



Health Science Career Cluster

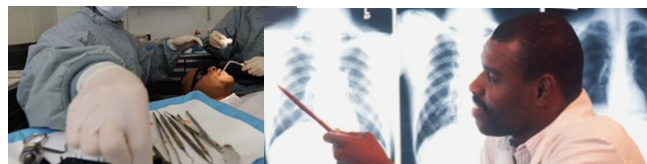
The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical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

Statewide Program of Study: *Diagnostic and Therapeutic Services*

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.

Secondary Courses for High School Credit

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"> Anatomy and Physiology Health Science Theory
Level 4	<ul style="list-style-type: none"> Practicum in Health Science Practicum in Health Science + Extended Practicum in Health Science Career Preparation for Programs of Study + Extended Career Preparation



Example Postsecondary Opportunities

Apprenticeships

- Medical Assistant

Associate Degrees

- Emergency Medical Technology
- Radiologic Technology/Science

Bachelor's Degrees

- Emergency Medical Technology
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees

- Medicine
- Occupational Therapy

Additional Stackable IBCs/License

- Registered Diagnostic Medical Sonographer

Aligned Advanced Academic Courses

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

- Certified Clinical Medical Assistant
- Certified EKG Technician
- Certified Nurse Aide (CNA)
- Emergency Medical Technician–Basic
- Phlebotomy Technician



Example Aligned Occupations

Medical Assistants

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

Dental Hygienists

Median Wage: \$79,663
Annual Openings: 1,352
10-Year Growth: 32%

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>

COURSE INFORMATION

COURSE NAME	COURSE NUMBER AND CREDITS	PREREQUISITES (PREQ) COREQUISITES (CREQ)	GRADE
Principles of Health Science	8650 (1 credit)	None	9-10
Medical Terminology	8651 (1 credit)	Principles of Health Science	10
Health Science Theory	8652 (1 credit)	PREQ: Biology Principles of Health Science & Medical Terminology	11
Anatomy & Physiology	8657 (1 credit)	PREQ: Biology & 2nd Science CREQ: Health Science Theory	11
Practicum in Health Science Dual Credit	8658-6 AND 8659-6 (1 credit) 8668-6 and 8669-6 (1 credit) 8655D1 & 8655D2 (2 credits) 8654D1 & 8654D2 (3 credits) 8860D1, 8860D2, 8865DC, 8865D2 (3 credits)	Health Science Theory & Anatomy and Physiology	12

COURSE DESCRIPTIONS

Principles of Health Science:

This course provides the beginning student with an overview of the health care field. The basic entry-level information that is covered serves as a solid foundation for all students in health sciences or health occupations, regardless of the particular health care profession they are interested in pursuing. An overview of content includes: Health Care Systems; Careers in Health Care; Personal Qualities of a Health Care Worker; Leadership and Teamwork concepts.

Medical Terminology

The student will learn and recognize word roots, prefixes, and suffixes used in medical language today and will learn how to combine words to create meaningful medical conditions as well as comprehend their definition and know the correct spelling. The course will cover medical terms related to all major body systems, including: muscular, skeletal, respiratory, circulatory, digestive, reproductive, and urinary systems.

Health Science Theory:

This course prepares students for the transition to certification programs and hands-on experience in health care. Focus is on leadership, legal and ethical issues, and introduction to emergency measures such as first aid and advanced cardiopulmonary resuscitation (CPR).

Anatomy & Physiology:

Anatomy is the study of human body parts, while physiology explains how they work and interact with each other to carry out the body's activities. Students will take a hands-on approach to learning these structures and functions through the use of microscopes, animal dissections, and computer simulated labs.

Extended Practicum In Health Science C.N.A. Dual Credit:

College Credit: NURA 1401, 1307, & 1160

The practicum is a competency training course designed to prepare students in their first career in medicine. Students gain knowledge to work side by side with nurses in providing patient bedside care in a classroom/clinical lab area. Basic nursing skills, rehabilitation skills, and mental health skills among other areas are learned during the 100 hr. training program. In addition, Texas Department of Aging and Disability Services (DADS) requires students to provide actual hands-on experience with real patients; therefore, students attend 40 hours of clinical rotations in a local nursing and rehabilitation clinical training site.

Certified by the Texas Department of Health Human Services Department of Aging, Disability Services

Practicum in Health Science C.M.A. Dual Credit:

College Credit: MDCA 1205, 1210, & 1352

Students will gain knowledge and skills related to both clinical and administrative duties for a variety of providers including physicians, nurse practitioners, and physician assistants. Students will learn procedures commonly performed in the ambulatory health care setting to include medical offices, clinics, urgent care center, or specialty health care practices.

Certified by National Healthcareer Association (NHA)

Extended Practicum in Health Science E.M.T. Dual Credit:

College Credit: EMSP 1360, 1455, 1456, & 1501

Certification Course instructs students in the pre-hospital care and transportation of the sick and injured. The material covered in this course is divided into 7 modules. They are: Preparatory, Airway Management, Patient Assessment, Medical Emergencies, Trauma Emergencies, Infants and Children and Operations. Students develop competencies both in academic content and the psychomotor skills necessary for the care and treatment of patients in the field.

Certified by the Texas Department of Health Human Services National Registry of EMT

Practicum in Health Science EKG Dual Credit:

College Credit: MDCA 1317

Emphasis on patient assessment, examination, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, office clinical procedures, and other treatments as appropriate for ambulatory care settings.

Certified by National Healthcareer Association (NHA)

Practicum in Health Science Phlebotomy Dual Credit:

College Credit: PLAB 1323

Skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, ethics, and medical terminology. Opportunity to earn two certifications.

Certified by National Healthcareer Association (NHA)

Courses in yellow are advanced courses for endorsement purposes.

