

For Immediate Release

February 13, 2025

Contact:

Andy Pruitt, 843-937-6583

Media Release

Career and Technology Education Month - West Ashley CAS students learning electronics and advanced mechatronics

Office of
Communications

Anita W. Huggins, M.Ed.
Superintendent of Schools

Michelle A. Mills
Associate of Communications

Charleston, SC - Charleston County School District (CCSD) 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.

At West Ashley Center for Advanced Studies, Nicholas Holmes' [Mechatronics Program](#) students are learning everything from basic electric circuitry, programming and coding, 3D printing, and advanced mechatronics and industrial robotics. The trade name mechatronics is composed of "mecha" from mechanism and "tronics" from electronics.

Students can earn up to 11 industry certifications through multitiered training. Many large corporations and community partners such as Boeing, Bosch, and Cummins have committed to hiring students for summer apprenticeships with a commitment to full-time employment upon graduation, and financial assistance towards licensures.

"We are expecting double-digit growth rates in manufacturing, engineering, and production career clusters in the Charleston metro region over the next five years," said Rich Gordon, Executive Director of Career and Technical Education. "The mechatronics program is a direct pipeline to thousands of these high-paying, high-skill, and in-demand jobs."

The class builds a foundation of core knowledge for students considering becoming an electrician or securing a career in mechatronics. The training facility at the West Ashley CAS is state-of-the-art with high-end, industrial-sized equipment such as a Kuka Robotic Arm. 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.

Holmes, a former math teacher, ran the mechatronics program next door at West Ashley High School before the CAS was opened. He said CCSD's capital investment in the CAS has been an instrumental turning point in access and learning.

"My students have more access and more opportunity," said Holmes. "It has also opened doors for the instructors here to collaborate. I recently teamed up with our engineering teacher and our maker space lead to design, create, and manufacture caddy-type boxes for the superintendent that went to every principal in the district as a gift. One-off projects like that are additional ways for our students to get the hands-on learning they need to be successful in the workforce."

One student works at a manufacturing facility owned by his father. This young man mentioned to Holmes that he wished there was a more efficient way to perform a certain task at the facility. Holmes went to work, creating a lesson plan that would put his students to the test. They are nearing completion of the creation of a machine that will increase productivity at the facility and could permanently be in use for years to come.

Holmes said this career track does not require college degrees and many of the companies CCSD partners with hire graduates and help them work towards additional certifications that they need for future advancement in the industry.

Twins Josh and Jordan Franks will graduate this year and plan to continue on to college as both are interested in engineering. They agreed that completing this program is a great accomplishment that will be added to their resumes.

Additionally, the type of students most drawn to mechatronics are artistic, creative students who enjoy hands-on learning.

"Any student at any level can enter this program and leave here with everything they need to know," added Holmes.

Annabell Brenkert is a senior who became interested in the class after her brother enrolled. Like him, she also joined the Robotics Team and serves as the captain. She transferred from Academic Magnet High School to her home school at West Ashley so she could have access to the course. Brenkert completed a summer internship at Boeing and plans to return this summer.

"I will then go to college to study mechanical engineering or science," said Brenkert. "What I have learned in this program and the resources provided to me through my internship have been invaluable."

Brenkert said many of their projects are student-led which gives teams or individuals room to interpret directions.

"There are so many tools at our disposal, and we're fortunate the 'community' in this class is one of friendship and passion for what we're learning," said Brenkert. "What we're doing and learning in here truly brings people together."

Jordan said the program allows students to create anything they can imagine.

“It’s practically free-form,” said Jordan. “We have the freedom to work how we want to which makes researching, and prototyping so much fun.”

His brother agreed.

“It’s a hands-on experience and that’s what most employers are looking for when they are interviewing applicants,” said Josh. “They want real-world experience.”

For more information contact the Office of Communications at (843) 937-6303.

###

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 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 50,000 students in 88 schools and specialized programs.

CCSD offers a diverse portfolio of educational options and specialized programs delivered to the students of CCSD through neighborhood, magnet, IB (international baccalaureate), Montessori, and charter schools and programs. Rich educational opportunities for students include programs in science, technology, engineering, and mathematics (STEM); music and other creative and performing arts; career and technical preparation programs; military; dual credit; and many more.