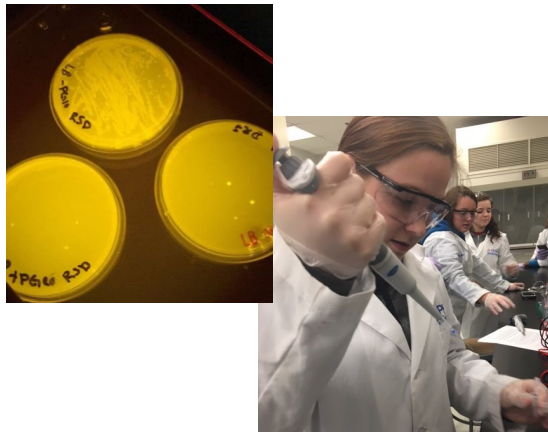


Upon completing the program students will be able to:

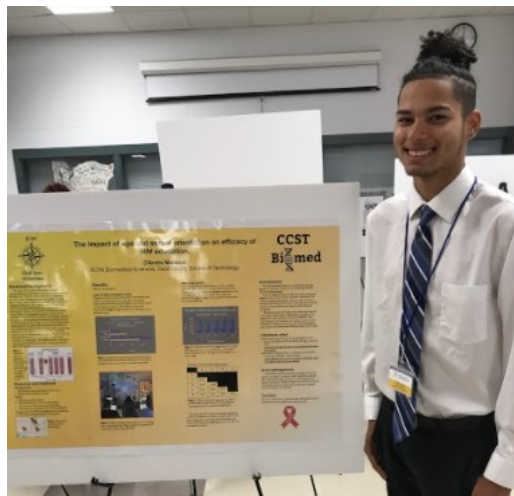
- Discuss the education requirements and job responsibilities of multiple careers in the Biomedical Sciences including biotechnology, bioengineering, and healthcare.
- Conduct research using valid sources from the Internet or library.
- Design and conduct well-controlled scientific experiments.
- Analyze and effectively present data experiments.
- Write lab reports, research summaries, and modify grant proposals.
- Discuss how societal attitudes affect the development and use of medical interventions.
- And much more...



Students from the five county high schools have the opportunity to begin programs during their junior year by a designated application process. Students will complete their programs during their senior year.



Cecil County Public Schools does not discriminate in admissions, access, treatment or employment in its programs and activities on the basis of race, color, gender, age, national origin, religion, sexual orientation, or disabling condition.

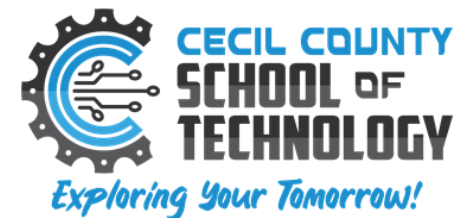


Expect Success at CCST
Certifications, Citizenship, Skills & Technology

Revised 10/2024



Biomedical Sciences

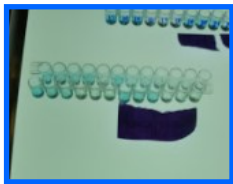


912 Appleton Road
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Fax: 410.392.8884
Guidance Office: 410.392.8880



CCST Biomed

This program allows students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students engage in scientific reading, research, writing and documentation. They also participate in a variety of laboratory activities. They examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease, while working collaboratively to understand and design solutions to the most pressing health challenges of today and the future.



Program Course Sequence

Principles of Biomedical Sciences (Junior Year, First Semester)- in this course students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research process, while allowing them to design their own experiments to solve problems.

Honors Human Body Systems with Lab (Junior Year, Second Semester)- students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and tissues on MANIKEN® skeletal models; use data acquisition software to monitor body functions, such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.

Honors Medical Intervention (Senior Year, All Year) - students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through cases, students learn about a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Honors Biomedical Innovations with Lab (Senior Year, All Year) - In this capstone course, students design and conduct experiments related to the diagnosis, treatment, and prevention of disease or illness. They apply their knowledge and skills to answer questions or to solve problems related to the biomedical sciences. They may work with a mentor or advisor from a university, hospital, physician's office, or industry as they complete their work. Students are expected to present the results of their work to an audience, which may include representatives from the local healthcare, business community, or the school's PLTW® partnership team.

College Credit

Stevenson University
<https://www.stevenson.edu/academics/schools/school-sciences/stem-initiatives/project-lead-the-way/>

Students who complete the program are prepared for further education at two- and four-year college levels. Stevenson University, the Maryland PLTW Biomedical Sciences Affiliate University, will offer eight (8) transcribed credits for its first semester majors biology course (BIO 113), and/or Human Anatomy (BIO 222). The credit will be offered for those students who complete the entire PLTW biomed sequence of courses with a B average, and score at least 7 on each end-of-course assessment.

BIO 113 General Biology I: Cell Biology and Genetics (3 credits).
BIO 113L: General Biology I Laboratory: Cell Biology and Genetics (1 credit).
BIO 222: Human Anatomy (4 credits).

Potential Careers

Doctor, Nurse, Dentist, Veterinarian, Veterinarian Assistant, Pharmacist, Research Scientist, Biomedical Engineer, Dietician, Paramedic, Health Information Manager, Medical Technologist, Radiologist, Medical Technical Writer, Physician Assistant, Medical Assistant, Biotechnology/Biomanufacturing Lab Technician, Geneticist

Fees

Exams \$190 and Uniforms \$110

