COLLEGE TECH PREP

Biomedical Science and Technology Academy STEM

This emerging science focuses on applying the principles of biotechnology to the life sciences. The focus of the College Tech Prep Program is discovery-based, with an emphasis on techniques for following procedures and protocols for working with specimens and monitoring environmental conditions of lab facilities. Students will use 3D imaging, data acquisition software and scientific research to design and develop medical intervention products. The biotechnology of analyzing biological samples is a component of the health and disease focus of the Initiative. Level II will incorporate a required Capstone project. Throughout this two-year offering, bioethics and entrepreneurship will be included. In addition, connections with area biomedical industries will be available to students.

Skills necessary for success

- Creative problem solver
- Technology/media skills
- Task-oriented
- Demonstrates written and verbal communication skills
- Works with information, ideas and products
- Conceptual thinker

Areas of concentration

- Microbiology
- Anatomy/Physiology
- Bioethics
- Entrepreneurship
- Technical tools
- 3D Imaging/Technology
- Engineering of medical devices

Required-prerequisites

- Algebra 1
- Physical Science
- Biology
- CP English

Recommendations

- Average 95% attendance for three previous semesters
- Average G.P.A. of 2.8 for Algebra 1, English and science for three previous semesters
- Chemistry
- Pre-Calculus
- Geometry

Higher education opportunities

- College credits available. See page 32.
- Bachelor's Degree

GRADE LEVEL: 10, 11, 12
LENGTH: Two years
SCHOOL: Woodridge High School

CREDIT:
Level I: Honors English I; Honors Anatomy and Physiology 1; Biomedical Engineering Tools 1; Principles and Practices of Biomedical Technology 1.
Level II: Honors English 1; Honors Physics 1; Biomedical Engineering 1; Biotechnology for Health and Disease 1. Capstone* 1. (*Capstone includes project/problem-based learning opportunities that occur both in the building and at an external site. Students may combine classroom teaching with work experience.)