Hartnell interns have grown up locally, many had never previously set foot on the NPS campus. Those first few days on the job can be intimidating.

“It seems like such a serious place,” said Casi Martin, a 20-year-old who is transferring to CSUMB after three years at Hartnell. “I remember driving up to the gates on my first day, seeing the guards with guns and thinking that it would be impossible to have fun here. But after a while you realize how friendly people are.”

Many Hartnell students have been mentored by computer science professor Joe Welch. Welch, a former engineer in the Navy, encourages students to utilize the academic opportunities at NPS.

“It doesn’t really matter to this process that NPS has any association with the military,” Welch said. “We don’t want the students to feel like they are being recruited. But the graduate students at NPS are amazing. They’re a national resource.”

Since Community College Catalyst was established, close to 20 former interns have been hired as civilian employees by NPS. Luciano Cerritos, 27, now works as a NPS research assistant in addition to studying engineering at Sacramento State.

“After working with computers here as an intern, I said to myself, ‘I can’t believe I’m getting paid to do this,’” Cerritos recalled. “That experience made me change my area of concentration in school.”

Welch summed up the experience, saying, “Work hard at your internship, ask questions, and you see that these students have a totally different perspective about the world, and it shows when they go back to school.”