

HEALTHCARE AND HUMAN SERVICES: BIOTECHNOLOGY PATHWAY –

This pathway focuses on using biology, biochemistry, genetics, and technology to improve healthcare, agriculture, industry, and the environment. It includes topics like gene research, biotechnology, microbiology, drug development, DNA sequencing, and ethical and legal aspects of the field.

CAREERS INCLUDE Physician, Nurse, Nurse Practitioners & Assistants, Clinical Laboratory Technologist, Dentist, Biological & Research Scientists, Pharmacists, Dental & Medical Assistants, Occupational & Physical Therapists, Respiratory Therapists, Radiologic Technologist, Veterinary Technologist

SAMPLE PLAN OF STUDY*

¥This course counts as a STEM Elective. ‡This course is offered at CTEC. *This course has a prerequisite.

<p>FRESHMAN YEAR</p> <p>(1.0) English (1.0) Math (based on math course progression) (1.0) Biology or Honors Biology (1.0) Social Studies (1.0) Physical Education (1.0) Performing/Fine Arts Credit (2.0) Electives</p>	<p>SOPHOMORE YEAR</p> <p>(1.0) English (1.0) Math (based on math course progression) (1.0) Chemistry ¥ or Honors Chemistry ¥ (1.0) Social Studies (0.5) Health (0.5) Communications Credit (3.0) Electives</p>
<p>JUNIOR YEAR</p> <p>(1.0) English 11/AP Lang & Comp (1.0) Math (based on math course progression) (1.0) Anatomy & Physiology *¥ (1.0) Social Studies (1.0) Biotechnology Essentials *‡¥ (1.0) Medical Interventions *‡ (2.0) Electives</p>	<p>SENIOR YEAR</p> <p>(1.0) English 12 or AP Lit & Comp or AP Lang & Comp (1.0) Math (based on math course progression) (1.0-2.0) Science Course (AP Chem and/or AP Bio) (0.5) Political Participation or Con. Law/AP Government (0.5) Financial Literacy (1.0) Biomedical Innovation *‡¥ (1.0) Bioscience Workplace Experience *‡¥ (1.0-2.0) Electives</p>

BOLDED COURSES LEAD TO PATHWAY COMPLETION

PATHWAY COURSES: Pathway completion requires students to complete three (3) credits in the pathway, with at least two (2) of those credits being a combination of technical and application-level courses. Additionally, a student must earn one of the following: an industry-recognized certification (IRC), nine (9) + college hours aligned to the pathway, or complete a high-quality work-based learning experience (Internship).

INTRODUCTORY LEVEL	TECHNICAL LEVEL	APPLICATION LEVEL
Chemistry/Honors Chemistry ¥	Anatomy & Physiology *¥ Medical Interventions *‡ Biotechnology Essentials *‡¥ Robotics I ¥‡	Biomedical Innovation *‡¥ Bioscience Workplace Experience *‡¥ (Internship)

<p>Other Recommended Courses Environmental Science or APES Psychology or AP Psych</p>	<p>Opportunities for Pathway Completion: Biotechnology Essentials *‡¥ (6 IRCs) Bioscience Workplace Experience *‡¥ (Internship)</p>	<p>Graduation Requirements: English – 4 credits Math - 4 credits Science – 3 credits Social Studies – 3.5 credits STEM Elective – 1 credit Fine Arts – 1 credit Communication – 0.5 credit Financial Literacy – 0.5 credit Physical Education/Health – 1.5 credits Postsecondary Assets – 2 required</p>
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*This sample plan of study offers an example of what a student's individual plan of study in this pathway might look like. Please note that some courses may not be offered on an annual basis and participation in classes may be subject to space availability.