



# BIOMEDICAL SCIENCE

Medicine, College/Career Prep, STEM, Hands-on



## Biomed 1 - PRINCIPLES OF BIOMEDICAL SCI – CTS-3030 – 1 Credit

This course introduces the biomedical sciences through engaging hands-on projects and problems. Students investigate concepts of biology and medicine as they explore health conditions including heart disease, diabetes, sickle-cell disease, and infectious diseases. The activities and projects introduce students to human physiology, basic biology, biochemistry, medicine, and research processes and allow students to design experiments to solve problems. Key biological concepts including homeostasis, metabolism, inheritance of traits, and defense against disease are embedded in the curriculum.

## Biomed 2 - HUMAN BODY SYSTEMS – CTS-3040 – 1 Credit

Prerequisite CTS 3030 – Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use sensors to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin®, work through interesting real-world cases and often play the role of biomedical professionals to solve medical mysteries.

## Biomed 3 - MEDICAL INTERVENTIONS – CTS-3050 – 1 Credit

Prerequisite CTS 3040 - Students explore the science behind medical interventions that prevent, diagnose and treat disease. Specifically, students investigate how to prevent and fight infection, how to screen and evaluate the code in human DNA, how to prevent, diagnose and treat cancer, and how to prevail when the organs of the body begin to fail. Through these real-life scenarios, students are exposed to the wide range of interventions related to immunology, microbiology, surgery, genetics, pharmacology, medical devices, and diagnostics.

## What do former students have to say?

"I am currently enrolled in Honors Biology at SDSU, and we frequently do labs for my Honors Biology course that I completed in your class in high school. Not only am I spending less time in lab, but I understand the concepts with much more ease in comparison to other students in my class."



"I am currently sitting in my dorm room going over anatomy flash cards with some friends of mine. In the past few minutes, I've come to the realization that the Biomedical Science program at CTE has had such a monumental impact on my college education."

## Did you know?

- Take both AP and Biomed courses to become an AP+PLTW Scholar
- Biomed 1 and 2 qualify for the 4th science for the SD Opportunity Scholarship
- Biomed classes receive weighted grades in the Sioux Falls School District
- College credit is available for biomed classes with qualifying scores.
- Biomed students can compete in HOSA for Future Health Professionals

