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.

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

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

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.

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.

Visit the Carroll County Career and Technology Center website:
http://www.carrollk12.org/etc/
## 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

### Exact scheduling depends on student’s plan and school’s master schedule.

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<th>Grade</th>
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### 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.
- 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)

### Career Specific Electives
- 8 credits possible per year

|                               | 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) |

### Value Added:

| From: | 3 Transcripted credits (pending) Stevenson University |

### End of Program Test:

| Industry: Project Lead the Way / Stevenson University | Taken: To Be Determined |

### ADA STATEMENT

The Board of Education of Carroll County does not discriminate on the basis of disability in employment or provision of services, programs or activities. Information concerning the Americans with Disabilities Act is available from the Director of Facilities, 410-751-3177. Persons needing auxiliary aids and services for communication should contact the Office of Community and Media Relations at 410-751-3020 or publicinfo@carrollk12.org, or write to Carroll County Public Schools, 125 North Court Street, Westminster, Maryland 21157. Persons who are deaf, hard of hearing, or have a speech disability, use Relay or 7-1-1. Please contact the school system at least one (1) week in advance of the date the special accommodation is needed.