

**For Immediate Release**  
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**Cooper River Center for  
Advanced Studies**

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**Vanessa Brown**  
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## Media Release

### **Career and Technology Education Month - Cooper River CAS students learning electronics and advanced mechatronics**

**North Charleston, SC** – Students are naturally curious about careers aligned with their interests and goals. Charleston County School District (CCSD) recognizes that and, as a result, has created an expansive menu of Career and Technology Education courses offered across the district. Today’s students have a front-seat view of thousands of career opportunities through CCSD’s Centers for Advanced Studies. The district believes that building early professional relationships with emerging talent puts students on direct career paths and meets the needs of growing industries that need highly skilled employees.

At Cooper River Center for Advanced Studies, Gary Careaga’s [Mechatronics Program](#) students are learning everything from basic electric technology to advanced mechatronics.

Principal Vanessa Brown said that at Cooper River, they are focused on developing highly trained professionals.

“Our standards are high because the stakes are high,” said Brown. “We have to produce students who are ready to make a decision about their future. The community is depending on us. It has to be done in a short period of time and taught by professionals who understand what industry needs.”

The trade name mechatronics is composed of “mecha” from mechanism and “tronics” from electronics. According to Careaga, highly skilled technicians, capable of critical thinking and accomplished at troubleshooting on multiple platforms, are an essential component of today’s manufacturing environment.

“The demand for technicians continues to grow world-wide,” said Careaga. “Our local business partners are especially interested in investing in our students.”

Careaga said that students can earn up to 11 industry certifications through multi-tiered training. Many large corporations have committed to hiring students for

summer apprenticeships with a commitment to full-time employment upon graduation, and financial assistance towards licensures. Locally, companies are willing to pay high school students \$16 to \$18 an hour. Professionals can make up to \$70,000 a year.

"Mechatronics is another example of how CCSD prepares students for the 21st-Century global economy," said Rich Gordon, CTE Executive Director. "In addition to mechanical and electronic systems, mechatronics blends computer, informatics, production, and much more, to create a holistic learning experience that prepares our students for the most in-demand jobs as well as top colleges and universities across the country."

Careaga's class builds a foundation of core knowledge for students considering becoming an electrician or securing a career in mechatronics.

"We not only get students prepared with the technical skill sets, but we prepare them for the professional world by teaching soft skills, personal development, and professional standards," said Careaga. "They'll leave here ready for on-the-job training, and likely be more advanced than others starting out in the industry."

The training facility at the Cooper River CAS is state-of-the-art. In the lab and in the classroom students are learning by using programmable logic controllers (PLCs) made by Siemens, which are used around the world.

"By providing opportunities like this for students, CCSD is giving our students an upper hand in the industry," said Careaga. "CCSD recognized the need both locally and globally to produce industry-ready trade employees. Multiple business and industry partners have seen our lab and curriculum and they have acknowledged how completers can transition seamlessly into the industry."

Brown said Careaga is one of the best educators she has ever worked with.

"If a student registers for Mechatronics or Electronics, they will be career and college ready," added Brown. "They will earn industry certifications. They will be personally and professionally developed. That I can guarantee."

Christopher Lopez Ortiz is a 10th grader at R.B. Stall High School. He learned about the CAS during a presentation to the student body and was excited to learn about the multitude of careers available to him. He was intrigued by the mechatronics courses and immediately enrolled.

"I enjoy the hands-on learning," said Ortiz. "I enjoy actually getting to physically do what we're learning instead of just reading and writing about it like in our core classes. We will definitely have a leg up on the competition when it comes to applying for a job because we are being trained and educated by a top-notch professional."

Ortiz has already earned four of the 11 certifications. He credits that to Careaga and Vanessa Brown, the school's principal, who is readily visible and present in the building.

"Like my instructor, Principal Brown encourages us in all things," said Ortiz. "They both encouraged me to continue earning my certifications because it could help with college scholarships or when I go to apply for a job."

Antonio Luciano is about to graduate from Stall and completed a semester in Mechatronics. He was able to earn two certifications that will be applicable to his future.

"This is a first-class facility where we learned industry safety and protocols," said Luciano. "Safety is a top priority in this classroom and in a real-world setting, so we learned the measures to protect ourselves and each other."

Luciano agreed with Ortiz about the real-world experiences in the lab.

"It was like going on a field trip every day," said Luciano. "You're able to have fun in a serious environment, doing real electrical work. It is a great learning experience."

Careaga explained that the lab offers numerous tools for the students to use and a variety of simulations such as residential lighting and wiring.

"Most students are hands-on, visual learners," said Careaga. "CTE allows that and makes learning fun. In here, students are finding out how things work, how to fix things, and how to put things back together."

Careaga served his country in the Air Force as a Master Mechanic and went on to earn his teaching degree so that he could give back to students like himself.

"My teachers pushed me to find something to like about school and it turned out to be hands-on education in the trades," said Careaga. "I've been accused of having a servant's heart, and maybe I do. I believe that if we don't take care of our kids, who else will?"

### **Courses available:**

- Mechatronics Integrated Technologies - Levels I – IV - Mechatronics originated in the advanced manufacturing industry. It merges disciplines in electrical, applied mechanics, hydraulics, pneumatics, HVAC, maintenance and repair, materials science, welding, fabrication and installation, Computer-Aided Design, automated production and PLC programming, analog and digital communications, and quality assurance.

- Electronics Technology – Levels I – IV – In this course students are exposed to the origins of electricity, fundamentals of power production for direct current and alternating current, installing and testing electrical wiring and components, soldering, reading, interpreting, and creating electrical wiring diagrams and schematics.

*(Prerequisites include pre-algebra and geometry - preferably Algebra 1)*

West Ashley Center for Advanced Studies also offers Mechatronics. It serves students from Baptist Hill Middle High School, St. John's High School, and West Ashley High School. Cooper River CAS serves students from Burke High School, Military Magnet Academy, North Charleston High School, and R.B. Stall High School.

For more information, contact Vanessa Brown at (843) 953-2732.

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#### **About the Charleston County School District**

Charleston County School District (CCSD) is a nationally accredited school district committed to providing equitable and quality educational opportunities for all of its students. CCSD is the second-largest school system in South Carolina and represents a unique blend of urban, suburban, and rural schools spanning 1,300 square miles along the coast. CCSD serves approximately 49,000 students in 88 schools and specialized programs.

CCSD offers a diverse, expanding portfolio of options and specialized programs, delivered through neighborhood, magnet, IB (international baccalaureate), Montessori, and charter schools. Options include programs in science, technology, engineering, and mathematics (STEM), music and other creative and performing arts, career and technical preparation programs, and military.