Career and Technical Education TEKS Review Draft Recommendations

Texas Essential Knowledge and Skills (TEKS) for Career and Technical Education Draft Recommendations

Health Science Career Cluster

Programs of Study: Diagnostic and Therapeutic Services, Health Informatics, and Nursing Science

Region 4 Education Service Center

The document reflects the draft recommendations to the career and technical education (CTE) Texas Essential Knowledge and Skills (TEKS) that have been recommended by subject matter experts facilitated by Region 4 Education Service Center for: **Diagnostic and Therapeutic Services, Health Informatics, and Nursing Science programs of study.**

Proposed additions and new courses are shown in green font with underline (additions). Proposed deletions are shown in red font with strikethroughs (~~deletions~~). Text proposed to be moved from its current student expectation is shown in purple italicized font with strikethrough (~~*moved text*~~) and is shown in the proposed new location in purple italicized font with underlines (*new text location*). Numbering for the knowledge and skills statements in the document will be finalized when the proposal is prepared to file with the *Texas Register*.

Comments in the right-hand column provide explanations for the proposed changes. The following notations may be used as part of the explanations.

Abbreviation	Description
KS	refers to knowledge and skills statement
SE	refers to student expectation

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§127.XX Allied Health Therapeutic Services (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available, this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-10. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provide content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.	
(3)	Allied Health Therapeutic Services builds on the concepts from Principles of Allied Health and allows students to apply the concepts, knowledge, and skills necessary for a health career in an allied health field. This course will focus on anatomy and physiology, medical terminology, and career skills and exploration associated with healthcare industry standards for respiratory therapy, physical and occupational therapy, radiological imaging, and pharmaceuticals. This is the Level II course for the medical therapy program of study in the health science career cluster. This course is designed for students who are interested in pursuing careers in the allied health fields.	

(4)	To pursue a career in the healthcare 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.	
(5)	Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.	
(6)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.	
(7)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	
(A)	communicate complex healthcare information in a clear, concise, and professional manner, both verbally and in writing, to patients, colleagues, and other healthcare professionals;	
(B)	model how to cooperate, contribute, and collaborate as a member of a team;	
(C)	model soft skills associated with employment in a healthcare therapeutic career such as critical thinking, communication, collaboration, creativity, reliability, time management, and productivity; and	
(D)	identify academic preparation and essential skills as defined by the health science industry, necessary for successful employment in an allied health profession.	
(2)	The student uses verbal and nonverbal communication skills. The student is expected to:	
(A)	differentiate components of effective and non-effective communication; and	
(B)	model effective communication skills, including conflict-resolution skills, for responding to the needs of individuals in a diverse society.	
(3)	The student expresses appropriate verbal and nonverbal communication skills. The student is expected to:	
(A)	summarize and distinguish among the roles of allied health professionals on an integrated health care team;	

(B)	analyze the consequences of using inappropriate medical terminology in health care;	
(C)	identify hospital-acquired pathologies and the processes used to prevent their spread;	
(D)	research Safety Data Sheet (SDS) guidelines used in health care settings;	
(E)	differentiate between various uses of personal protective equipment (PPE) with hospital-specific pathologies such as methicillin resistant Staphylococcus aureus, vancomycin-resistant Enterococcus, tuberculosis, and coronavirus disease (COVID-19);	
(F)	demonstrate various lifting techniques to transport patients out of a hospital setting in the event of a mass evacuation or fire; and	
(G)	describe how vital signs present with different pathologies.	
(4)	The student researches medical laws and ethics associated with allied healthcare. The student is expected to:	
(A)	compare the standards, including those set forth by the Health Insurance Portability and Accountability Act (HIPAA), for privacy, safety, and confidentiality of health information;	
(B)	examine principles of ethical behavior and related issues such as the breach of confidentiality;	
(C)	research the ethical dilemmas arising from the integration of advanced technologies into healthcare, encompassing issues such as patient privacy, data security, algorithmic bias, equitable access, the impact on the doctor-patient relationship, the potential for dehumanization, and the ethical considerations surrounding emerging technologies like artificial intelligence, gene editing, and robotics in healthcare delivery;	
(D)	distinguish among issues related to malpractice, negligence, and liability; and	
(E)	model understanding of diversity and cultural health care practices.	
(5)	The student researches and evaluates the knowledge and skills required in respiratory therapy occupations. The student is expected to:	
(A)	model the use of the pulse oximeter and recognize normal and abnormal values associated with breathing;	
(B)	compare the different cardiopulmonary pathologies of pulmonary diseases such as asthma, emphysema, and COVID-19;	

(C)	differentiate among standard precautions necessary for pulmonary diseases, including asthma, emphysema, tuberculosis, influenza, pneumonia, and COVID- 19;	
(D)	understand and articulate the intricate anatomical and physiological systems, including the respiratory, cardiovascular, and neurological systems, as well as their interrelationships, that underpin the practice of respiratory therapy, enabling them to effectively assess, diagnose, and plan appropriate interventions for patients with respiratory conditions; and	
(E)	differentiate among roles of respiratory therapists in various work settings such as long-term care facilities, hospitals, home health, sleep clinics, and medical offices.	
(6)	The student researches and evaluates the knowledge and skills required in speech pathology occupations. The student is expected to:	
(A)	differentiate among communication, speech, language, and hearing;	
(B)	summarize the structural basis of speech production and hearing;	
(C)	identify healthy verbal and nonverbal communication development;	
(D)	describe the developmental building blocks for appropriate speech, language, and hearing development;	
(E)	analyze and apply the terminology related to human communication such as speech sound production, fluency (stuttering), voice, language, hearing, hearing loss, pragmatics, swallowing, and cognition;	
(F)	identify the psychological bases of communication and the linguistic and cultural influences on interpersonal communication;	
(G)	describe the role of the speech-language pathologist in discriminating between healthy speech and language development and hearing disorders;	
(H)	identify anatomical and physiological structures and systems critical for speech, language, and hearing, including the respiratory system, phonatory system (larynx), articulatory system (oral cavity, pharynx, nasal cavity), resonatory system, auditory system, and the central and peripheral nervous systems, and their roles in the production, reception, and processing of speech and language; and	
(I)	differentiate the roles of speech pathologists in various work settings such as nursing and residential care facilities, hospitals, educational settings, and private practices.	

(7)	The student researches and evaluates radiological imaging occupations. The student is expected to:	
(A)	identify pathologies seen in imaging techniques;	
(B)	use appropriate medical terminology relating to different types of imaging techniques such as chest radiographs and magnetic resonance imaging (MRI);	
(C)	identify the technology used in diagnostic imaging;	
(D)	identify anatomy and physiology associated with the practice of various radiological imaging occupations, such as X-ray technician or MRI technician;	
(E)	differentiate roles of individuals working in radiological imaging occupations such as radiological technologists, cardiovascular technologists, and MRI technicians/technologists; and	
(F)	differentiate among various work settings for individuals in radiological imaging occupations such as inpatient and outpatient settings.	
(8)	The student researches and evaluates the skills required in physical therapy occupations. The student is expected to:	
(A)	differentiate among types of musculoskeletal injuries, including sprains, strains, and fractures;	
(B)	identify different types of splinting techniques for upper and lower extremities;	
(C)	assess passive and active range of motion on the upper and lower extremities;	
(D)	demonstrate proper application of moist heat and cold packs;	
(E)	demonstrate the proper use of mobility aids such as walkers, canes, or crutches;	
(F)	identify and use medical terminology and abbreviations commonly used in physical therapy;	
(G)	identify relevant anatomy and physiology associated with the practice of physical therapy;	

(H)	differentiate roles of the physical therapist in various work settings such as acute care, inpatient rehabilitation, or outpatient therapy;	
(I)	identify and describe the contraindications for each of the major imaging modalities (X-ray, CT, MRI, Ultrasound, Nuclear Medicine) used in healthcare, including patient conditions, implanted medical devices, and other relevant factors that may preclude or limit the safe and effective use of these diagnostic procedures; and	
(J)	differentiate among types of musculoskeletal injuries, including sprains, strains, and fractures.	
(9)	The student researches and evaluates the skills required in occupational therapy careers. The student is expected to:	
(A)	explain how occupational therapy overlaps with other allied health occupations;	
(B)	differentiate the roles of occupational therapists in various work settings such as acute care, inpatient rehabilitation, or outpatient therapy;	
(C)	describe types of adaptive equipment used in occupational therapy such as bed side commode, tub transfer bench, built-up utensils, weighted utensils, sock aid, reacher/grabber, long handled sponge, long handled shoehorn, leg lifter and dressing stick;	
(D)	identify and explain medical terminology and abbreviations commonly used in occupational therapy; and	
(E)	identify anatomy and physiology associated with the practice of occupational therapy.	
(10)	The student describes the principles and role of pharmacology in allied health occupations. The student is expected to:	
(A)	identify and explain common medical abbreviations used in a prescription order;	
(B)	explain the required components of a prescription order;	
(C)	identify and analyze the pharmacologic agents commonly utilized within the scope of practice for respiratory therapists, physical therapists, speech-language pathologists, and occupational therapists, including their mechanisms of action, therapeutic uses, potential side effects, and contraindications, while emphasizing the importance of interprofessional collaboration and patient safety in medication management drugs;	

(D)	calculate dosages based on patient weight; and	
(E)	identify common over-the-counter medications used for pain management and respiratory disorders.	
(11)	The student analyzes strategies for the prevention of disease. The student is expected to:	
(A)	develop a wellness plan for a common disease and/or injury;	
(B)	research and analyze local public health issues;	
(C)	analyze access to quality health care in local community and describe implications of community health; and	
(D)	explain the process and components of creating a local public health campaign to promote wellness.	

§127.XX Introduction to Pharmacy Science (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available, this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-10. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.	
(3)	The Introduction to Pharmacy Sciences course is designed to provide an overview of the history of the pharmacy profession, legal and ethical aspects of pharmacy, skills necessary to work in the field of pharmacy, including professionalism, certifications/registration, communication and medical terminology, and rules and regulations pertaining to the field, medical math, anatomy and physiology/pathophysiology, pharmacology, and wellness as they pertain to pharmacy sciences. It is the first course in a pathway leading to certification as a pharmacy technician.	
(4)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.	

(5)	Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.	
(6)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	
(A)	present written and oral technical communication in a clear, concise, and effective manner for a variety of purposes and audiences;	
(B)	identify different types of communication and explain how different types of communication lead to successful teamwork on a shared project in a professional setting; and	
(C)	describe and demonstrate characteristics of a positive work ethic, including punctuality, dependability, reliability, and responsibility for reporting for duty and performing assigned tasks.	
(2)	The student compares the history of medicine and pharmacy with modern practices. The student is expected to:	
(A)	identify ancient beliefs associated with illness and medicine from 440 BC through AD 1600;	
(B)	list treatments that were commonly practiced prior to the Enlightenment period in Western Civilization;	
(C)	describe eighteenth- and nineteenth-century medicine and identify how major wars influenced medicine; and	
(D)	identify advances in drug therapies and vaccinations.	
(3)	The student explains the ethical and legal responsibilities of pharmacists and pharmacy technicians. The student is expected to:	
(A)	describe the basic laws and regulations that govern pharmacy at the state and federal level;	
(B)	describe the legal terms and consequences associated with medication errors that occur when dispensing and compounding medications;	
(C)	differentiate between negligence, product liability, contributory negligence, and regulatory law;	

(D)	differentiate between the roles and responsibilities of a pharmacist and a pharmacy technician;	
(E)	describe the importance of maintaining confidentiality of patient information and summarize the Health Insurance Portability and Accountability Act (HIPAA);	
(F)	identify tort law and explain how HIPPA relates to medical negligence cases; and	
(G)	define professional liability.	
(4)	The student describes and demonstrates appropriate professionalism in pharmacy in appearance and behavior. The student is expected to:	
(A)	define appropriate attire such as neat, professional clothing of slacks or skirts, collared shirts, closed-toe shoes, and a lab coat when required for laboratory work;	
(B)	describe appropriate hygiene expected of pharmaceutical professionals;	
(C)	discuss professional attitudes and behaviors expected and behavior expected of pharmacy employees; and	
(D)	describe basic conflict resolution technique that involve effective communication, active listening, empathy, compromise, and negotiation to address and resolve interpersonal and professional conflicts within the pharmacy setting.	
(5)	The student effectively communicates with patients and other healthcare workers. The student is expected to:	
(A)	identify the key characteristics of effective and ineffective communication in pharmacy practice;	
(B)	demonstrate effective communication with diverse individuals in a variety of healthcare settings;	
(C)	evaluate the effectiveness of various conflict-resolution techniques in resolving pharmacy-related dispute;	
(D)	accurately interpret, transcribe, and communicate medical vocabulary using appropriate technology;	
(E)	demonstrate active and engaged listening skills;	
(F)	explain the communication cycle;	
(G)	demonstrate clear and effective verbal and written communication;	
(H)	identify ways to eliminate barriers to effective communication;	

(I)	identify communication skills needed to work with individuals who are terminally ill, intellectually disabled, visually/hearing impaired, or other impairments; and	
(J)	demonstrate a respectful and professional attitude when interacting with a diverse patient population, colleagues, and professionals.	
(6)	The student demonstrates the characteristics, training, and certifications necessary to work in the field of pharmacy. The student is expected to:	
(A)	develop strong time management, stress management, and change management skills to thrive in the dynamic pharmacy profession;	
(B)	apply interpersonal skills, including negotiation skills, conflict resolution, customer service, and teamwork, within a pharmacy science environment;	
(C)	demonstrate problem-solving skills by developing and implementing effective solutions to pharmacy challenges within a specified timeframe;	
(D)	maintain competency through continuing education and continuing professional development; and	
(E)	list and compare the various career paths in pharmacy, including pharmacist, pharmacy technician, sales representative, and pharmaceutical research.	
(7)	The student uses appropriate medical vocabulary to communicate effectively with other healthcare professionals. The student is expected to:	
(A)	identify the various routes of drug medication;	
(B)	differentiate among the various classes of drugs;	
(C)	define prefixes, roots, suffixes, and abbreviations common to the pharmacy profession;	
(D)	list common terms associated with pharmacology; and	
(E)	apply knowledge of word roots, prefixes, and suffixes to comprehend unfamiliar terms in pharmacy science.	
(8)	The student uses mathematical calculations and systems of measurement to solve problems in pharmacy. The student is expected to:	
(A)	perform medication calculations, including metric, apothecary, and household systems;	

(B)	convert units within measurement systems such as the metric system (SI units) and the imperial system, including units for length, weight, volume, temperature, and time, as well as conversions between the two systems;	
(C)	convert measurements between the metric, apothecary, and avoirdupois systems; and	
(D)	perform multi-step ratio and proportion drug concentration problems.	
(9)	The student understands the fundamental principles of human anatomy, physiology, pathophysiology, and basic pharmacology. The student is expected to:	
(A)	describe the anatomy and physiology of the human body systems, including integumentary, musculoskeletal, nervous, immune/lymphatic, endocrine, cardiovascular, respiratory, gastrointestinal, renal/genitourinary, hematological, and the senses;	
(B)	describe the pathophysiology of the main human body systems, including integumentary, musculoskeletal, nervous, immune/lymphatic, endocrine, cardiovascular, respiratory, gastrointestinal, renal/genitourinary, hematological, and the senses; and	
(C)	identify the basic drug categories that affect each of the main human body systems, including integumentary, musculoskeletal, nervous, immune/lymphatic, endocrine, cardiovascular, respiratory, gastrointestinal, renal/genitourinary, hematological, and senses.	
(10)	The student applies their knowledge of basic wellness concepts and disease prevention strategies. The student is expected to:	
(A)	describe the recommended vaccination schedule, including how to counsel a patient on recommendations for patient populations with certain chronic illnesses;	
(B)	explain accepted procedures for delivery and documentation of immunizations;	
(C)	analyze the effectiveness and safety of Complementary and Alternative Medicines (CAM) like acupuncture, acupressure, and coining, and their potential impact on traditional medical treatments;	
(D)	explain the role of health screenings in maintaining a healthy population;	
(E)	research and describe the impact of external factors on one's lifestyle such as alcohol, tobacco, vaping, and drug use; and	
(F)	explain the role of Medication Therapy Management (MTM) in optimizing patient health and medication compliance.	

(11)	The student researches pharmaceutical regulations that are enforced by state and federal agencies. The student is expected to:	
(A)	define Occupational Safety and Health Administration (OSHA), National Institute of Occupational Safety and Health (NIOSH), and United States Pharmacopeia (USP) requirements for prevention and treatment of exposure to hazardous substances, including risk assessment, personal protective equipment, eyewash, and spill kits;	
(B)	identify, handle, dispense, and safely dispose of hazardous medications and materials using information from Safety Data Sheets (SDS), NIOSH Hazardous Drug List, and USP;	
(C)	describe requirements for prevention and response to blood-borne pathogen exposure, including accidental needle stick and post-exposure prophylaxis; and	
(D)	explain OSHA Hazard Communication Standard, including "Employee Right to Know."	

§127.XX Principles of Allied Health (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-10. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provide content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.	

(3)	Principles of Allied Health is designed to provide the basic concepts, knowledge, and skills necessary for a health career in an allied health field. This course will cover key concepts in the healthcare industry, including standards, respiratory therapy, physical and occupational therapy, radiological imaging, and pharmaceuticals. It will explore topics such as patient safety, disease management, rehabilitation techniques, imaging modalities, and medication administration, providing students with a foundational understanding of these critical areas. The course will also delve into industry standards, including regulations, quality improvement, and ethical considerations, preparing students for a career in healthcare. This is the foundation course for the medical therapy pathway in the health science cluster. This course is designed for students that are interested in pursuing careers in the allied health fields.	
(4)	To pursue a career in the healthcare 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 through effective communications, teamwork, interpersonal skills, and conflict resolution.	
(5)	Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.	
(6)	Students will be encouraged to actively participate in extended learning experiences such as Career and Technical Student Organizations (CTSOs) and other leadership or extracurricular organizations. This participation will foster the development of valuable skills such as leadership, collaboration, professionalism, and networking.	
(7)	Statements that contain the word “including” reference content that must be mastered, while those containing the phrase “such as” are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates professional standards/employability skills such as adaptability, communication, time management, problem-solving, and ethical and legal considerations, as required by business and industry. The student is expected to:	
(A)	communicate ideas in a clear, concise, and effective manner;	
(B)	demonstrate how to cooperate, contribute, and collaborate as a member of a team; and	
(C)	explain employer expectations such as punctuality, attendance, time management, communication, organizational skills, and productive work habits.	

(2)	The student uses verbal and nonverbal communication skills. The student is expected to:	
(A)	identify components of effective and non-effective communication;	
(B)	demonstrate effective communication skills for responding to the needs of individuals in a diverse society;	
(C)	evaluate the effectiveness of conflict resolution techniques in various situations; and	
(D)	accurately interpret, transcribe, and communicate medical vocabulary using appropriate technology.	
(3)	The student researches careers and career resources in allied health. The student is expected to:	
(A)	locate and evaluate career options and employment information;	
(B)	explain the impact of career decisions, including the causes and effects of changing employment situations;	
(C)	identify academic preparation and skills necessary for employment as defined by the health science industry; and	
(D)	identify academic requirements for professional advancement such as certifications, licensure, registration, continuing education, and advanced degrees.	
(4)	The student demonstrates the professional and safety requirements of the allied health workplace. The student is expected to:	
(A)	explain the concept of integrated health care teams such as differentiating between traditional models, exploring patient-centered care, interdisciplinary care, collaborative care, and coordinated care;	
(B)	evaluate the role of professional organizations in the preparation and governance of credentialing and certification;	
(C)	discuss the importance of using appropriate medical terminology in delivering quality healthcare;	
(D)	explain how using principles of infection control improve quality health outcomes;	
(E)	identify and explain health care workplace safety procedures based on Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control (CDC);	

(F)	identify and demonstrate the use of personal protective equipment (PPE);	
(G)	identify industry safety standards such as standard precautions, fire prevention and safety practices, and appropriate actions to emergency situations; and	
(H)	explain and demonstrate procedures for measuring and recording vital signs, including normal values (temperature, pulse, blood pressure, respirations, and pain).	
(5)	The student researches medical laws and ethics associated with allied healthcare. The student is expected to:	
(A)	describe and discuss the standards for safety, privacy and confidentiality of health information, including Health Insurance Portability and Accountability Act (HIPAA);	
(B)	compare published professional codes of ethics and scope of practice;	
(C)	explain principles of ethical behavior and confidentiality, including the consequences of breach of confidentiality;	
(D)	describe ethical issues related to health care, including implications of technological advances;	
(E)	research and summarize issues related to malpractice, negligence, and liability;	
(F)	analyze the impact of local, state, and national government on the health science industry; and	
(G)	identify and explain diversity and cultural practices influencing contemporary aspects of health care.	
(6)	The student investigates the structure and function of the human body. The student is expected to:	
(A)	analyze the levels of organization in biological systems and relate the levels of each to the whole system;	
(B)	identify the body planes, directional and regional terms, quadrants, and cavities;	
(C)	define anatomical position;	
(D)	analyze the basic structure and function of the human body systems, including skeletal, muscular, respiratory, circulatory, nervous, endocrine, urinary, digestive, immune/lymphatic, and integumentary systems; and	

(E)	analyze the basic structure and function of the human body systems, including skeletal, muscular, respiratory, circulatory, nervous, endocrine, urinary, digestive, immune/lymphatic, and integumentary systems.	
(7)	The student researches and evaluates the skills required in respiratory therapy occupations. The student is expected to:	
(A)	identify normal and abnormal respiratory effort;	
(B)	demonstrate the proper usage of pulse oximeter for measurement of oxygen saturation and recognize the difference between normal and abnormal readings;	
(C)	identify and explain the usage of respiratory management devices such as nasal cannula, simple oxygen mask, Venturi mask, non-rebreather, nasopharyngeal airway (NPA), oropharyngeal airway (OPA), endotracheal tube and tracheostomy;	
(D)	demonstrate proper technique and use of bag-mask ventilation (AMBU)on a manikin; and	
(E)	explain the disease process for common respiratory diseases and injuries such as asthma, bronchitis, pneumonia, restrictive lung disease, cystic fibrosis, and traumatic lung injury.	
(8)	The student researches and evaluates the skills required in radiological imaging occupations. The student is expected to:	
(A)	differentiate between the types and functions of diagnostic imaging techniques, including Computer-Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron Emissions Tomography (PET), ultrasound imaging, X-rays, arrhythmia monitoring, pulmonary monitoring, obstetrical/neonatal monitoring, and nuclear imaging;	
(B)	examine the types of medical information and records each diagnostic imaging technique generates, including Computer-Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET), ultrasound Imaging, X-rays, arrhythmia monitoring, pulmonary monitoring, obstetrical/neonatal monitoring, and nuclear imaging; and	
(C)	explain the impact of new technology on diagnostic imaging techniques and treatments.	

(9)	The student researches and evaluates the skills required in rehabilitation occupations. The student is expected to:	
(A)	identify and explain types of synovial joints and joint movement;	
(B)	determine joint mobility and muscle strength, including range of motion;	
(C)	differentiate between active, passive, assistive, and resistive range of motion of joints;	
(D)	describe types of immobilization devices;	
(E)	demonstrate proper use of rehabilitation devices such as transfer belt, cane, crutches, and walker;	
(F)	explain the care and use of prosthetic and orthotic devices;	
(G)	demonstrate techniques for applying hot and cold treatments;	
(H)	explain how the principles of body mechanics and biomechanics are used to prevent injury;	
(I)	determine the appropriate equipment for transportation and transfer of a patient;	
(J)	describe techniques to enhance muscle strength, endurance, and flexibility;	
(K)	demonstrate the use of protective taping, wrapping, padding and protective equipment to upper and lower extremities;	
(L)	differentiate between therapeutic modalities, including cryotherapy, thermotherapy, hydrotherapy, light therapy and electrotherapy;	
(M)	explain the impact of typical development and aging on occupational performance, health, and wellness across the life span; and	
(N)	create a rehabilitation plan for a patient, including physical and occupational therapy interventions.	

(10)	The student researches some physical disabilities that may benefit from rehabilitation occupation and a brief description of the pathologies.	
(A)	identify traumatic brain injury, spinal cord injury, arthritis, back injury, paralysis, impaired movement, limb loss, or amputation;	
(B)	identify the impact of mental health conditions, including psychological or mental health disabilities, behavioral disorders, and autism spectrum disorders;	
(C)	identify the impact of learning disabilities such as intellectual disability, dyslexia, or other learning difficulties;	
(D)	identify the impact of sensory impairments such as vision loss, deaf, blind, or blindness disabilities, or hearing loss; and	
(E)	identify the impact of developmental delays, chronic illnesses, muscular dystrophy, spina bifida, cerebral palsy, multiple sclerosis, Parkinson's disease, and related degenerative disorders.	
(11)	The student analyzes strategies for the prevention of disease. The student is expected to:	
(A)	research and summarize wellness strategies such as stretching, basic hygiene, and sanitary behaviors, for the prevention of disease and injury;	
(B)	evaluate positive and negative effects of relationships on physical and emotional health;	
(C)	explain the benefits of positive relationships among community health professionals in promoting a healthy community;	
(D)	research, analyze, and summarize the effects of access to quality health care; and	
(E)	research and summarize alternative health practices and therapies such as meditation, hypnosis, chiropractic, message therapy, acupuncture, herbal medicine, dietary supplements, aromatherapy, homeopathy, and reiki.	
(12)	The student describes the principles and role of pharmacology in allied health occupations. The student is expected to:	
(A)	define terms related to drugs and pharmacology;	
(B)	identify and interpret elements of a prescription;	

(C)	define the various drug types such as analgesics, sedatives, narcotics, statins, antipyretics, antipsychotics, mood stabilizers, opioids, barbiturates, antibiotics, antifungals, and antiseptics;	
(D)	identify the mechanisms of action of drugs;	
(E)	explain how drugs are grouped into therapeutic classes;	
(F)	explain the advantages and disadvantages of different routes of drug administration;	
(G)	describe the four major processes of pharmacokinetics;	
(H)	convert units within and among the metric-household and apothecaries' systems;	
(I)	calculate basic medication dosages; and	
(J)	identify brand and generic names of prescription medications and over-the-counter drugs.	

§127.XX Sterile Processing (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development.	
(3)	This course is designed to provide students with the comprehensive knowledge and skills necessary to become competent and skilled Sterile Processing Technicians (SPTs). The course will focus on the principles of sterilization, decontamination, and assembly of surgical instruments and equipment.	

(4)	Students are encouraged to participate in extended learning experiences such as hands-on experience in a simulated healthcare setting, mastering the techniques required to maintain a sterile environment and ensure patient safety.	
(5)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates knowledge of the fundamental concepts and importance of sterile processing in the healthcare system. The student is expected to:	
(A)	identify and describe the role and responsibilities of a sterile processing technician within the healthcare team;	
(B)	explain the impact of sterile processing on patient safety and infection prevention; and	
(C)	explore career opportunities, certification requirements, and the ethical considerations in sterile processing.	
(2)	The student examines the ethical and legal responsibilities in sterile processing. The student is expected to:	
(A)	discuss the legal implications of improper sterilization and its impact on patient care;	
(B)	analyze ethical dilemmas that may arise in sterile processing and propose solutions; and	
(C)	understand the importance of confidentiality and professionalism in handling medical instruments and patient information.	
(3)	The student demonstrates an understanding of infection control measures in sterile processing. The student is expected to:	
(A)	apply standard precautions, including personal protective equipment (PPE) and hand hygiene, in the sterile processing department;	
(B)	identify common pathogens and discuss the significance of infection control in preventing healthcare-associated infections (HAIs); and	
(C)	implement disinfection protocols for surfaces, equipment, and work areas in accordance with regulatory guidelines.	

(4)	The student identifies and classifies surgical instruments used in various medical procedures. The student is expected to:	
(A)	identify and describe the basic types of surgical instruments (e.g., forceps, scalpels, clamps);	
(B)	identify the specific functions of instruments used in different medical specialties; and	
(C)	explain the importance of maintaining the integrity and functionality of surgical instruments.	
(5)	The student demonstrates knowledge of the decontamination process for medical instruments and equipment. The student is expected to:	
(A)	describe the steps involved in the decontamination process, including manual and automated cleaning methods;	
(B)	identify common contaminants and their sources in a health care setting; and	
(C)	follow guidelines for the safe handling and transportation of contaminated instruments to minimize the risk of infection.	
(6)	The student applies knowledge of various sterilization techniques used in health care. The student is expected to:	
(A)	explain the principles of sterilization and the importance of achieving sterility in medical instruments;	
(B)	distinguish the difference between the various autoclave indicators to ensure that the proper temperature and pressure were reached within the autoclave for the sterilization to occur;	
(C)	compare and contrast the different sterilization methods, including steam sterilization, ethylene oxide (EtO) gas, and chemical sterilant; and	
(D)	perform routine checks on sterilization equipment to ensure proper functioning and document sterilization processes.	
(7)	The student demonstrates knowledge of proper packaging and storage of sterile items. The student is expected to:	
(A)	explain the principles of sterile packaging and the types of materials used;	
(B)	perform wrapping and packaging procedures according to health care standards; and	
(C)	describe the correct storage practices for sterile items to maintain sterility and prevent contamination.	

(8)	The student understands the importance of quality assurance and compliance in sterile processing. The student is expected to:	
(A)	explain the purpose of quality assurance programs and how they ensure the effectiveness of sterilization procedures;	
(B)	identify and comply with regulations set forth by agencies such as OSHA, FDA, and the CDC; and	
(C)	participate in quality control measures, including biological and chemical monitoring, to validate sterilization processes.	
(9)	The student demonstrates knowledge of proper documentation and record-keeping in sterile processing. The student is expected to:	
(A)	maintain accurate records of sterilization cycles, including load contents, cycle parameters, and biological test results;	
(B)	document any equipment malfunctions or deviations from standard operating procedures; and	
(C)	follow institutional policies for retaining and securing records in compliance with health care regulations.	
(10)	The student demonstrates knowledge of maintaining and troubleshooting sterile processing equipment. The student is expected to:	
(A)	perform routine maintenance and cleaning of sterilizers, washers, and other decontamination equipment;	
(B)	identify common equipment malfunctions and report them for repair; and	
(C)	understand the principles of preventive maintenance to ensure equipment reliability and longevity.	
(11)	The student demonstrates knowledge of safety standards and best practices in sterile processing. The student is expected to:	
(A)	identify and adhere to safety standards related to the handling of hazardous materials and sharps;	
(B)	implement ergonomic practices to reduce the risk of injury in the workplace; and	
(C)	conduct safety checks and ensure compliance with institutional and regulatory safety guidelines.	

(12)	The student demonstrates the professional skills and behaviors required for success in sterile processing. The student is expected to:	
(A)	demonstrate effective communication and teamwork skills within the sterile processing department and with other health care professionals;	
(B)	explore opportunities for continuing education and professional certification in sterile processing; and	
(C)	create a professional development plan that includes short-term and long-term career goals in the field of sterile processing.	

§127.XX Medical Intervention Evaluation and Research (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available, this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 10-11. Recommended prerequisite: Health Informatics. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development.	
(3)	Medical intervention, evaluation and research builds upon the concepts from Health Informatics and will apply the basic concepts, knowledge, and skills necessary for a health career in health informatics, medical intervention evaluation, or health research fields.	

(4)	To pursue a career in the medical intervention, evaluation and research industry, students should learn to think critically, make decisions, solve problems, and communicate effectively.	
(5)	Professional integrity in the medical intervention, evaluation and research industries are dependent on acceptance of ethical and legal standards and practices. Students are expected to employ ethical and legal responsibilities, recognize limitations, and recognize the implications of their actions.	
(6)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.	
(7)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	
(A)	communicate research findings, data analyses, and critical evaluations of medical interventions through clear, concise, and well-supported written and oral presentations, demonstrating proficiency in scientific writing, data visualization, and effective communication strategies for a diverse audience, including healthcare professionals, researchers, and the general public;	
(B)	demonstrate examples of responding quickly to the needs of the customer to meet the expectation and achieve customer satisfaction;	
(C)	model soft skills associated with employment in medical intervention, evaluation and research industries;	
(D)	demonstrate examples of written and oral instructions;	
(E)	model soft skill associated with interaction and working well with a diverse group of people inside and outside the organization at different level s and across disparate cultures;	
(F)	model listening and verbal expression with others in a clear, concise and effective manner;	
(G)	role model professional behaviors through dressing appropriately; and	
(H)	model skills to assess interpersonal situations and resolve or remediate conflict.	

(2)	The student demonstrates knowledge of various informatics used in the processes of medical intervention, research, and evaluation. The student is expected to:	
(A)	differentiate the abbreviations, acronyms and symbols related to the health science industry;	
(B)	employ medical terminology appropriately when collaborating with health care professionals and apply ICD-10 codes and bills related to treatment, procedures, and diagnosis in the patient medical records;	
(C)	assign and utilize current and appropriate medical billing codes (e.g., ICD-10-CM, CPT) and procedural codes to accurately reflect the nature, extent, and complexity of medical interventions and procedures performed, ensuring proper reimbursement and compliance with healthcare regulations;	
(D)	identify directional terms and opposite directional terms and correlate anatomical planes related to the area of the body of symptoms and disease; and	
(E)	use specific occupational terms, including terms related to body systems, surgical and diagnostic procedures, disease, and treatment.	
(3)	The student investigates medical intervention, evaluation, and research careers. The student is expected to:	
(A)	analyze the intersections of health informatics, including electronic health records (EHRs), telemedicine, data analytics, and artificial intelligence, with the diverse roles and responsibilities of various medical occupations such as physicians, nurses, pharmacists, therapists, and technicians, examining how these technologies impact patient care, clinical decision-making, research, and the overall healthcare system;	
(B)	research and present on various careers in health informatics and medical intervention, evaluation, and research;	
(C)	practice interview skills for a position related to a medical intervention, evaluation, and research career of interest;	
(D)	explain preparation for a career in health informatics, including education requirements and industry certifications; and	
(E)	describe and demonstrate through role-playing scenarios the principles and practices of interprofessional collaboration within the healthcare team, including communication strategies, conflict resolution techniques, and the importance of shared decision-making in optimizing patient care and research outcomes.	
(4)	The student examines of the use of health informatics and technology. The student is expected to:	
(A)	employ computer skills such as data entry, information security, and database management required to maintain patient health records;	

(B)	analyze the monitoring processes used to safeguard patient information;	
(C)	evaluate the quality of information such as appropriate diagnostic test and therapeutic treatment according to content and purpose;	
(D)	list and describe the steps necessary to develop a records management system;	
(E)	analyze best practices to prevent loss of information;	
(F)	describe and execute the process to verify patient information; and	
(G)	explain database design and management as it is used in health informatics.	
(5)	The student examines the relationship between therapeutics and the use of informatics and technology. The student is expected to:	
(A)	review and analyze a diverse range of diagnostic tests commonly employed in medical practice, evaluating their sensitivity, specificity, accuracy, and clinical utility in verifying disease states, considering factors such as patient demographics, risk factors, and the clinical context to inform appropriate test selection and interpretation for optimal patient management;	
(B)	explain the data modeling process, including the attributes and relationships of the data and the reconciliation of data discrepancies;	
(C)	describe the process to request diagnostic or medical reports and records;	
(D)	analyze different demographics such as race, ethnicity, socioeconomical status, or education level in data, medical reports, and records;	
(E)	use code data and patient information to evaluate therapeutic treatment provided for specific disease states;	
(F)	identify and explain the codes for medical procedures and how to process the information for administrative purposes such as insurance records and facility documentation; and	
(G)	demonstrate the process to compile patient data with relevant medical documentation such as matching disease state with diagnostic procedure (e.g., lung cancer and chest radiograph).	
(6)	The student explores therapeutic applications associated with medical intervention and evaluation. The student is expected to:	
(A)	define therapeutic interventions, including preventative care, early intervention, community interventions, and chronic and acute care;	

(B)	explain the process of evaluating a therapeutic intervention for measurable outcomes, including using evidence-based medical practices;	
(C)	identify measurable goals of therapeutic intervention such as increased life expectancy and health-related quality of life;	
(D)	define quality-adjusted life year (QALY) and identify how QALY addresses mortality and morbidity;	
(E)	evaluate a therapeutic intervention using QALY as a basis for allocating medical resources in a healthcare system;	
(F)	differentiate between using QALY as cost-effective measure and providing each patient with adequate care; and	
(G)	analyze the benefits of a therapeutic intervention, including efficacy, effectiveness, assigning value, and patient changes in health behaviors.	
(7)	The student uses informatics and databases to accurately process medical information. The student is expected to:	
(A)	describe the Health Insurance Portability and Accountability Act (HIPPA) and Protected Health Information (PHI) guidelines for confidentiality, privacy, and security of patient medical information when sharing with an entity such as the guideline clearing house;	
(B)	complete forms related to coding and billing such as superbills and Center for Medicaid and Medicare Service (CMS)-1500 claim forms;	
(C)	articulate the distinct characteristics and consequences of insurance fraud, including deliberate and intentional acts of deception for financial gain, such as billing for services not rendered, upcoding, and false claims, and differentiate these from insurance abuse, which encompasses unintentional errors or irregularities in billing and coding practices such as clerical errors, coding inaccuracies, and lack of proper documentation;	
(D)	verify and use the correct diagnosis codes such as the ICD-9 or ICD-10 codes in patient documentation;	
(E)	describe the two types of codes in the Healthcare Common Procedure Coding System (HCPCS);	
(F)	use technology necessary to document charges billed and reimbursement for disease state and diagnostic procedures; and	
(G)	discuss how medical coding affects the payment process.	

(8)	The student demonstrates knowledge of medical research standards associated with interventions and evaluations. The student is expected to:	
(A)	differentiate between single-blind and double-blind studies;	
(B)	identify the types of clinical trials, including randomized clinical trials (RCT), controlled trial without randomization, case control analytic study, multiple time series, uncontrolled experiment, case study, and expert opinion and classify by using the hierarchy of evidence;	
(C)	define community-based participatory research and evaluation;	
(D)	explain the four major foci of evaluation, including context, process, impact, and outcome; and	
(E)	compare an impact evaluation, which assess the broader societal and programmatic changes resulting from a therapeutic intervention, with outcome evaluations, which focus on measuring the specific effects of the intervention on individual patients, including changes in health status, functional abilities, and quality of life.	

§127.XX Principles of Health Informatics (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available, this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development.	

(3)	The Principles of Health Informatics course introduces students to of one of the fastest growing areas in academia and industry professions. A large gap exists between state-of-the-art computer technologies and the state of affairs in health care information technology. The result is an increased 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.	
(A)	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.	
(B)	Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.	
(4)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.	
(5)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates an understanding of health informatics, and employability skills as required by business and industry. The student is expected to:	
(A)	define health informatics and describe its role in healthcare;	
(B)	describe the steps in assessing and responding quickly to customer needs to meet expectations and achieve customer satisfaction;	
(C)	discuss judging alternatives, setting limits, and relying on forethought and rationale in making well-informed decisions;	
(D)	listen and respond and verbally express ideas and messages to others in a clear, concise, and effective manner;	
(E)	explain the importance of dressing appropriately, speaking politely, and conducting oneself in a manner appropriate for the profession and work site;	
(F)	identify the skills necessary to assess interpersonal situations and resolve or mediate conflicts;	

(G)	identify the various fields within health informatics such as medical records, health information technology, data analytics); and	
(H)	discuss various career pathways and roles in the field of health informatics.	
(2)	The student examines terminology required to communicate effectively in the health science industry. The student is expected to:	
(A)	identify common abbreviation, acronyms, and symbols used in the health science industry;	
(B)	decompose medical terms into their root words, prefixes, and suffixes;	
(C)	develop word-building skills to expand vocabulary and comprehension of medical terminology;	
(D)	explore the historical development of eponyms in the field of health informatics;	
(E)	describe directional terms and anatomical planes related to body structure;	
(F)	define and use medical terminology, including anatomical, physiological, and pharmacological terms; and	
(G)	understand the meaning of terms as they relate to the health science industry.	
(3)	The student demonstrates communication skills using the terminology applicable to the health science industry. The student is expected to:	
(A)	demonstrate appropriate verbal and written strategies to correctly pronounce and spell health informatics terms in a variety of health science scenarios;	
(B)	use clear and concise language to effectively communicate complex health informatics concepts;	
(C)	convert complex technical information in the health sciences into clear and understandable language; and	
(D)	demonstrate the ability to adapt communication styles to suit different audiences and cultural context.	
(4)	The student demonstrates fundamental knowledge of health information systems technology and the tools for collecting, storing, and retrieving healthcare data. The student is expected to:	
(A)	identify the fundamental computer skills required to maintain patient health records;	
(B)	define monitoring processes used to safeguard patient information;	

(C)	classify information according to content and purpose;	
(D)	describe the steps necessary to develop a records management system;	
(E)	identify the steps necessary to prevent loss of information;	
(F)	describe the steps necessary in verifying the accuracy of patient information;	
(G)	organize and categorize health information resources to facilitate efficient retrieval and analysis;	
(H)	describe the components of an electronic health record system; and	
(I)	utilize appropriate tools and techniques to access and analyze healthcare data.	
(5)	The student investigates the various types of databases in relation to health informatics. The student is expected to:	
(A)	define the function of a database management system;	
(B)	identify the purpose of data modeling;	
(C)	list the steps to requesting reports or records;	
(D)	describe how to reconcile data discrepancies with medical personnel;	
(E)	define the customary steps in the data modeling process;	
(F)	differentiate between entities, attributes, and relationships in a data model; and	
(G)	explain how health information system integrate across healthcare facilities.	
(6)	The student examines healthcare data standards related to patient information and code data. The student is expected to:	
(A)	differentiate between code data and patient information;	
(B)	assign codes to healthcare or insurance records and paperwork;	
(C)	list the steps to compiling data;	

(D)	list the steps to completing medical documentation; and	
(E)	contrast data collection methods used by patients and healthcare providers to evaluate the role of patient-generated health data (PGHD).	
(7)	The student examines the evolution of the health information system. The student is expected to:	
(A)	evaluate the growing role of the electronic health record;	
(B)	identify occupations in the health information career field;	
(C)	research and explain the progress of the development of the electronic health record; and	
(D)	explain functional requirements for electronic health records.	
(8)	The student examines the process of medical diagnostic and coding concepts and current procedural practices. The student is expected to:	
(A)	define Health Insurance Portability and Accountability Act (HIPAA) guidelines for confidentiality, privacy, and security of a patient's information when sharing with a covered entity such as clearinghouse, insurance company, etc.;	
(B)	identify forms related to coding and billing such as Superbills, standardized claim forms such as CMS-1500, UB-04 (formerly known as HCFA-1450) hospital claim forms;	TEA: Are CMS and UB acronyms for something? If so, suggest spelling-out first before using the acronym in parentheses. –These are the terms for the said forms.
(C)	differentiate between insurance fraud and insurance abuse;	
(D)	input the correct diagnosis code using the International Classification of International Diseases, Tenth Revision, and Clinical Modification (ICD-10-CM) code system;	
(E)	identify the two types of codes in the health care common procedure coding system (HCPCS);	
(F)	discuss the relationship between current procedural technology (CPT) codes, ICD-10-CM, and medical necessity for reimbursement for charges billed;	TEA: Check grammar of highlighted section. –We do not understand the ask in this comment.
(G)	advise patients on hospital or healthcare system rules, processes, and procedures through a role-playing activity; and	

(H)	describe how medical coding affects the payment process.	
(9)	The student identifies government health agencies and the process in completing health insurance claims. The student is expected to:	
(A)	define Medicaid and Medicare;	
(B)	discuss healthcare benefit programs such as Tricare and Civilian Health and Medical Program of the Department of Veteran Affairs (CHAMPVA);	
(C)	list the steps for managing a worker's compensation case;	
(D)	prepare reports summarizing patient diagnostic or care activities;	
(E)	describe how to submit a reimbursement claim; and	
(F)	identify methods of transmitting electronic claims.	
(10)	The student understands the role of telemedicine and remote healthcare delivery systems. The student is expected to:	
(A)	explain the use of telemedicine in patient care;	
(B)	identify the technologies that enable telemedicine and remote monitoring;	
(C)	evaluate the benefits and limitations of telemedicine in various healthcare settings; and	
(D)	discuss the role of health informatics in ensuring the quality and security of telemedicine services.	
(11)	The student understands emerging trends and innovations in health informatics. The student is expected to:	
(A)	research and describe new technologies in health informatics such as artificial intelligence, and wearable health devices;	
(B)	identify potential roadblocks in the field of health informatics;	
(C)	discuss the role of big data and predictive analytics in personalized medicine; and	
(D)	evaluate the ethical and societal impacts of emerging health informatics technologies.	

(12)	The student understands the importance of teamwork and collaboration in health informatics. The student is expected to:	
(A)	describe the roles of various healthcare professionals in using health informatics systems;	
(B)	present written and oral technical communication in a clear, concise, and effective manner for a variety of purposes and audiences;	
(C)	analyze case studies that involve the use of health informatics to improve patient care; and	
(D)	simulate interprofessional collaboration in healthcare settings by participating in group projects.	

§127.XX Principles of Nursing Science (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available, this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-10. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development.	

(3)	The Principles of Nursing Science course introduces students to basic principles of the profession of nursing. The goals/student outcomes for the course include knowledge of the history of nursing, an introduction to nursing theory, professionalism (teamwork, communication, conflict resolution), legal/ethical issues in nursing, infection control, safety, and customer (patient) satisfaction. Skills learned include vital signs and how to document on a graphic record, patient positioning/transferring, bed-making, feeding, and personal protective equipment (PPE).	
(4)	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.	
(5)	Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.	
(6)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.	
(7)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	
(A)	express ideas in a clear, concise, and effective manner;	
(B)	exhibit the ability to cooperate, contribute, and collaborate as a member of a team; and	
(C)	identify employer expectations such as punctuality, attendance, time management, communication, organizational skills, and productive work habits.	
(2)	The student demonstrates effective communication skills for responding to the needs of individuals in a diverse society. The student is expected to:	
(A)	identify and describe key therapeutic communication techniques, including active listening, empathy, reflection, clarification, confrontation, summarizing, and providing support, and demonstrate the ability to apply these techniques effectively in simulated and real-life clinical settings to establish and maintain therapeutic relationships with patients and their families;	

(B)	identify written, nonverbal, and verbal modes of communication in the field of nursing, including information technology;	
(C)	describe how to communicate & collaborate with patients, their families, and the interdisciplinary health care team to assist in the planning, delivery, and coordination of patient-centered care;	
(D)	describe communication techniques that assist with maintaining professional boundaries;	
(E)	describe the communication of detailed medical information to patients or family members;	
(F)	describe patient interaction strategies that build rapport or provide emotional support; and	
(G)	discuss how to provide health and wellness advice to patients, program participants, or caregivers.	
(3)	The student interprets, transcribes, and communicates medical vocabulary using appropriate technology. The student is expected to:	
(A)	identify the systems in the human body, including organs and functions, using medical nomenclature;	
(B)	demonstrate how to collect medical information from patients, family members, or other medical professionals;	
(C)	explain technical medical information to patients;	
(D)	list describe, and demonstrate the proper procedures for recording and interpreting various types of technical health or medical documents, including patient charts, medication administration records, laboratory results, diagnostic imaging reports, and physician orders, while adhering to legal and ethical guidelines for documentation and maintaining patient confidentiality; and	
(E)	describe entering patient or treatment data into medical software.	
(4)	The student summarizes the history of nursing. The student is expected to:	
(A)	discuss historical factors and nursing leaders that influenced the development of nursing;	
(B)	review the historical nursing practices and issues affecting the development and practice of nursing;	
(C)	describe the different types of educational programs for nurses; and	

(D)	describe the development of the historical and contemporary development of the four major areas of nursing science – clinical practice, nursing administration, nursing education, and nursing research – including their key figures, foundational theories, major milestones, and their evolving contributions to the advancement of nursing knowledge and practice.	
(5)	The student describes the components of infection control. The student is expected to:	
(A)	identify the components of the chain of infection and analyze strategies to break the chain of infection;	
(B)	identify standard and transmission-based precautions such as the use of personal protective equipment (PPE);	
(C)	identify characteristics, concepts, and processes related to the transmission of common communicable diseases, including individual risk factors and preventative health factors;	
(D)	describe and implement effective sanitation practices in healthcare settings, including hand hygiene techniques, proper disinfection and sterilization procedures, environmental cleaning protocols, and the use of personal protective equipment (PPE), to prevent the transmission of infectious diseases and maintain a safe and hygienic environment for patients and healthcare workers; and	
(E)	demonstrate appropriate hand-washing technique and how to properly don and doff PPE.	

(6)	The student demonstrates knowledge of teamwork concepts in an integrated healthcare work environment. The student is expected to:	
(A)	identify the roles and responsibilities of members of the interdisciplinary health care team;	
(B)	define methods of collaboration with healthcare professionals to plan or provide treatment;	
(C)	cooperate, contribute and collaborate as a member of the healthcare team to obtain agreement and achieve a collective outcome; and	
(D)	evaluate the essential role of the nurse as a vital member of the interdisciplinary healthcare team, emphasizing effective communication, collaboration, and coordination of care with other healthcare professionals such as physicians, physical therapists, occupational therapists, social workers, pharmacists, and respiratory therapists to ensure optimal patient outcomes and enhance the quality of patient care.	
(7)	The student differentiates between professional and nonprofessional behavior in nursing practices. The student is expected to:	
(A)	identify aspects of professionalism including attention to appearance and demeanor; and	
(B)	identify professional characteristics and values such as altruism, human dignity, truth, justice, freedom, equality, and esthetics.	
(8)	The student integrates nursing theory into nursing practice. The student is expected to:	
(A)	discuss evidence-based clinical practice guidelines;	
(B)	discuss nursing philosophy and theory and how each guides nursing practice;	
(C)	identify the components of nursing process and apply them to a patient's plan of care; and	
(D)	define quality, safety, education in nursing (QESN) concepts and the importance to professional practice.	
(9)	The student explains the legal and ethical responsibilities in nursing practice. The student is expected to:	
(A)	identify key federal and state statutes such as Health Insurance Portability and Accountability Act (HIPAA) and Protected Health Information (PHI) and institutional policies regarding confidentiality;	
(B)	identify the nurses' legal scope of practice in accordance with the Texas Nurse Practice Act;	
(C)	analyze legal and ethical issues related to the delivery of culturally sensitive care to patients and their families;	

(D)	discuss the rights and responsibilities of patients regarding healthcare, including self-determination and right of refusal; and	
(E)	demonstrate the application of ethical principles to unethical situations involving the nursing profession.	
(10)	The student understands patient-centered care. The student is expected to:	
(A)	evaluate the individualized plan of care to assist patients to meet basic physical and psychosocial needs; and	
(B)	analyze methods for providing culturally sensitive care that address the needs of diverse individuals and their families across the lifespan.	

§127.XX Science of Nursing (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 10-11. Recommended prerequisite: Principles of Nursing Science or Principles of Health Science. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development.	

(3)	The Science of Nursing course introduces students to basic research-based concepts in nursing. Topics include the nursing process, the importance of critical thinking to patient care, regulatory agencies, and professional organizations. Instruction includes skills needed to pursue a nursing degree and training requirements required for specialty nursing roles. Knowledge and skills learned will include emergency care, patient assessment, basic interpretation of vital signs, identification of patients with physical and mental disabilities, patient positioning, use of assistive devices, and application of nursing theories in patient care plans. 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.	
(4)	Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.	
(5)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.	
(6)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	
(A)	apply appropriate verbal and non-verbal communication in a clear, concise, and effective manner;	
(B)	apply a range of critical thinking and problem-solving skills to analyze complex clinical scenarios, adapt nursing care plans to meet the unique needs of individual patients, and creatively develop innovative solutions to overcome challenges encountered in the dynamic and ever-changing healthcare environment;	
(C)	create or evaluate a career plan using career exploration methods such as identifying educational pathways, developing career goals, and assessing individual aptitudes;	
(D)	demonstrate teamwork skills by actively participating in collaborative learning activities, interprofessional simulations, and clinical settings, exhibiting effective communication, conflict resolution, and delegation strategies, and demonstrating a commitment to shared goals and patient-centered care within a multidisciplinary healthcare team;	

(E)	create a professional and compelling nursing resume that effectively showcases their clinical experiences, academic achievements, relevant skills (e.g., critical thinking, communication, teamwork, patient care), licensure and certifications, and professional affiliations, adhering to best practices in resume writing and tailoring it to specific nursing job requirements; and	
(F)	identify and demonstrate soft skills valued by employers.	
(2)	The student understands the tiers of nursing careers and the associated licensures. The student is expected to:	
(A)	describe the entry-level patient care technician (PCT) certification and common work settings such as hospitals, doctor's offices, and health care agencies for patient care technicians;	
(B)	list qualifications to become a certified nursing assistant (CNA) and the scope of practice for a CNA in a long-term care facility;	
(C)	define unlicensed assistive personnel (UAP) and how UAPs assist individuals with physical disabilities, mental impairments, and other healthcare needs;	
(D)	discuss course work required to obtain nursing credentials, including a licensed vocational nurse (LVN), associate degree nurse - registered nurse (ADN RN), and Bachelor of Science - registered nurse (BSN RN);	
(E)	review the requirements for advanced practice registered nurse (APRN), including certified registered nurse anesthetist (CRNA), certified nurse midwife (CNM), certified nurse practitioner (CNP), and certified clinical nurse specialist (CNS); and	
(F)	research nursing specialty options, including pediatric nursing, critical care nursing, emergency room nursing, mental health nursing, forensic nursing, geriatric nursing, nursing roles in education, and hospice nursing roles.	
(3)	The student understands how the nursing process is used to collect subjective and objective data in patient assessment. The student is expected to:	
(A)	describe the steps of a basic patient intake interview, including recording family history, biographical information, reason for seeking health care, present illness or health concerns, past health history, current medication list, and review of systems;	
(B)	explain the visual and physical head-to-toe assessment used to evaluate patient condition, including abnormal and normal structure and function of the body systems;	

(C)	identify and describe the importance of patient vital signs, including temperature, blood pressure (systolic and diastolic), heart rate (pulse), respiratory rate, pulse oximetry (oxygen saturation), and pain assessment (using appropriate pain scales), in assessing a patient's overall health status, identifying potential health complications, and guiding appropriate nursing interventions;	
(D)	identify equipment used to measure and record patient vital signs, including a thermometer, sphygmomanometer, stethoscope, pulse oximeter, and time keeping device;	
(E)	compare patient vital signs that establish baseline homeostasis, including values outside of normal ranges;	
(F)	discuss wellness versus illness related to human growth and development, including factors related to race, gender, identity, and culture; and	
(G)	evaluate how the steps in the nursing process are used to assist the patient to reach optimal physiological, social, mental, emotional, spiritual, cultural, and environmental wellness.	
(4)	The student demonstrates knowledge of therapeutic care by reviewing patient activities of daily living. The student is expected to:	
(A)	define and differentiate between essential activities of daily living (ADLs) such as dressing and undressing, bathing, oral care, toileting, feeding, and transferring, recognizing their significance in assessing patient independence, identifying functional limitations, and developing appropriate care plans to promote optimal patient function and quality of life;	
(B)	identify mental health disabilities such as depression, anxiety, and disorientation or social economic limitations such as domicile insecurities, food insecurities and low socioeconomic status experienced by patients;	
(C)	evaluate physical disabilities and limitations such as loss of limbs, multiple sclerosis, spina bifida, cerebral palsy, spinal cord injuries, musculoskeletal injuries, visual impairment, hearing impairment, and rheumatoid arthritis to recommend the correct assistive device for patient care; and	
(D)	relate therapeutic care to specific deficiencies in activities of daily living (ADLs) such as performing personal care (bathing, grooming, dressing), ambulation (walking, transferring), reality orientation (awareness of time, place, and person), and using of assistive devices (wheelchairs, walkers, canes), promoting patient independence and optimizing functional outcomes.	
(5)	The student understands the role of the nurse in providing first aid and emergency care. The student is expected to:	
(A)	compare first aid and emergency care certifications such as Basic Life Support (BLS), Automated External Defibrillator (AED), First Aid, and Mental Health First Aid;	

(B)	discuss the advantages of obtaining first aid and emergency care certifications;	
(C)	demonstrate first aid and emergency care skills used by nurses in a simulated environment; and	
(D)	evaluate the role of a nurse in an emergency setting such as an emergency room, intensive care unit, urgent care, or responding to a life-saving event.	
(6)	The student applies nursing theory to simulate the implementation of patient care. The student is expected to:	
(A)	identify and explain the purpose of medical equipment that is used to assist patients with diverse needs, including a Hoyer lift, hospital beds, foley catheter and drainage system, wheelchairs, gait belts, and bedside commodes;	
(B)	evaluate patient care needs throughout the lifespan using theories such as Maslow's Hierarchy of Needs, Erik Erikson's Stages of Psychosocial Development, Jean Piaget's Theory of Child Development, and Lev Vygotsky's Contemporary Theories on Development;	
(C)	identify proper patient positioning for patient needs, including Trendelenburg, Fowlers, Supine, Prone, Lithotomy, and Lateral Recumbent;	
(D)	analyze methods to educate patients, family members, or caregivers in techniques for managing disabilities or illnesses and using medical devices in an outpatient setting; and	
(E)	model the use of medical equipment that assists patients in various healthcare settings, including long-term care facilities, nursing and rehabilitation facilities, home health care settings, classroom, or simulated environment.	
(7)	The student knows how to use technology as it pertains to nursing practice. The student is expected to:	
(A)	identify and describe the technology used to collect patient information, including electronic medical records, mobile computer workstations, scanning devices, and charting software;	
(B)	describe where to access laboratory values and normal ranges for diagnostic tests such as complete blood count, comprehensive metabolic panel, basic metabolic panel, and urinalysis to determine patient health status; and	
(C)	describe how advancements in technology, including remote patient monitoring systems, wearable monitoring systems, electronic intake patient interviews, interpreting services, deaf-link communication services, and patient safety alarms, can improve quality of care.	

(8)	The student understands the importance of using critical thinking skills in the nursing process. The student is expected to:	
(A)	analyze the components of conducting a comprehensive patient assessment;	
(B)	differentiate between subjective and objective data, including what the patient reports and what is observable and quantifiable;	
(C)	compare trends in health outcomes among diverse populations across the lifespan, including birth rates, life expectancy, mortality rates, and morbidity rates;	
(D)	interpret medical research using peer-reviewed articles to review efficacy in patient care;	
(E)	create a patient care plan using procedures such as assess, diagnose, plan, implement and evaluate (ADPIE) and subjective, objective, assess, plan, implement, and evaluate (SOAPIE);	
(F)	assess the impact of nursing interventions on patient condition in a simulated setting; and	
(G)	examine clinical outcomes based upon patient assessment, care plan, and nursing interventions.	
(9)	The student understands pharmacology terminology associated with nursing practices. The student is expected to:	
(A)	describe the eight rights of medication administration, including right patient, medication, dose, route, time, documentation, diagnosis, and response;	
(B)	describe the effects of medication on the human body system, including pharmacodynamics;	
(C)	explain pharmacokinetics in the human body system such as the course of drug absorption, distribution, metabolism, and excretion; and	
(D)	analyze the advantages and disadvantages of various routes of drug administration, including oral, injection, topical, buccal, suppository, mucosal, intravenous, interosseous, nebulization, and intrathecal.	