



Health Science



## Scope & Sequence

<b>Course Name:</b> Principles of Health Science <b>PEIMS Code:</b> 13020200		<b>Course Credit:</b> 1.0 <b>Course Requirements:</b> This course is recommended for students in Grades 9 and 10. <b>Prerequisites:</b> None.
<b>Course Description:</b> 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.		
<b>NOTE:</b> This is a suggested scope and sequence for the course content. This content will work with any textbook or instructional materials. If locally adapted, make sure all TEKS are covered.		
<b>Total Number of Periods</b> <b>Total Number of Minutes</b> <b>Total Number of Hours</b>	175 Periods 7,875 Minutes 131.25 Hours*	*Schedule calculations based on 175/180 calendar days. For 0.5 credit courses, schedule is calculated out of 88/90 days. Scope and sequence allows additional time for guest speakers, student presentations, field trips, remediation, extended learning activities, etc.
<b>Unit Number, Title, and Brief Description</b>	<b># of Class Periods*</b> (assumes 45-minute periods) Total minutes per unit	<b>TEKS Covered</b> <b>130.222(c) Knowledge and skills</b>



<p><b>Unit 1: Employability Skills, Career Options and Preparation</b></p> <p>This unit allows students to explore business and industry employer expectations. Teamwork, communications skills, punctuality, attendance, time management, organizational skills, and productive work habits are emphasized. Students also identify career options and the corresponding pathway for a health science career.</p>	<p>18 periods 810 minutes</p>	<p>(1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to</p> <ul style="list-style-type: none"><li>(A) express ideas in a clear, concise, and effective manner;</li><li>(B) exhibit the ability to cooperate, contribute, and collaborate as a member of a team; and</li><li>(C) identify employer expectations such as punctuality, attendance, time management, communication, organizational skills, and productive work habits.</li></ul> <p>(5) The student assesses career options and the preparation necessary for employment in the health science industry. The student is expected to:</p> <ul style="list-style-type: none"><li>(A) locate, evaluate, and interpret career options and employment information; and</li><li>(B) recognize the impact of career decisions, including the causes and effects of changing employment situations.</li></ul>
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		(6) The student identifies academic preparation and skills necessary for employment as defined by the health science industry. The student is expected to identify academic requirements for professional advancement such as certification, licensure, registration, continuing education, and advanced degrees.
<b>Unit 2: Using Data and Measurement in Health Science</b>  In this unit students look at the many ways data and measurements influence health science. The metric system, reading charts and graphs, an interpreting data are covered. Students will also plan and prepare oral presentations and practice using precise language to communicate ideas.	18 periods 810 minutes	(2) The student applies mathematics, science, English language arts, and social studies in health science. The student is expected to:  (A) convert units between systems of measurement; (B) apply data from tables, charts, and graphs to provide solutions to health-related problems; (C) interpret technical material related to the health science industry; (D) organize, compile, and write ideas into reports and summaries; (E) plan and prepare effective oral presentations; (F) formulate responses using precise language to communicate ideas



<p><b>Unit 3: Wellness Principles in Health Science</b></p> <p>Maintaining wellness is a key concept in health science. This unit will look at biological and chemical processes that influence wellness. Students analyze how an individual can maintain wellness throughout their life span along with stages of development, Maslow's Hierarchy of Needs and stages of development being covered.</p>	<p>16 periods 720 minutes</p>	<p>(2) The student applies mathematics, science, English language arts, and social studies in health science. The student is expected to:</p> <ul style="list-style-type: none"><li>(G) describe biological and chemical processes that maintain homeostasis;</li><li>(H) identify and analyze principles of body mechanics and movement such as forces and the effects of movement, torque, tension, and elasticity on the human body;</li><li>(I) identify human needs according to Maslow's Hierarchy of Human Needs;</li><li>(J) describe the stages of development related to the life span;</li><li>(K) identify the concepts of health and wellness throughout the life span;</li><li>(L) analyze and evaluate communication skills for maintaining healthy relationships throughout the life span;</li></ul>
<p><b>Unit 4: Research and Analysis in Health Science</b></p>	<p>16 periods 720 minutes</p>	<p>(2) The student applies mathematics, science, English language arts, and social studies in health science. The student is expected to:</p>



<p>Understanding the health care system is vital to those looking to make it a career. This unit looks at the history of modern health care along with state, local, and national influences. Health care varies greatly from state to state, and from nation to nation. Differences are explored along with the tremendous economic impact the health care industry has on any country's economy.</p>		<ul style="list-style-type: none"><li>(M) research the historical significance of health care;</li><li>(N) describe the impact of health services on the economy;</li><li>(O) analyze the impact of local, state, and national government on the health science industry;</li><li>(P) identify diverse and cultural influences that have impacted contemporary aspects of health care delivery; and</li><li>(Q) research and compare practices used by various cultures and societies to solve problems related to health.</li></ul>
<p><b>Unit 5: Communication Skills in Health Science</b></p> <p>Students learn about effective communications in the unit. Verbal and nonverbal communication is explored along with conflict resolution techniques.</p>	<p>14 periods 630 minutes</p>	<ul style="list-style-type: none"><li>(3) The student uses verbal and nonverbal communication skills. The student is expected to:<ul style="list-style-type: none"><li>(A) identify components of effective and non-effective communication;</li><li>(B) demonstrate effective communication skills for responding to the needs of individuals in a diverse society;</li><li>(C) evaluate the effectiveness of conflict-resolution techniques in various situations; and</li></ul></li></ul>



		(D) accurately interpret, transcribe, and communicate medical vocabulary using appropriate technology.
<p><b>Unit 6: Leadership Skills and Teamwork</b></p> <p>Leadership skills such as goal setting and team building are evaluated. Students also identify traits of effective leadership. The concept of the multidisciplinary team along its role in healthcare are explained.</p>	<p>15 periods 675 minutes</p>	<p>(4) The student implements the leadership skills necessary to function in a democratic society. The student is expected to:</p> <ul style="list-style-type: none"> <li>(A) identify traits of a leader;</li> <li>(B) demonstrate leadership skills, characteristics, and responsibilities of leaders such as goal-setting and team building; and</li> <li>(C) demonstrate the ability to effectively conduct and participate in meetings.</li> </ul> <p>(8) The student examines the role of the multidisciplinary team in providing health care. The student is expected to:</p> <ul style="list-style-type: none"> <li>(A) explain the concept of teaming to provide quality health care; and</li> <li>(B) examine the role of professional organizations in the preparation and governance of credentialing and certification.</li> </ul>
<p><b>Unit 7: Health Science Career Pathways</b></p>	<p>16 periods 720 minutes</p>	<p>(7) The student identifies the career pathways related to health science. The student is expected to:</p>



<p>Students will have the opportunity to compare health science careers within the diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems. Students will study how various health science entities interact within the health care system.</p>		<ul style="list-style-type: none"> <li>(A) compare health science careers within the diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems; and</li> <li>(B) identify the collaborative role of team members between systems to deliver quality health care.</li> </ul>
<p><b>Unit 8: Ethics and Legal Responsibilities</b></p> <p>Principles of ethical behavior and confidentiality are examined along with the concepts of malpractice, negligence, and liability. The student will research laws governing the health science industry..</p>	<p>16 periods 720 minutes</p>	<ul style="list-style-type: none"> <li>(9) The student interprets ethical behavior standards and legal responsibilities. The student is expected to:               <ul style="list-style-type: none"> <li>(A) compare published professional codes of ethics and scope of practice;</li> <li>(B) explain principles of ethical behavior and confidentiality, including the consequences of breach of confidentiality;</li> <li>(C) discuss ethical issues related to health care, including implications of technological advances;</li> <li>(D) examine issues related to malpractice, negligence, and liability; and</li> <li>(E) research laws governing the health science industry.</li> </ul> </li> </ul>



<p><b>Unit 9: Individual Rights and Choices</b></p> <p>Wellness strategies for the prevention of disease are emphasized in this unit. The positive and negative effects of relationships on physical and emotional health such as peers, family, and friends in promoting a healthy community are evaluated.</p>	<p>16 periods 720 minutes</p>	<p>(10) The student recognizes the rights and choices of the individual. The student is expected to:</p> <ul style="list-style-type: none"><li>(A) identify situations related to autonomy;</li><li>(B) identify wellness strategies for the prevention of disease;</li><li>(C) evaluate positive and negative effects of relationships on physical and emotional health such as peers, family, and friends in promoting a healthy community;</li><li>(D) review documentation related to rights and choices; and</li><li>(E) demonstrate an understanding of diversity and cultural practices influencing contemporary aspects of health care.</li></ul>
<p><b>Unit 10: Understanding Safety Requirements in Health Sciences</b></p> <p>Safety practices in the health science industry along with standard precautions, fire prevention and safety practices are taught. Students will study the many</p>	<p>14 periods 630 minutes</p>	<p>(11) The student recognizes the importance of maintaining a safe environment and eliminating hazardous situations. The student is expected to:</p> <ul style="list-style-type: none"><li>(A) identify governing regulatory agencies such as the World Health Organization, Centers for Disease Control and Prevention, Occupational Safety and Health Administration, U.S. Food and Drug</li></ul>





<p>governmental and regulatory agencies surrounding health sciences.</p>		<p>Administration, Joint Commission, and National Institute of Health;</p> <p>(B) identify industry safety standards such as standard precautions, fire prevention and safety practices, and appropriate actions to emergency situations; and</p> <p>(C) relate safety practices in the health science industry.</p>
<p><b>Unit 11: Technology for Your Health Sciences Career</b></p> <p>Technology is becoming a vital component in modern health sciences. In this unit students will research many of the technologies currently in use health careers. A culminating activity will be to present a report about a specific piece of equipment that includes the potential issues and benefits the equipment may have..</p>	<p>16 periods 720 minutes</p>	<p>(12) The student identifies the technology used in the diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems. The student is expected to:</p> <p>(A) research and identify technological equipment used in the diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems;</p> <p>(B) identify potential malfunctions of technological equipment; and</p> <p>(C) recognize and explain the process for reporting equipment or technology malfunctions.</p>