

Model Biomedical and Health Sciences Program of Study

Subject Area	9 th Grade	10 th Grade	11 th Grade	12 th Grade
Biomedical and Health Sciences	<i>Introduction to Biomedical and Health Sciences</i> <i>Human Structure and Function</i> <i>Communications</i> <i>Teamwork</i>	<i>Human Systems and Health Maintenance</i> <i>Health Maintenance Practices</i> <i>Diseases and Disorders</i> <i>Safety Practices</i>	<i>Healthcare Systems</i> <i>Healthcare Systems</i> <i>Ethics and Legal Responsibilities</i> <i>Professional Employment Skills</i>	<i>Biomedical and Health Sciences Research and Practice</i> <i>Professional Employment Skills</i> <i>Information Technology Applications</i> <i>Research Applications</i>
Work-based Learning Experiences	<i>Job shadow, Explorations</i> <i>Guided Study Tours</i>	<i>Job shadow, Explorations</i> <i>Guided Study Tours, Community Service or Service Learning</i>	<i>Community Service, Service Learning, Summer Internships</i>	<i>Integrated Internships</i> <i>Community Service, Service Learning</i> <i>Volunteer activity, Employment</i>
Language Arts	English 9 (<i>integrated units</i>)	English 10 (<i>integrated units</i>)	English 11 (<i>integrated units</i>)	English 12 (<i>integrated unit- research paper using medical research topic</i>)
Mathematics	Algebra I or Integrated Mathematics I (<i>integrated units</i>)	Geometry or Integrated Mathematics II (<i>integrated units</i>)	Algebra II or Integrated Mathematics III (<i>integrated units</i>)	**Pre-calc/Trig, **Calculus, **Trigonometry **Statistics & Probability (<i>Integrated units</i>)
Science	Biology or Integrated Science I (<i>integrated units</i>)	Chemistry or Integrated Science II (<i>integrated units</i>)	Physics or Integrated Science III (<i>integrated units</i>), and Human Anatomy & Physiology	**Microbiology, **Biotechnology, **AP Physics, **AP Biology (<i>integrated units</i>)
Social Studies	U.S. History (<i>Integrated units</i>)	World History/Geography (<i>integrated units</i>)	U.S. Government/Civics (<i>integrated units</i>)	Economics/Psychology (<i>Integrated units</i>)
Electives or other required courses (electives depend on student's career interests))	Physical Education Foreign Language <i>Intro to Medical Terminology</i> (<i>Integrated units</i>)	Physical Ed/Health Ed Foreign Language Fine and Performing Arts <i>Medical Information Management I & II</i> (<i>integrated units</i>)	Physical Education Foreign Language Fine and Performing Arts <i>Medical Information Management III</i> (<i>integrated units</i>)	Physical Education Foreign Language Advanced Fine and Performing Arts <i>Advanced Medical Terminology</i> (<i>Integrated units</i>)

The Biomedical and Health Sciences Program of Study will:

- Align to the National Health Care Foundation Standards and nationally recognized academic subject standards for Mathematics, Science, History-Social Studies, and English-Language Arts
- Include problem/project-based and interactive learning
- Reflect sequential and age-appropriate instruction and work-based learning experiences
- Emphasize health and wellness content and align to nationally recognized standards for Physical and Health Education
- Integrate career development and professional employment skills

Note: The course sequence is optional and may be reconfigured based on local course taking patterns and organization of the school scheduling

Health Science Pathway Options:

Variance in student interest, course availability, and local economic conditions may determine pathway options. These career pathways are grouped by similar healthcare work environments, applications, processes and procedures. The pathways are as follows:

Therapeutic Services

Standards by title: client interaction, intra team communication, information collection, treatment planning and implementation, monitoring client status, patient and other client status evaluation

Diagnostic Services

Standards by title: multidisciplinary communication, assessment of patient and other client status, patient and other client movement, patient and other client interaction, preparation, procedure, evaluation and reporting

Biotechnology Research

Standards by title: contributions of biotechnology to health and the human condition, academic foundations, introduction to biotechnology knowledge areas and techniques, laboratory protocols and procedures, product design and development, bioethics

Health Informatics

Standards by title: communication, analysis, abstracting and coding, information systems, documentation, operations

Support Services

Standards by title: operations, aseptic procedures, resource management, aesthetics

Recommended senior course options for each pathway

Therapeutic Services	Diagnostic Services	Biotechnology Research	Health Informatics	Support Services
<p>*Academic:</p> <ul style="list-style-type: none"> Statistics & Probability Calculus or Pre-Calc/Trig AP Biology Microbiology Psychology <p>Electives:</p> <ul style="list-style-type: none"> Foreign Language Advanced Arts Advanced Med Term 	<p>*Academic:</p> <ul style="list-style-type: none"> Statistics & Probability Calculus or Pre-Calc/Trig AP Physics AP Biology Microbiology Psychology <p>Electives:</p> <ul style="list-style-type: none"> Physical Education Foreign Language Advanced Med Term 	<p>*Academic:</p> <ul style="list-style-type: none"> Statistics & Probability Calculus or Pre-Calc/Trig AP Physics AP Biology Microbiology Biotechnology <p>Electives:</p> <ul style="list-style-type: none"> Foreign Language Advanced Med Term 	<p>*Academic:</p> <ul style="list-style-type: none"> Statistics & Probability Accounting Economics Psychology <p>Electives:</p> <ul style="list-style-type: none"> Foreign Language Advanced Med Term 	<p>*Academic:</p> <ul style="list-style-type: none"> Statistics & Probability Calculus or Pre-calc/Trig AP Physics Microbiology <p>Electives:</p> <ul style="list-style-type: none"> Physical Education Foreign Language

*To ensure the course content has the rigor needed to meet postsecondary program expectations, it is recommended that these courses are developed in collaboration with postsecondary partners and are made available for dual credit, advanced placement or as concurrent enrollment.