Health Science

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.

Program of Study: Diagnostic & Therapeutic Services (KHS Pathways)

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.

Courses

9th Grade	Principles of Health Science
10th Grade	Medical Terminology
11th Grade	Health Science Theory Anatomy and Physiology
12th Grade	Practicum in Health Science

Work-Based Learning/Expanded Learning Opportunities

Work-Based Learning Activities	• Earn industry certification • Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility • Participate in job shadowing experiences at hospital/clinical
Expanded Learning Opportunities	Health Occupation Students of America (HOSA)

Aligned Industry-Based Certifications

- Certified EKG Technician

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

Example Aligned Occupations

Medical Assistants
Median Wage: $37,568
Annual Openings: 11,247
10-Year Growth: 29%

Dental Hygienists
Median Wage: $89,155
Annual Openings: 1,047
10-Year Growth: 32%

Physician Assistants
Median Wage: $131,082
Annual Openings: 887
10-Year Growth: 41%

Successful completion of this program of study will fulfill requirements of the Public Services endorsement or the STEM endorsement if the math and science requirements are met.
Approved Statewide Program of Study. C. E. King High School – 2026-27

Diagnostic and Therapeutic Services (KHS Options)

Course Information

Level 1

Principles of Health Science 13020200

Grade: 9-10 **Credit: 1**

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 health care industry. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others.

Level 2

Medical Terminology 13020300

Grade: 10-12 **Credit: 1**

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.

Level 3

Health Science Theory 13020400

Grade: 10-12 **Credit: 1**

Prerequisite: Biology and at least one credit in a course from the health science career cluster

The Health Science Theory 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.

Anatomy and Physiology (Satisfies a science credit) 13020600

Grade: 11-12 **Credit: 1** **GPA: 5.0**

Prerequisite: 1 credit in Biology AND 1 credit in Chemistry, IPC, or Physics

In Anatomy and Physiology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

Level 4

Practicum in Health Science 13020500

Grade: 12 **Credit: 2**

Prerequisite: Health Science Theory and Biology

The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills in Health science. Practicum experiences offer a variety of opportunities to pursue a career in the health care industry. Students are expected to apply the knowledge and skills necessary to pursue a health science certification or licensure through further education and employment and are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Industry Based Certifications: Certified EKG Technician OR Pharmacy Technician

Health Science

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.

Program of Study: Diagnostic & Therapeutic Services (Dual Credit Options)

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.

Courses

	Medical Assisting	Pharmacy
9th Grade	Principles of Health Science Foundations of Business Communication and Technologies	Principles of Health Science Foundations of Business Communication and Technologies
10th Grade	Health Science Theory	Medical Terminology Pharmacy I
11th Grade	Medical Terminology @ San Jacinto College Business English @ San Jacinto College Health Informatics @ San Jacinto College Anatomy and Physiology @ San Jacinto College	Anatomy and Physiology Health Science Theory @ San Jacinto College Pharmacy II @ San Jacinto College
12th Grade	Pathophysiology @ San Jacinto College Practicum in Health Science @ San Jacinto College	Pharmacology @ San Jacinto College Mathematics for Medical Professionals @ San Jacinto College Practicum in Health Science @ San Jacinto College

Students must maintain a 2.5 GPA or higher to qualify for dual credit.

Work-Based Learning/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 at hospital/clinical
Expanded Learning Opportunities	• Health Occupation Students of America (HOSA) • Earn dual credit hours

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

Example Aligned Occupations

Medical Assistants
Median Wage: $37,568
Annual Openings: 11,247
10-Year Growth: 29%

Dental Hygienists
Median Wage: $89,155
Annual Openings: 1,047
10-Year Growth: 32%

Physician Assistants
Median Wage: $131,082
Annual Openings: 887
10-Year Growth: 41%

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

Approved Statewide Program of Study. C. E. King High School – 2026-27

Diagnostic and Therapeutic Services (Dual Credit Options)

Course Information

Level 1

Principles of Health Science 13020200

Grade: 9-10 **Credit: 1**

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 health care industry. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others.

Foundations of Business Communication and Technologies (Required for Medical Assisting Pathway) 13011400

Grade: 9-12 **Credit: 1**
Recommended Prerequisite: Touch Systems and Data Entry

In Foundations of Business Communication and Technologies, students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.

Level 2

Medical Terminology 13020300

Grade: 10-12 **Credit: 1**

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.

Note: Medical Assisting Pathway students will be taking this course at San Jacinto College.

Pharmacy I 13021020

Grade: 10-11 **Credit: 1**
Recommended Prerequisite: Principles of Health Science and Biology

The goal of Pharmacy I is for the student to gain a strong foundation in the knowledge and skills needed to pursue a career in the pharmaceutical field (e.g., pharmacy technician, pharmacist). Knowledge includes pharmacology, pharmacy law, medication safety, the dispensing process, and inventory. Pharmacy I is designed to be the second course in a pathway leading to college and career readiness in the healthcare therapeutics professions. The course content aligns with the competencies of pharmacy technician certification examinations.

Level 3

Health Science Theory 13020400

Grade: 10-12 **Credit: 1**
Prerequisite: Biology and at least one credit in a course from the health science career cluster

The Health Science Theory 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.

Note: Pharmacy Pathway students will be taking this course at San Jacinto College.

Health Informatics @ San Jacinto College 13020960

Grade: 11-12 **Credit: 1**
Prerequisite: Medical Terminology

The Health Informatics course is designed to provide knowledge of one of the fastest growing areas in both academic and professional fields. The large gap between state of the art computer technologies and the state of affairs in health care information technology has generated demand for information and health professionals who can effectively design, develop, and use technologies such as electronic medical records, patient monitoring systems, and digital libraries, while managing the vast amount of data generated by these systems.

Diagnostic and Therapeutic Services (Dual Credit Options)

Course Information

Level 3, Continued

Pharmacy II @ San Jacinto College — **13021030**

Grade: 11-12 **Credit: 1**
Prerequisite: Pharmacy I, Biology and Chemistry

The Pharmacy II course provides students with the advanced knowledge and skills to explore various careers in the pharmacy field, including pharmacology, pharmacy law, medication errors, inventory pharmacy calculations, compounding, and workflow expectations in a pharmacy setting. Pharmacy II is designed to be the third course in a pathway leading to college and career readiness in the healthcare therapeutics professions.

Anatomy and Physiology (Satisfies a science credit) — **13020600**

Grade: 11-12 **Credit: 1** **GPA: 5.0 (6.0 for San Jacinto College course)**
Prerequisite: 1 credit in Biology AND 1 credit in Chemistry, IPC, or Physics

In Anatomy and Physiology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

Note: Medical Assisting Pathway students will be taking this course at San Jacinto College.

Level 4

Business English @ San Jacinto College — **13011600**

Grade: 11-12 **Credit: 1**
Prerequisite: English III

In Business English, students enhance communication and research skills by applying them to the business environment, in addition to exchanging information and producing properly formatted business documents using emerging technology.

Pathophysiology @ San Jacinto College — **13020800**

Grade: 12 **Credit: 1**
Prerequisite: Biology and Chemistry

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. Students will differentiate between normal and abnormal physiology.

Pharmacology @ San Jacinto College — **13020950**

Grade: 11-12 **Credit: 1**
Prerequisite: Biology and Chemistry *Recommended Prerequisite: 1 credit from Health Science cluster*

The Pharmacology course is designed to study how natural and synthetic chemical agents such as drugs affect biological systems. Knowledge of the properties of therapeutic agents is vital in providing quality health care. It is an ever-changing, growing body of information that continually demands greater amounts of time and education from health care workers.

Mathematics for Medical Professionals @ San Jacinto College — **13020970**

Grade: 12 **Credit: 1**
Prerequisite: Geometry and Algebra II

The Mathematics for Medical Professionals course is designed to serve as the driving force behind the Texas essential knowledge and skills for mathematics, guided by the college and career readiness standards. By embedding statistics, probability, and finance, while focusing on fluency and solid understanding in medical mathematics, students will extend and apply mathematical skills necessary for health science professions. Course content consists primarily of high school level mathematics concepts and their applications to health science professions.

Practicum in Health Science @ San Jacinto College — **13020500**

Grade: 12 **Credit: 2**
Prerequisite: Health Science Theory and Biology

The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills in Health science. Practicum experiences offer a variety of opportunities to pursue a career in the health care industry. Students are expected to apply the knowledge and skills necessary to pursue a health science certification or licensure through further education and employment and are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.