Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study: Biomedical Science

Offered at YWLA

The Biomedical Science program of study focuses on occupational and educational opportunities associated with the study of biology and medicine. This program of study includes researching and diagnosing diseases, pre-existing conditions, and other determinants of health. Students will also practice patient care and communication.

Secondary Courses for High School Credit

9th Grade	•	V265H [1 Credit L1] Principles of Biomedical Science (PLTW)
10th Grade	•	V160H [1 Credit L4] Anatomy and Physiology
11th Grade	•	V400H [1 Credit L3] Medical Interventions (PLTW)
12th Grade	•	V410H [1 Credit L3] Biomedical Innovation (PLTW)

TEA Program of Study Courses
https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/hs-biomedical-science-2024.pdf



Example Postsecondary Opportunities

Apprenticeships
- Medical Laboratory Technician

Associate Degrees
- Biotechnology
- Biological Sciences

Bachelor's Degrees
- Biology
- Cellular and Molecular Biology

Master's, Doctoral, and Professional Degrees
- Forensic Science and Technology
- Biomedical Sciences

Additional Stackable IBCs/License
- Cytotechnologist

Aligned Advanced Academic Courses

AP or IB	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
Dual Credit	Dual credit offerings will vary by local education agency.	

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern with a biological or medical scientist at a healthcare organization or health research company to learn scientific testing methods • Shadow a clinical laboratory technician to observe laboratory testing processes
Expanded Learning Opportunities	• Participate in Health Occupations Students of America (HOSA)

Aligned Industry-Based Certifications

- Biotechnician Assistant Credentialing Exam (BACE)

Successful completion of the Biomedical program of study will fulfill requirements of the STEM endorsement if the math and science requirements are met or the Public Services endorsement.

Example Aligned Occupations

Medical Equipment Preparers
Median Wage: $38,827
Annual Openings: 519
10-Year Growth: 18%

Forensic Science Technicians
Median Wage: $56,971
Annual Openings: 249
10-Year Growth: 22%

Biological Technicians
Median Wage: $45,787
Annual Openings: 879
10-Year Growth: 14%

Data Source: Texas Wages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit:
https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

Biomedical Science