



Program of Study Course Sequence	9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
<b>Health Science: Biomedicine</b>	<b>Medical Terminology</b> (1 credit)	<b>Health Science Theory</b> (1 credit) <i>Prerequisite:</i> <b>**Principles of Health Science, Medical Terminology, and Biology</b>	<b>Medical Microbiology</b> (1 credit) <b>AND</b> <b>Anatomy and Physiology (at KCAL)</b> (1 credit) <i>Prerequisite: Health Science Theory, Biology, Chemistry</i>	<b>World Health Research</b> (1 credit) <b>AND</b> <b>Pathophysiology</b> (1 credit), <b>OR</b> <b>Practicum in Health Science: PCT</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: CMA</b> (2 credits) <i>Prerequisite: 3 credits in Health Science Program</i>
<b>Health Science: Clinical Rotations</b>	<b>Medical Terminology</b> (1 credit)	<b>Health Science Theory</b> (1 credit) <i>Prerequisite:</i> <b>**Principles of Health Science, Medical Terminology, and Biology</b>	<b>Anatomy and Physiology (home campus)</b> (1 credit) <b>AND</b> <b>Practicum in Health Science I: Clinical Rotations</b> (2 Credits) <i>Prerequisite: Health Science Theory, Biology, Chemistry</i>	<b>Practicum in Health Science II: Clinical Rotations</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: PCT</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: CMA</b> (2 credits) <i>Prerequisite: 3 credits in Health Science Program</i>
<b>Health Science: Certified Nursing Assistant (CNA)</b>	<b>Medical Terminology</b> (1 credit)	<b>Health Science Theory</b> (1 credit) <i>Prerequisite:</i> <b>**Principles of Health Science, Medical Terminology, and Biology</b>	<b>Anatomy and Physiology (home campus)</b> (1 credit) <b>AND</b> <b>Practicum in Health Science I: CNA</b> (2 credits) <i>Prerequisite: Health Science Theory, Biology, Chemistry</i>	<b>Practicum in Health Science: PCT</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: CMA</b> (2 credits) <b>OR</b> <b>Career Preparation I: CNA</b> (2 credits) <b>OR</b> <b>Career Preparation I /Extended Career Preparation: CNA</b> (3 credits) <i>Prerequisite: 3 credits in Health Science Program</i>
<b>Health Science: Emergency Medical Technician (EMT)</b>	<b>Medical Terminology</b> (1 credit)	<b>Health Science Theory</b> (1 credit) <i>Prerequisite:</i> <b>**Principles of Health Science, Medical Terminology, and Biology</b>	<b>Anatomy and Physiology (at KCAL)</b> (1 credit) <b>AND</b> <b>Pathophysiology</b> (1 credit) <i>Prerequisite: Health Science Theory, Biology, Chemistry</i>	<b>Practicum in Health Science: EMT</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: PCT</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: CMA</b> (2 credits) <i>Prerequisite: 3 credits in Health Science Program</i>

<b>Health Science: Pharmacy</b>	<b>Medical Terminology</b> (1 credit)	<b>Health Science Theory</b> (1 credit) <i>Prerequisite:</i> <b>**Principles of Health Science, Medical Terminology, and Biology</b>	<b>Anatomy and Physiology (home campus)</b> (1 credit) <b>AND</b> <b>Pharmacology</b> (1 credit) <i>Prerequisite: Health Science Theory, Biology, Chemistry</i>	<b>Practicum in Health Science: Pharmacy</b> (2 credits), <b>OR</b> <b>Practicum in Health Science: PCT</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: CMA</b> (2 credits) <i>Prerequisite: 3 credits in Health Science Program</i>
<b>Health Science: Exercise Science and Sports Medicine</b>	<b>Medical Terminology</b> (1 credit)	<b>Health Science Theory</b> (1 credit) <b>AND</b> <b>Kinesiology I</b> (1 credit) <i>Prerequisite:</i> <b>**Principles of Health Science, Medical Terminology, and Biology</b>	<b>Anatomy and Physiology</b> (1 credit) <i>Prerequisite: Biology, Chemistry, Health Science Theory</i> <b>AND</b> <b>Kinesiology II</b> (1 credit) <i>Prerequisite: Kinesiology I</i>	<b>Practicum in Health Science I: Sports Medicine</b> (2 credits), <b>OR</b> <b>Practicum in Health Science: PCT</b> (2 credits) <b>OR</b> <b>Practicum in Health Science: CMA</b> (2 credits) <i>Prerequisite: Sports Med II or Kinesiology II</i>

\*\*Principles of Health Science (recommended pre-requisite) is offered in 8<sup>th</sup> grade.\*\*

<b>Certifications / Certificate Opportunities Based on Program of Study</b>
CPR (Biomedicine) OSHA (Biomedicine) Certified Nursing Assistant (CNA) CPR/First Aid (BLS) (CNA, Clinical Rotations) Phlebotomy Technician (PCT) Certified Patient Care Technician (CPhT) (PCT) EKG Technician (PCT) Emergency Medical Technician (EMT) Certified Pharmacy Technician (CPhT) (Pharmacy) Sterile Products Aseptic Technique Certified (Pharmacy) OSHA HealthCare Certified (Pharmacy) HealthCare Provider CPR (Pharmacy) AHA Basic Life Support Certification (Sports Medicine)
<b>Career and Technical Student Organization (CTSO)</b>
HOSA—Health Occupation Students of America

<b>Additional Course Information</b>
<p><b>Credits:</b> Anatomy &amp; Physiology, Medical Microbiology, Pathophysiology can be used as a science credit.</p> <p><b>Fees:</b> Career and Technical Student Organizations are co-curricular to the curriculum. Although membership is not required, it is highly encouraged for students to join their local CTSO chapter. Fees may apply.</p> <p><b>Location:</b> Courses shaded in gray will be taught at the <b>Keller Center for Advanced Learning</b>.</p>

**Medical Terminology**  
**TEDS:** 13020300 **iChoose** **KISD:** 81801  
**Credit:** 1  
**Grade:** 9-12  
**Recommended prerequisite:** None

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. **This course is offered in the traditional classroom and online through the Keller ISD Virtual Learning program.**

**Health Science Theory**  
**TEDS:** 13020400 **KISD:** 81803  
**Credit:** 1  
**Grade:** 10-12  
**Recommended prerequisite:** Principles of Health Science\*\*, Medical Terminology, and Biology

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 have hands on experiences for continued knowledge and skills development. The course may be taught by different methodologies such as clinical rotation and career preparation learning.

## Anatomy and Physiology

**TEDS:** 13020600



**KISD:** 81820

**Credit:** 1

**Honors:** 82820

**Grade:** 10-12

**Recommended prerequisite:** Biology and Chemistry, IPC, or Physics

This course offers a comprehensive study of the structures and functions of the human body. It will include dissections and the study of the organization of organs and organ systems. Students will utilize critical thinking skills and scientific problem solving as they conduct lab investigations. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum). This course counts as a science credit. It is taught at all main campuses and at the Keller Center for Advanced Learning.



## Medical Microbiology

**TEDS:** 13020700



**KISD:** 81821

**Credit:** 1

**Honors:** 82821

**Grade:** 10-12

**Recommended prerequisite:** Health Science Theory, Biology, and Chemistry

This science elective course is designed to explore medical based microbiology. The student will discover relationships between microbes and health maintenance as well as the role of microbes in infectious diseases. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum). This course counts as a science credit.

## Pathophysiology

**TEDS:** 13020800



**KISD:** 81822

**Credit:** 1

**Honors:** 82822

**Grade:** 11-12

**Recommended prerequisite:** Health Science Theory, Biology, and Chemistry

In this course students conduct laboratory investigations and fieldwork, use scientific methods during investigations, and make informed decisions using critical thinking and problem solving. Students study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of diseases. Students will differentiate between normal and abnormal physiology. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum). This course counts as a science credit.

## World Health Research

**TEDS:** 13020900

**KISD:** 81823

**Credit:** 1

**Grade:** 12

**Recommended prerequisite:** Medical Terminology

This course examines major world health problems and emerging technologies as solutions to these medical concerns. The course is designed to improve students' understanding of the cultural, infrastructural, political, educational, and technological constraints and inspire ideas for appropriate technological solutions to global medical care issues.



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## **Practicum in Health Science:**

### **Clinical Rotations (CR)**

**TEDS:** 13020500      I      **KISD:** 81812

**TEDS:** 13020510      II      **KISD:** 81842

**Credit:** 2

**Grade:** 11-12

**Recommended prerequisite:** Health Science Theory and Biology

The Practicum in Health Science 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 experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The clinical rotations class will occur in various settings including hospital, clinical, and classroom. Students will be required to comply with HIPAA requirements.

## **Practicum in Health Science:**

### **Certified Nursing Assistant (CNA)**

**TEDS:** 13020500      I      **KISD:** 81816

**TEDS:** 13020510      II      **KISD:** 81846

**Credit:** 2

**Grade:** 11-12

**Recommended prerequisite:** Health Science Theory, Biology, and Chemistry

The Practicum in Health Science 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 experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The Certified Nursing Assistant (CNA) practicum is designed to provide an opportunity to gain a nationally recognized certification after passing the CNA certification examination. To qualify for the examination, one must be able to pass a criminal background/drug screening and have successfully passed the classroom portion of the class. Students will be required to comply with HIPAA requirements.

## **Career Preparation I: CNA**

**TEDS:** 12701300

**KISD:** 8201

**Credit:** 2

**Grade:** 11-12

**Recommended prerequisite:** Practicum in CNA

This course is a work-based instructional arrangement, which develops essential knowledge and skills through classroom, technical knowledge and on the job internships in any approved career-tech specific training area. Internship placement must be teacher approved and fall within the guidelines and requirements in order for students to qualify for enrollment in this program. The student must work an average of 10 hours per week.

## **Career Preparation I/ Extended Career Preparation: CNA**

**TEDS:** 12701305

**KISD:** 82012

**Credit:** 3

**Grade:** 11-12

**Recommended prerequisite:** Practicum in CNA

This course is a work-based instructional arrangement, which develops essential knowledge and skills through classroom, technical knowledge and on the job internships in any approved career-tech specific training area. Internship placement must be teacher approved and fall within the guidelines and requirements in order for students to qualify for enrollment in this program. The student must work an average of 15 hours per week.



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**Practicum in Health Science:  
Patient Care Technician (PCT)**

**TEDS:** 13020500            I            **KISD:** 82818

**TEDS:** 13020510            II            **KISD:** 81849

**Credit:** 2

**Grade:** 11-12

**Required prerequisite:** Practicum in CNA, Practicum in Clinical Rotations, Pharmacology, Pathophysiology, Medical Microbiology, Kinesiology II, or Sports Medicine II

The Practicum in Health Science is designed to give students practical applications of previously studied knowledge and skills in health science courses. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. The Patient Care Technician (PCT) practicum is designed to provide an opportunity to gain a nationally recognized certification after passing the PCT, Phlebotomy Technician, and Electro-cardiogram (EKG) Technician national certification examination. To qualify for the examination, one must be able to pass a criminal background/drug screening and have successfully passed the classroom and technical portions of the class. The technical portion will include reading EKGs correctly, performing phlebotomy skills on both artificial and live patients, and performing basic nursing skills. Students will be required to comply with HIPAA requirements.



**Practicum in Health Science II: Clinical  
Medical Assistant (CMA)**

**TEDS:** 13020500            I            **KISD:** 82816

**TEDS:** 13020510            II            **KISD:** 82940

**Credits:** 2

**Grade:** 12

**Required prerequisite:** Practicum in CNA, Practicum in Clinical Rotations, Pharmacology, Pathophysiology, Medical Microbiology, Kinesiology II, or Sports Medicine II

A Clinical Medical Assistant is a multi-skilled allied health care professional that specializes in procedures commonly performed in the ambulatory health care setting. The Clinical Medical Assistant performs both clinical and administrative duties and assists a variety of providers including physicians, nurse practitioners and physician assistants. They typically work in medical offices, clinics, urgent care centers and may work in general medicine or specialty practices. Common duties of a medical assistant include administrative and clinical tasks such as checking patients in and out upon arrival and departure, taking patient vital signs, administering injections or medications, use aseptic laboratory techniques and protocols, working in the electronic health record (EHR), understand and use medical terminology and understand and use office procedures including HIPAA, OSHA, medical insurance billing and medical coding, and answering phone calls and questions. All students will become certified in American Heart Association BLS CPR. Students who successfully complete the course and are on track to graduate will have the opportunity to sit for the Medical Assistant Certification Exam offered by the National Healthcareer Association.

### **Practicum in Health Science:**

#### **Emergency Medical Technician (EMT)**

**TEDS:** 13020500      I      **KISD:** 81815

**TEDS:** 13020510      II      **KISD:** 82842

**Credit:** 2

**Grade:** 11-12

**Recommended prerequisite:** Health Science Theory and Biology

The Practicum in Health Science 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 experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. In the E.M.T. program, students will be provided opportunities to work in hospital settings, ambulance services, and may be assigned to firehouses in order to experience first-hand the challenges of Emergency Medical Technicians. Students enrolled in this course will be provided the knowledge and skills training to prepare and successfully complete the exam required for E.M.T. Upon completion of the course and successfully passing the national exam, students will be eligible to continue to the next level of training at Tarrant County College. Students will be required to comply with HIPAA requirements.

#### **Pharmacology**

**TEDS:** 13020950      **KISD:** 81813

**Credit:** 1

**Grade:** 11-12

**Recommended prerequisite:** Health Science Theory, Biology, and Chemistry

The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. 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.

### **Practicum in Health Science:**

#### **Pharmacy**

**TEDS:** 13020500      I      **KISD:** 81818

**TEDS:** 13020510      II      **KISD:** 81848

**Credit:** 2

**Grade:** 11-12

**Recommended prerequisite:** Health Science Theory and Biology

The Practicum in Health Science 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 experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The Pharmacy Technician practicum is designed to provide an opportunity to gain a nationally recognized certification after passing the Pharmacy Technician Certification Board examination. To qualify for the examination, students must be able to pass a criminal background screening and have graduated from high school. Students will be required to comply with HIPAA requirements.

#### **Kinesiology I**

**TEDS:** N1302104      **KISD:** 8930

**Credit:** 1

**Grade:** 9-12

This course is designed to introduce students to the basic concepts of kinesiology. Students will gain an understanding of body mechanics, physiological functions of muscles and movements, the history of kinesiology, and the psychological impact of sports and athletic performance. Students will also explore careers within the kinesiology field and be able to explain the societal demand for kinesiology-related jobs. Students will develop a foundation in Kinesiology I that will prepare them for upper-level courses that will dive deeper into the anatomical and physiological functions of the body and provide opportunities for an industry-certified exam such as a certified personal trainer.

## **Kinesiology II**

**TEDS:** N1302124

**KISD:** 8932

**Credit:** 1

**Grade:** 11-12

The Kinesiology II course is designed to provide students an advanced level of knowledge, skills, and understanding of body composition and the effect on health, nutritional needs of physically active individuals, qualitative biomechanics, application of therapeutic modalities, appropriate rehabilitation services, and aerobic training intensity programs.

## **Practicum in Health Science:**

### **Sports Medicine**

**TEDS:** 13020500

**KISD:** 81817

**Credit:** 2

**Grade:** 12

**Prerequisite:** Sports Medicine II and Anatomy & Physiology or Kinesiology II

The Practicum in Health Science 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 experience. Keller ISD offers 7 practicum opportunities throughout the district. An online district application will be emailed after registration is complete. Students will be asked to rate the Practicum class in order of preference. Due to class size limitations, it is possible a student will not get their first choice. The Sports Medicine Practicum course will provide an opportunity for the study and application of the components of sports medicine, including but not limited to sports medicine-related careers; organizational and administrative considerations; prevention of athletic injuries; recognition, evaluation, and immediate care of athletic injuries; rehabilitation and management skills; taping and wrapping techniques; first aid/CPR/AED; emergency procedures; nutrition; sports psychology; human anatomy and physiology; therapeutic modalities; and therapeutic exercise.



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