

Biomedical Sciences



Project Lead the Way Biomedical Sciences gives students a glimpse into the world of biomedicine through computer-based and hands-on activities and projects. This dynamic program uses hands-on, real world problems to engage and challenge students. This program is designed for students who have career interests in biomedical research and biotechnology.

Transcribed Credit

An articulation agreement with Stevenson University is pending to allow qualified students to apply for college credit based on successful completion of the courses in the program.

Major Units of Study (1st Year)

Honors Principles of Biomedical Sciences

- Human medicine, research processes, and bioinformatics
- Human body systems and various health conditions
- Homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease
- Design process, feedback loops, fluid dynamics, and the relationship of structure to function

Honors Human Body Systems

- Human body and its physiology and relationship to human health.
- Examination of body systems at rest and under stress
- Interactions between the various body systems
- Building of systems to monitor body functions using computer software

Major Units of Study (2nd Year)

Honors Medical Intervention

- Medical interventions that extend and improve the quality of life including pharmacology, surgery, prosthetics, rehabilitation, and supportive care
- Design and development of various medical interventions including vascular stents, cochlear implants, and prosthetic limbs.
- Organ transplants and gene therapy
- 3-D imaging software to design and build a model of therapeutic protein.

Honors Biomedical Research

- Work as a team to design and construct a solution to an authentic healthcare problem.



COMPLETER: *Biomedical Science – Project Lead the Way Endorsement*

CREDITS: 4

- Guideline for Course Selections
- Refer to Graduation Requirements in the Program of Studies for specific course requirements in each content area

Grade →	9	10	11	12
Exact scheduling depends on student's plan and school's master schedule.	English 9 (1)	English 10 (1)	English 11 (1)	English 12 (1)
	US Government (1)	US History (1)	World History (1)	
	Conceptual Physics (1)	Chemistry (1)	Biology (1)	Chemistry II (1)
	Algebra I / Data Analysis (1)	Intermediate Algebra / Data Analysis (1)	Geometry (1)	Algebra II / Data Analysis (1)
	PE (.5) / Health (.5)		PE (.5) / Financial Literacy (.5)	
	Fine Arts (1)	Foundations of Technology (1)		
	World Language (1)	World Language (1)		
Completer Program Requirements			Honors Principles of Biomed. Sciences (1) Honors Human Body Systems (1)	Honors Medical Interventions (1) Honors Biomedical Research (1)
Program Specific Requirements	A college preparatory math and science course is required each year of high school. See chart above.			
Career Specific Electives (may be taken any year offered after prerequisites have been satisfied)	Human Anatomy & Physiology or Honor Human Anatomy & Physiology (1), Science Research I or Honors Science Research I (1), AP Biology (1), AP Chemistry (1), Technological Issues & Impacts (1), Health II (.5), Issues in American Society (.5), Veterinary Science (1), Probability & Statistics or AP Probability & Statistics (1)			
8 credits possible per year				
Value Added: From:	3 Transcribed credits (pending) Stevenson University			
End of Program Test: Industry: Taken:	To Be Determined Project Lead the Way / Stevenson University To Be Determined			

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