

Biomedical Science Pathway

Paloma Valley High School



Year 1

Principles of
Biomedical Science



Year 2

Human Body Systems
(Honors)



Year 3

Medical Interventions
(Honors)



Year 4

Biomedical Innovations
(Honors)

Who should join the biomedical science pathway?

If you love life science and are interested in learning more about health and medicine, this program is for you. Our students are well prepared to enter a variety of college and career programs on their way to becoming medical technicians, physical therapists, nurses, doctors, veterinarians, biotech engineers, or anything else that requires a firm foundation in biomedical science.

Do the biomed pathway courses replace my regular science courses?

No. You take biomed courses in addition to your core science courses. Here's what your science schedule would be:

- Freshman: Principles of Biomedical Science AND Biology
- Sophomore: Honors Human Body Systems AND Chemistry
- Junior: Honors Medical Interventions AND choice of science elective (AP Bio, AP Chem, Honors or AP Physics, Honors Anatomy & Physiology, AP Environmental Science, Nutrition, Marine Biology, etc.)
- Senior: Honors Biomedical Innovations AND choice of science elective (AP Bio, AP Chem, Honors or AP Physics, Honors Anatomy & Physiology, AP Environmental Science, Nutrition, Marine Biology, etc.)

What does “honors” mean? Are these college classes?

Three of the four pathway courses are designated as honors level. This means you will receive 5 grade points for an “A” instead of the usual 4, which gives your GPA a boost. In addition, Human Body Systems and Medical Interventions are articulated with MSJC courses, which means that you also get college credit for earning a “C” or better.

Will this program help me get into college or get a job?

Completing the pathway definitely looks good on any college, scholarship, internship, or employment application. The biomed pathway teachers are here to support you in any way we can, including helping you find opportunities and writing letters of recommendation that give you an edge on the competition.

Is there an application for the program?

No, everyone is welcome. Just choose Principles of Biomedical Science and Biology when you fill out your 9th Grade Course Selection Form.

Can you only start the pathway in the 9th grade? What if I change my mind?

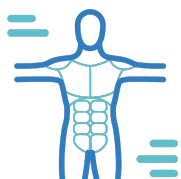
Most students start the pathway in the 9th grade but you can also start later as long as you are willing to double up on biomed classes in 11th and/or 12th grade. If you start the pathway and then decide it isn't a good fit, you can exit the program at any time. Just talk to your PVHS science teacher or counselor if you need help getting started or making changes.

Pathway Course Descriptions



Year 1 - Principles of Biomedical Science

In this course, students explore concepts of biology and medicine as they take on roles of different medical professionals to solve real-world problems. Students will be challenged to investigate a crime scene to solve a medical mystery, diagnose and treat patients in a family medical practice, track down and contain an outbreak at a local hospital, stabilize a patient during an emergency, and collaborate with others to design solutions to global medical problems.



Year 2 - Honors Human Body Systems

In this course, students build organs and tissues on a skeletal model and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Students will diagnose and treat patients at an outpatient rehabilitation center, keep clients healthy on an adventure medicine trip, work in a research center to explore human development and aging, and design interactive elements for an immersive science exhibit.



Year 3 - Honors Medical Interventions

In this course, students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students will explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when body organs begin to fail. Through realistic case studies, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, devices, and diagnostics.



Year 4 - Honors Biomedical Innovations

In the final course of the pathway, students build on the knowledge and skills gained in previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students will address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They will write a grant proposal, conduct original research, and present their findings to peers and mentors in a professional medical conference setting.

Pathway Completion Incentives

Certificate

+

Medallion

+

Honor Stole

+

White Coat
Ceremony



3+ years in program
(C's or better)

4 years
in program

Capstone
class

PVHS Biomedical Science Teachers

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