



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: **Health Science- Nursing**

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

Offered to: LMHS and TCHS

Secondary Courses for High School Credit

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| Level 1 | <ul style="list-style-type: none"> Principles of Health Science |
| Level 2 | <ul style="list-style-type: none"> Medical Terminology |
| Level 3 | <ul style="list-style-type: none"> Health Science Theory/Clinical (Required) Anatomy and Physiology (Recommended) |
| Level 4 | <ul style="list-style-type: none"> Practicum in Health Science (Required) Medical Microbiology (Recommended TCHS only) |

Aligned Advanced Academic Courses

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

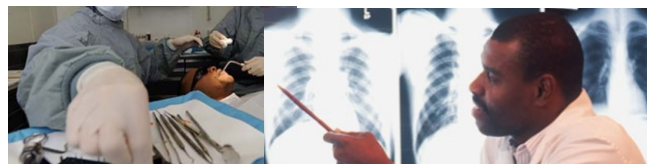
- Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility
- Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job

Expanded Learning Opportunities

- Participate in Health Occupation Students of America (HOSA) or SkillsUSA
- Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event

Aligned Industry-Based Certifications

- Patient Care Technician



Example Postsecondary Opportunities

Apprenticeships

- Medical Assistant

Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science
- Registered Nurse

Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding
- Nursing

Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy



Example Aligned Occupations

Medical Assistants

Median Wage: \$36,834
Annual Openings: 11,638
10-Year Growth: 29%

Registered Nurse

Median Wage: \$74,540
Annual Openings: 16,210
10-Year Growth: 6%

Physician Assistants

Median Wage: \$127,332
Annual Openings: 974
10-Year Growth: 41%

Data Source: TexasWages, 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>



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Course Information

Level 1

Course	Prerequisites Corequisites	Local Course #
Principles of Health Science 13020200 (1 credit)	Prerequisites: None Corequisites: None	7735

This is the first of a sequence of courses offered in the Health Science Technology Career Tech Program, which prepares the student for a career as a health care professional. Students will learn leadership skills, safety skills in health care setting, health care systems, Anatomy and physiology, professionalism, overview of careers in the health care field, as well as Life stages. Students will be certified with health care provider CPR as well.

Level 2

Course	Prerequisites Corequisites	Local Course #
Medical Terminology 13020300 (1 credit)	Prerequisites: Principles of Health Science, Biology or IPC Corequisites: None	7745

This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining forms, and singular and plural forms, plus medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

Level 3

Course	Prerequisites Corequisites	Local Course #
Health Science Theory/Clinical 13020410 (2 credits)	Prerequisites: One credit in Biology and at least one credit in a course from the Health Science career cluster Recommended Corequisites: Anatomy and Physiology *Weighted Credit	7830

This level three course is designed to allow students to explore a vast number of health careers & shadow health care professionals in the following clinical settings at Mainland Medical Center: nursing, physical and occupational therapy, radiology, pharmacy, occupational medicine, dietary, hyperbaric medicine, sterile processing, and medical laboratory and more. 3 hours each week are in classroom lecture, discussion, and skills training. There are student fees that are required for the clinical rotations. A uniform fee of \$48 and a clinical lab fee of \$42.00.

Anatomy and Physiology 13020600 (1 credit)	Prerequisites: One credit in Biology and one credit in Chemistry, Integrated Physics and Chemistry, or Physics Recommended Corequisites: Health Science Theory/Clinical *Weighted Credit	7742
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Students conduct field and laboratory investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem-solving. Topics will be presented through the integration of biology, chemistry, and physics. Students will study the structures and functions of the human body and body systems. Students will investigate the body's responses to forces, maintenance of homeostasis, electrical interactions, transport systems, and energy systems. Outside research will be required. This course will satisfy the 3rd or 4th Science graduation requirement.

For additional information on the **Health Science** career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Course Information

Level 4

Course	Prerequisites Corequisites	Local Course #
Practicum in Health Science- Nursing 13020500 (2 credits)	Prerequisites: Health Science Theory and 3 Science credits including Biology Recommended Corequisites: Medical Microbiology *Weighted credit	7737
<p>This Level four course is an occupation specific course designed to provide knowledge and skills for post-secondary education in health careers. Students develop advanced clinical skills needed for employment in the health care industry. Six hours each week are in clinical experience in a health care community setting and three hours each week are in the classroom. The classroom phase will include medical terminology where students will learn the "language of medicine." Students acquire word building skills by relating terms to body systems. **Students must have own transportation for this course. ** Uniforms are required and are worn during clinical rotations and field trips. There is a student clinical fee of \$ 42.00 that is required to participate in the Practicum of Health Science class. Additional fees may be required to obtain a health science certification.</p>		
Medical Microbiology 13020700 (1 credit)	Prerequisites: Biology and Chemistry Recommended Corequisites: Practicum in Health Science *TCHS only	7715
<p>The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement.</p>		

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