

For Immediate Release

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Media Release

Career and Technology Education Month - Biomedical students learn everything from DNA analysis to dissection

Charleston, SC – Students in Erica Wolfsen’s class have their sights set on a variety of healthcare-related careers. The Project Lead the Way (PLTW) [Biomedical Science](#) classes at West Ashley Center for Advanced Studies (WACAS) allow them to dabble in an array of biomedical sciences, systems, and interventions.

“Real-world concepts are taught at all levels through exciting hands on projects and problems,” said Wolfsen. “It takes dedication and persistence to reach their goal and complete all three levels of courses, but I’ve watched my students push through the hard stuff.”

Courses include:

- **Principals of Bio-Medical Sciences** – In this introductory course, students take on the role of healthcare professionals as they learn how to assess patients, investigate infectious disease outbreak, and participate in emergency response scenarios. The activities and projects introduce students to human medicine, psychology, genetics, microbiology, and public health.
- **Human Body Systems** – Students investigate the structures and functions of the human body and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students play the role of biomedical professionals to solve medical mysteries.
- **Medical Interventions** – Students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. Students are exposed to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

“Biomedical Science is one of our most popular CTE programs across the district - and is featured at each of our Centers for Advanced Studies,” said Richard Gordon

Executive Director of Career and Technology Education. "All students in Charleston County, from McClellanville to Edisto and in-between, have access to this high-skill, high-wage, and high-demand career cluster."

Wolfsen called it an amazing opportunity for students.

"They get to process mock crime scenes, dissect organs and analyze blood splatter," said Wolfsen. "The technical skills they learn include DNA analysis, lab processes, and more."

Wolfsen said the amount of information the students have to learn is overwhelming and the courses are pressure packed because there is so much content to memorize.

"All of the hands-on skills they are learning are tiered so that students are honing what they need to know and practicing them over and over," Wolfsen added. "Learning works differently in this class because it is exploratory and it keeps things from fizzling out. It enables my students to research and advocate for themselves."

Wolfsen described her role as fulfilling.

"One day my students will go on to be doctors, nurses, forensics experts and so much more," said Wolfsen. "They will have earned it too. They are top-notch students who work so hard. You don't see that kind of dedication in regular classes. To reach the third tier courses shows an extreme level of commitment."

Elianna Navarro is a junior at West Ashley High School. She enrolled in the biomedical sciences classes and is completing the third course.

"I jumped at the chance to get in this class because I want to go on to have a medical career," said Navarro. "This field excites me because I want to do research."

Navarro is intrigued by dissection and said the course has exceeded her expectation.

"The hands-on experiences are real-to-life," said Navarro. "It is a challenging college-level experience but I am used to rigorous coursework due to my experience in AP-level classes."

Classmate Shakhruza Kamolova is also a junior in her third semester.

"I've always been interested in healthcare," said Kamolova. "I have enjoyed these classes because I have the same common interests as my classmates and we're built relationships with each other. I also appreciate that Mrs. Wolfsen lets us go on our own to do the research and the work and she is there to help us when we

need it. We are able to work individually and as a group and not just rely on the teacher.”

Kamolova said that group-based learning has brought her fellow classmates closer and she’s gotten to know her peers through collaboration, which she likened to the workplace.

“We’re learning both professional and soft-skills which are crucial to future success,” Kamolova added.

“Programs like this are important because the career opportunities out there aren’t always as well-known to students as options,” said Wolfsen. “This CAS and our career center are crucial to letting students know what is out there.”

Gordon said Biomedical Science vertically articulates to two and four-year colleges and universities, as well as medical school, so students truly have multiple exit ramps to college and career opportunities. PLTW Biomedical is offered at all three of CCSD’s centers for advanced studies and most middle schools offer PLTW Gateway to Technology courses that introduce concepts in biomedical sciences, as well as other STEM subjects.

“We are so fortunate to have many partners in the Charleston region who have and continue to help students along their biomedical science journey, such as Trident Technical College, College of Charleston, MUSC, Roper St. Francis, and many more,” added Gordon.

For more information, contact the school at (854) 216-0801 or the Office of Communications at (843) 937-6303.

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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.