



P-TECH Healthcare (offered at Tomball Star Academy)

The P-TECH Healthcare program of study enables students to pursue a career in the medical industry through a rigorous and supportive learning environment that blends high school with the first two years of college. Through an innovative partnership with Lone Star College- Tomball and HCA Houston Healthcare- Tomball, students will apply their medical coursework with hands-on work experiences, making them top candidates whether they choose to continue their postsecondary education or begin their careers upon graduation.



Courses for High School Credit

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|----------------|--|
| Level 1 | • Principles of Health Science |
| Level 2 | • Medical Terminology |
| Level 3 | • Health Science Clinical |
| Level 4 | • Anatomy and Physiology
• Practicum in Nursing |

LSC Health Science Courses for College Credit

HPRS 1206	Essentials of Medical Terminology
HPRS 2321	Medical Law & Ethics- Health Professions
ECRD 1211	Electrocardiography
PLAB1223	Phlebotomy Lab
PLAB1160	Phlebotomy Clinical
NURA1401	Nurse Aide for Healthcare

Aligned Industry-Based Certifications

- Certified EKG Technician
- Certified Nurse Aide (CNA)
- Patient Care Technician
- Phlebotomy Technician

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Develop clinical and patient care skills in state-of-the-art simulation labs at the Lone Star College- Tomball Health Science Building • Participate in job shadowing and internship experiences at HCA Houston Healthcare- Tomball Hospital
Expanded Learning Opportunities	• Participate in Health Occupation Students of America (HOSA)

Example Postsecondary Opportunities

Bachelor's Degrees

- Registered Nurse (RN)
- Respiratory Therapist (BSRC)

Master's, Doctoral, and Professional Degrees

- Advanced Practice Registered Nurse (APRN)
- Doctor of Nursing Practice (DNP)

Additional Stackable IBCs/License

- Certified Diabetes Educator
- Certified Flight Registered Nurse
- Wound Care Certified

Example Aligned Occupations

(Based on statewide employment data)



Registered Nurses

Median Wage: \$85,108
Annual Openings: 16,904
10-Year Growth: 1%

Nurse Practitioners

Median Wage: \$126,579
Annual Openings: 2,241
10-Year Growth: 5%

Nurse Anesthetists

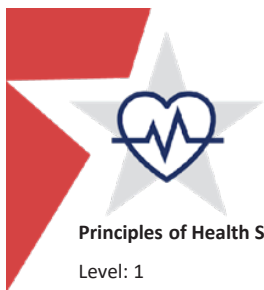
Median Wage: \$196,539
Annual Openings: 189
10-Year Growth: 2%



Successful completion of the P-Tech Healthcare program of study will fulfill requirements of the Public Services endorsement.



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



P-TECH Healthcare Course Descriptions: ***(Offered at Tomball Star Academy)***

Principles of Health Science- HLT2000 (1 Credit)

Level: 1

Course Fee: \$15

Prerequisite: None

GPA Weight: Regular

The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry.

Medical Terminology- HLT1000MT (1 Credit)

Level: 2

Course Fee: None

Prerequisite: None

GPA Weight: Regular

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

Health Science Clinicals- HLT2110 (2 Credits)

Level: 3

Course Fee: \$100 + Uniform

Prerequisite: Biology and 1 Additional Health Science Course

GPA Weight: Regular

The Health Science Clinical course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development.

Human Anatomy and Physiology- BIOL2401,2 (4 Credit Hours)

Prerequisites: College level readiness in Reading, Writing and Math

A study of the structure and function of the human body. Emphasis will be given to the study of cells and tissues and anatomical and physiological interrelationships of the integumentary, skeletal, muscular, and nervous systems. Designed primarily for students entering health careers.

Practicum in Nursing- HLT3520 (2 Credits)

Level: 4

Course Fee: \$100 + Uniform

Prerequisite: Health Science Theory/Clinicals, Biology, and 1 Additional Health Science Course

GPA Weight: Regular

Practicum in Nursing is designed to give students practical applications of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of the experience.

Essentials of Medical Terminology- HPRS1206 (2 Hours)

Prerequisite: None

Medical terminology related to sterile processing is unique. The course introduces the student to a broad range of terms related to health care with a focus on sterile processing.

Medical Law & Ethics- HPRS2321 (3 Hours)

Prerequisites: College level readiness in Reading AND Writing Principles, procedures, and regulations governing the legal and ethical relationships among physicians, patients, and health care professionals. Includes current ethical issues related to the various healthcare professions and patient confidentiality.

Electrocardiography- ECRD1211 (2 Hours)

Prerequisite: None

Fundamentals of cardiovascular anatomy and physiology. Includes basic electrocardiography procedures, interpretation of basic dysrhythmias, and appropriate treatment modalities. Additional topics may include spirometry and CPR/AED and first aid training.

Phlebotomy Lab- PLAB1223 (2 Hours)

Corequisite: PLAB1160

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.

Phlebotomy Clinicals- PLAB1160 (1 Hour)

Corequisite: PLAB1223

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Nurse Aide for Healthcare- NURA1401 (4 Hours)

Prerequisites: Successful completion of all other healthcare courses.

Knowledge, skills, and abilities essential to provide basic care to residents of long-term care facilities. Topics include resident's rights, communication, safety, observation, reporting and assisting residents in maintaining basic comfort and safety. Emphasis on effective interaction with members of the healthcare team, restorative services, mental health, and social services needs.



Successful completion of the P-Tech Healthcare program of study will fulfill requirements of the Public Services endorsement.