

Science, Technology, Engineering, and Mathematics Career Cluster

The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Biomedical Science Statewide Program of Study



The Biomedical Science program of study focuses on the study of biology and medicine in order to introduce CTE learners to the knowledge and skills necessary to be successful in the healthcare field, such as researching and diagnosing diseases, pre-existing conditions, or other determinants of health. Students may also practice patient care and communication.

Secondary Courses for High School Credit

Level 1

- Principles of Biosciences
- Principles of Biomedical Science (PLTW)

Level 2

- Human Body Systems (PLTW)
- Biotechnology I

Level 3

- Biotechnology II
- Medical Microbiology
- Medical Interventions (PLTW)

Level 4

- Pathophysiology
- Biomedical Innovation (PLTW)
- Scientific Research and Design
- Practicum in STEM

Postsecondary Opportunities

Associates Degrees

- Histologic Technician
- Clinical Laboratory Science/Medical Technology/Technologist

Bachelor's Degrees

- Biomedical Engineers
- Clinical Laboratory Science/Medical Technology/Technologist

Master's, Doctoral, and Professional Degrees

- Genetic Counseling
- Medical Scientists
- Epidemiology

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> • Join Health Occupations Students of America 	<ul style="list-style-type: none"> • Intern at a lab • Shadow a healthcare or medical professional

Industry-Based Certifications

- Biotechnician Assistant Credentialing Exam (BACE)
- Medical Laboratory Assistant
- Medical Laboratory Technician



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Medical and Laboratory Technicians	\$37,981	1,159	28%
Biological Technicians	\$42,931	452	17%
Forensic Science Technicians	\$48,152	171	35%
Chemical Technicians	\$49,733	672	10%
Medical and Clinical Laboratory Technologists	\$58,760	1,166	35%

Successful completion of the Biomedical program of study will fulfill requirements of the Public Service or STEM endorsement if the math and science requirements are met. Revised – October 2022

Biomedical Science Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Biosciences	13036300 (1 credit)	None	None
Principles of Biomedical Science (PLTW)	N1302092 (1 credit)	None	None

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Human Body Systems (PLTW)	N1302093 (1 credit)	None	None
Biotechnology I	13036400 (1 credit)	Biology	None

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Biotechnology II	13036450 (1 credit)	Biotechnology I, Biology and Chemistry	None
Medical Microbiology	13020700 (1 credit)	Biology and Chemistry	None
Medical Interventions (PLTW)	N1302094 (1 credit)	None	None

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Pathophysiology	13020800 (1 credit)	Biology and Chemistry	None
Biomedical Innovation (PLTW)	N1302095 (1 credit)	None	None
Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, Integrated Physics and Chemistry (IPC) or Physics	None
Practicum in Science, Technology, Engineering, and Math	13037400 (2 credits) 13037405 (3 credits) 13037410 (2 credits) 13037415 (3 credits)	Algebra I and Geometry	None

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING AND MATH CAREER CLUSTER, PLEASE CONTACT: CTE@tea.texas.gov
<https://tea.texas.gov/cte>

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