

# ENGINEERING INNOVATION

The Future is Yours



## Biomedical Engineering Innovation Be part of the engineering future—start now!

Join other high school students in a challenging online program where you will learn how to apply math and science concepts to biomedical engineering projects.

### What is Biomedical Engineering Innovation (BMEI)?

Designed for talented high school math and science students, Johns Hopkins Biomedical Engineering Innovation is offered online.

- Students order a program-specific lab kit and conduct hands-on engineering labs and team activities
- Learn from expert engineers and faculty
- College-level course
- Earn college credit

### Learn More!

Visit us at [ei.jhu.edu](http://ei.jhu.edu) to apply. You will also find more information about deadlines, tuition, and fees.

Need-based financial aid is available.



**JOHNS HOPKINS**  
WHITING SCHOOL  
of ENGINEERING

# BIOMEDICAL ENGINEERING INNOVATION

## About Biomedical Engineering Innovation

BMEI introduces biomedical engineering to high school students by

- (1) modeling biological systems and designing experiments to test those models
- (2) introducing engineering principles to solve design problems that are biological, physiological, and/or medical.

Students use the content taught in math, physics and biology and apply this knowledge to the solution of practical problems encountered in biomedical engineering.

- Introduction to modeling physiological systems, specifically the circulatory system and human efficiency
- Introduction to the design process through two design projects
- Demonstration or presentation (written or oral) of projects
- Development of an independent project including proposing a hypothesis, designing an experiment, obtaining and analyzing data, and preparing an online poster
- Three college credits earned from Johns Hopkins University

## Interested students must meet the following academic requirements:

- Have As and Bs in their high school math and science classes
- Successful completion of Algebra II
- Successful completion of a course that includes trigonometric functions to determine angles and side lengths for right angle triangles
- Successful completion of a high school physics course including a lab component where hands-on experiments are completed and lab reports are written. Students need to be comfortable with drawing and calculating forces in free-body diagrams, equations of motion, and principles of electric circuits prior to taking the course.

## In 2023, BMEI will be offered online during the summer semester.

June 26–August 4, 2023

Biomedical Engineering Innovation is an asynchronous course with pre-recorded lectures and real-time office hours and support. It is not a self-paced course.



Apply Now: [ei.jhu.edu/apply](https://ei.jhu.edu/apply) Questions? [ei@jhu.edu](mailto:ei@jhu.edu)