PHHS BIOMEDICAL SCIENCES

PROGRAM DESCRIPTION
Students investigate and study the concepts of human medicine, physiology, genetics, microbiology, and public health as they engage in activities like investigating the death of a fictional person or dissecting a sheep’s heart. Students learn content in the context of real-world cases. They examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease. The future of the biomedical sciences comes alive in this rigorous and relevant four-course sequence that prepares students to continue their studies through post-secondary education and careers.

COURSE SEQUENCE:
Freshman: Principles of Biomedical Sciences
Sophomore: Human Body Systems
Junior: Medical Interventions
Senior: Biomedical Innovations

WHO
Class of 2023
Anyone interested in careers in biomedical sciences

WHAT
A 4 YEAR PROGRAM
4 COURSES
COLLEGE CREDIT POSSIBLE
FIELD-RELATED EXPERIENCES

HOW
Apply Online
http://perryhallhs.bcps.org/students/biomedical_science

WHEN
Applications now available
Deadline 2:15 on Friday 1/18/19
Acceptances will be mailed in March.

FOR MORE INFO:
Contact: Dr. Lipinski
llipinski@bcps.org
Terri Cohee
tcohee@bcps.org

Come to Registration Night at PHHS on 12/05/18 for more info!
Sample Schedule

Students have plenty of room to take Biomed courses and still participate in their favorite electives!

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<tr>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
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<td>English 9</td>
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<td>Government</td>
<td>World History</td>
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<td>Economics (.5) +</td>
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<td>Living Systems</td>
<td>Integrated Physics and Chemistry OR Chemistry</td>
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<td>Principles of Biomedical Sciences</td>
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<td>Medical Interventions</td>
<td>Biomedical Innovations</td>
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Course Descriptions:

Course #1: Principles of the Biomedical Sciences (9th grade)
- Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases while trying to determine the cause of death of a fictitious woman.
- The activities and projects introduce students to human physiology, medicine, research processes and bioinformatics.
- This course is designed to provide an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses through exciting hands-on projects and problems.

Course #2: Human Body Systems (10th grade)
- 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 data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration.

Course #3: Medical Interventions (11th grade)
- Students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease.
- Explore how to prevent and fight infection, how to screen and evaluate the code in our DNA, how to prevent, diagnose and treat cancer, and how to prevail when the organs of the body begin to fail.
- Exposed to the wide range of interventions related to Immunology, Surgery, Genetics, Pharmacology, Medical Devices, and Diagnostics.

Course #4: Biomedical Innovations (12th grade)
- Students apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences.
- Students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems.
- Address topics such as clinical medicine, physiology, biomedical engineering, and public health.