



# Biomedical Science at HHS

*A Professional Pathway for the Class of 2023*



# Introductions

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## In This Presentation, We Will Review...

- An overview of Biomedical Science and the curriculum provider;
- Course descriptions;
- How courses fit into student schedules;
- Advantages of enrollment in this program; and
- Answers to your questions.



# What is Biomedical Science?

Biomedical Science is a blend of medicine and multiple life science specialties (anatomy, physiology, genetics, and biochemistry) that focuses on the health of human beings.





# Who is Providing The Biomedical Science Curriculum?



Developed by Project Lead The Way

- Curricula in Biomedical Science, Engineering and Computer Science;
- More than 11,000 schools in all 50 states;
- Massachusetts strategic partners include UMass - Lowell, Worcester Polytechnic Institute, and Mass STEM Hub
- [www.pltw.org](http://www.pltw.org)



## Students Will Complete a Three Course Pathway

Grade 9 - Principles of Biomedical Science (2019-2020)

Grade 10 - Human Body Systems (2020-2021)

Grade 11 - Medical Interventions (2021-2022)





## Course Description

### *Principles of Biomedical Science*

In the introductory course of the PLTW Biomedical Science program, 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 processes while allowing them to design their own experiments to solve problems.



## Course Description *Human Body Systems*

Students examine the interactions of the human body as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and tissues on a skeletal Maniken; 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.





## Course Description *Medical Interventions*

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 real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.



## What are the Biomedical Science Courses Like?

- LABS! LABS!! AND MORE LABS!!!
- Extensive use of professional equipment and software;
- Students need to rely on their collaborative and problem-solving abilities, as well as strong study skills and passion for science;
- End of course exams.



# What is the Biomedical Science Pathway Like?

Let's hear from some students who are taking these  
courses

{type this link into your browser window for a brief video:

<https://www.youtube.com/watch?v=HnYj6-PEoIA> }



## Sample Student Schedule

	<b>General Graduation Path</b>	<b>Classical Academy</b>
<b>Grade 9</b>	English Language Arts	English Language Arts
	Social Studies	Social Studies
	World Language	Latin
	Health/ PE	Classical Perspective Studio (Art)/ Classical Perspective Literature
	Mathematics	Mathematics
	Biology	Biology
	Principles of Biomedical Science	Principles of Biomedical Science



## Advantages to Completing this Pathway

- Deep knowledge of human biology and solid preparation for college and career;
- Career exploration (field trips and possible HHS internships);
- Students are given a free digital portfolio of their work products and accomplishments;
- AP + PLTW student recognition;
- College applications.



## Who We Want to Participate

- Enrolling 100 students in Year 1,
  - Current 8th grade students (Class of 2023) get first consideration;
- Students who are passionate about science, and can explain how this pathway will benefit them and help them achieve goals after high school;
- Students who know their strengths and weaknesses and can use that knowledge to thrive in this program.



## How Do Students Get Involved?

Students can apply through a paper application or online at <http://bit.ly/hhsbiomedapp>

Application deadlines:

Online - Thursday April 11, 2019 at 11:59PM

Paper - Friday April 12, 2019 at 9:00AM

Acceptance notification by Friday May 17, 2019

Students start the first day of 2019-2020 school year.



## For More Information

See the following pages on the HPS website:

- Departments >> Curriculum >> Science & Technology
- Schools >> Haverhill High School >> Academies >> STEM Academy (Programs)

[www.pltw.org](http://www.pltw.org)