Burroughs High School students attend a computer science seminar taught by Naval Air Warfare Center Weapons Division’s Curtis Merrell in preparation for an upcoming Advanced Placement exam. (U.S. Navy photo)

NAVAL AIR WARFARE CENTER WEAPONS DIVISION, CHINA LAKE, Calif. - About an hour before classes start every Monday through Friday, Curtis Merrell, a computer scientist at Naval Air Warfare Center Weapons Division, teaches a computer science seminar at Burroughs High School for students interested in taking the Advanced Placement exam in May.

Burroughs offers a few AP science, technology, engineering and math classes, but AP computer science isn’t one of them and is not yet available for credit. Since January, Merrell and interested students have been meeting to go over Java, which is built around Object Oriented Software Design, a software design model that has been used in professional industry for decades. Students who take the upcoming AP exam and earn qualifying scores are eligible to receive college credit per their chosen university or major.

“[NAWCWD] approached me last year to look at the possibility of adding a computer science course; their inspiration was twofold: employee retention and recruitment,” said Burroughs Principal Bryan Auld. “The hope is that exposure to the field will inspire students to consider computer science as a career and NAWCWD as an employer when they finish
college. We were excited to have an opportunity to offer this curriculum and confident that Curtis would be an excellent instructor.”

Another goal, according to Merrell, is to upgrade the seminar to a full-fledged class, so that any student can take the course as an elective for credit. An AP, college-level class, he believes, will provide the most comprehensive entry point to prepare the students to succeed in STEM career paths.

“I have been impressed with the rigor of the students who have been attending my sessions so far,” Merrell said. “In the seminar so far, the students have kept up with the required coursework in addition to their normal school schedules. Having struggled, myself, through the steep learning curve of my first years of programming, I will say that each week of progress is quite the noteworthy achievement for these students.”

Angel Zamarron, NAWCWD STEM program manager, added that College Board offers a total of six computer science and physics exams every year and NAWCWD would like to assist Sierra Sands Unified School District in identifying opportunities to provide local students access to the instruction and materials to succeed in these STEM course offers.

“The seminar provides a means by which students and faculty can benefit from NAWCWD’s staff expertise, unique facilities and equipment related to naval warfare systems and technologies,” Zamarron said. “One of the program’s goals is to engage local students with the scientists and engineers who seek to educate students about the opportunities available in STEM fields and inspire the students to become well-prepared for employment in STEM careers that will support the Navy.”

Richard Cracraft, NAWCWD Human Resources director who originally pushed the idea nearly a year ago in response to a Department of Defense call for STEM ideas, echoed Zamarron’s sentiments.

“The AP computer science seminar is a critical pilot for potential AP STEM opportunities at Burroughs as the demand for STEM AP courses will continue to be on the rise,” Cracraft said. “The partnership between NAWCWD and SSUSD and the commitment that both have to ensuring a strong STEM AP curriculum at Burroughs is pivotal to meeting the needs of the students as well as providing a pipeline of future employees for the Navy.”

According to NAWCWD Executive Director Joan Johnson, the next generation of talented scientists and engineers is essential to NAWCWD’s mission of delivering superior warfighting systems to the fleet.

“Our ability to grow and improve as a warfare center in support of our warfighters relies on young, innovative professionals and our commitment to developing, recruiting and mentoring them,” she said. “What better place to grow from than right here in our own community?”
NAWCWD helps Burroughs students prepare for college, STEM careers