

# Health Science Theory

Subject: Career Development and Career and Technical Education

Grade: 10

Expectations: 52

Breakouts: 103

## (a) Introduction.

1. Career and technical education instruction provides content aligned with challenging academic standards, industry-relevant technical knowledge, and college and career readiness skills for students to further their education and succeed in current and 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 Health Science Theory course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will become familiar with industry-based standards for documenting and maintaining medical information; research industry employment requirements, including education, certification, and licensing requirements; and evaluate ethical and legal responsibilities of health science professionals. Students will employ hands-on experiences for continued clinical knowledge and skill development.
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. The health science industry is comprised of diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems that function individually and collaboratively to provide comprehensive health care. Students should identify the employment opportunities, technology, and safety requirements of each system. Students are expected to learn the knowledge and skills necessary to pursue a health science career through further education and employment.
6. 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.
7. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
8. 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.

## (b) Knowledge and Skills Statements

- (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;
    - (i) express ideas in a clear manner
    - (ii) express ideas in a concise manner
    - (iii) express ideas in a[n] effective manner

- (B) exhibit the ability to cooperate, contribute, and collaborate as a member of a team; and
    - (i) exhibit the ability to cooperate as a member of a team
    - (ii) exhibit the ability to contribute as a member of a team
    - (iii) exhibit the ability to collaborate as a member of a team
  - (C) model industry expectations of professional conduct such as attendance, punctuality, appropriate professional dress, proper hygiene, and time management.
    - (i) model industry expectations of professional conduct
- (2) The student demonstrates patient-centered skills and interactions that foster trust and lead to a quality customer service experience. The student is expected to:
- (A) demonstrate care, empathy, and compassion;
    - (i) demonstrate care
    - (ii) demonstrate empathy
    - (iii) demonstrate compassion
  - (B) communicate medical information accurately and efficiently in language that patients can understand; and
    - (i) communicate medical information accurately in language that patients can understand
    - (ii) communicate medical information efficiently in language that patients can understand
  - (C) comply with Health Insurance Portability and Accountability Act (HIPAA) policy standards.
    - (i) comply with Health Insurance Portability and Accountability Act (HIPAA) policy standards
- (3) The student applies mathematics, science, English language arts, and social studies in health science. The student is expected to:
- (A) solve mathematical calculations appropriate to situations in a healthcare-related environment;
    - (i) solve mathematical calculations appropriate to situations in a healthcare-related environment
  - (B) express ideas clearly in writing and develop skills in documentation related to health science;
    - (i) express ideas clearly in writing
    - (ii) develop skills in documentation related to health science
  - (C) interpret complex technical material related to the health science industry;
    - (i) interpret complex technical material related to the health science industry
  - (D) summarize biological and chemical processes in the body such as maintaining homeostasis; and
    - (i) summarize biological processes in the body
    - (ii) summarize chemical processes in the body
  - (E) research topics related to health science such as the global impact of disease prevention.
    - (i) research topics related to health science

- (4) The student demonstrates verbal, non-verbal, and electronic communication skills. The student is expected to:
- (A) demonstrate therapeutic communication appropriate to the situation;
    - (i) demonstrate therapeutic communication appropriate to the situation
  - (B) use appropriate verbal and non-verbal skills when communicating with persons with sensory loss and language barriers in a simulated setting; and
    - (i) use appropriate verbal skills when communicating with persons with sensory loss in a simulated setting
    - (ii) use appropriate verbal skills when communicating with persons with language barriers in a simulated setting
    - (iii) use appropriate non-verbal skills when communicating with persons with sensory loss in a simulated setting
    - (iv) use appropriate non-verbal skills when communicating with persons with language barriers in a simulated setting
  - (C) use electronic communication devices in the classroom or clinical setting appropriately.
    - (i) use electronic communication devices in the classroom or clinical setting appropriately
- (5) The student analyzes and evaluates communication skills for maintaining healthy relationships in the healthcare workplace. The student is expected to:
- (A) evaluate how healthy relationships influence career performance;
    - (i) evaluate how healthy relationships influence career performance
  - (B) identify the role of communication skills in building and maintaining healthy relationships;
    - (i) identify the role of communication skills in building healthy relationships
    - (ii) identify the role of communication skills in maintaining healthy relationships
  - (C) demonstrate strategies for communicating needs, wants, and emotions in a healthcare setting; and
    - (i) demonstrate strategies for communicating needs in a healthcare setting
    - (ii) demonstrate strategies for communicating wants in a healthcare setting
    - (iii) demonstrate strategies for communicating emotions in a healthcare setting
  - (D) evaluate the effectiveness of conflict-resolution techniques in various simulated healthcare workplace situations.
    - (i) evaluate the effectiveness of conflict-resolution techniques in various simulated healthcare workplace situations
- (6) The student documents and records medical information into a permanent health record. The student is expected to:
- (A) research document formats such as dental or medical records;
    - (i) research document formats
  - (B) prepare health documents or records according to industry-based standards; and
    - (i) prepare health documents or records according to industry-based standards
  - (C) record health information on paper and electronic formats such as patient history, vital statistics, and test results.
    - (i) record health information on paper

- (ii) record health information on electronic formats
- (7) The student describes industry requirements necessary for employment in health science occupations. The student is expected to:
- (A) research education, certification, licensing, and continuing education requirements and salary related to specific health science careers; and
    - (i) research education requirements related to specific health science careers
    - (ii) research certification requirements related to specific health science careers
    - (iii) research licensing requirements related to specific health science careers
    - (iv) research continuing education requirements related to specific health science careers
    - (v) research salary related to specific health science careers
  - (B) practice employment procedures for a specific health science career such as resume building, application completion, and interviewing.
    - (i) practice employment procedures for a specific health science career
- (8) The student identifies problems and participates in the decision-making process. The student is expected to:
- (A) apply critical-thinking, adaptability, and consensus-building skills to solve problems relevant to health science;
    - (i) apply critical-thinking skills to solve problems relevant to health science
    - (ii) apply adaptability skills to solve problems relevant to health science
    - (iii) apply consensus-building skills to solve problems relevant to health science
  - (B) evaluate the impact of decisions in health science; and
    - (i) evaluate the impact of decisions in health science
  - (C) suggest modifications to a decision or plan based on healthcare outcomes.
    - (i) suggest modifications to a decision or plan based on healthcare outcomes
- (9) The student demonstrates comprehension and proficiency of clinical skills used by health science professionals in a classroom or clinical setting. The student is expected to:
- (A) comply with specific industry standards related to safety requirements;
    - (i) comply with specific industry standards related to safety requirements
  - (B) employ medical vocabulary specific to the healthcare setting;
    - (i) employ medical vocabulary specific to the healthcare setting
  - (C) perform admission, discharge, and transfer functions in a simulated setting;
    - (i) perform admission functions in a simulated setting
    - (ii) perform discharge functions in a simulated setting
    - (iii) perform transfer functions in a simulated setting
  - (D) demonstrate skills related to assisting patients with activities of daily living such as dressing, undressing, grooming, bathing, and feeding;
    - (i) demonstrate skills related to assisting patients with activities of daily living

- (E) determine proper equipment needed for patient ambulation such as gait belts, wheelchairs, crutches, or walkers;
    - (i) determine proper equipment needed for patient ambulation
  - (F) demonstrate skills related to assessing range of motion and assisting with mobility, including positioning, turning, lifting, and transferring patients for treatment or examination;
    - (i) demonstrate skills related to assessing range of motion
    - (ii) demonstrate skills related to assisting with mobility, including positioning
    - (iii) demonstrate skills related to assisting with mobility, including turning
    - (iv) demonstrate skills related to assisting with mobility, including lifting
    - (v) demonstrate skills related to assisting with mobility, including transferring patients for treatment or examination
  - (G) role play techniques used in stressful situations such as situations involving trauma and chronic and terminal illness;
    - (i) role play techniques used in stressful situations
  - (H) demonstrate first aid, vital signs, cardiopulmonary resuscitation, and automated external defibrillator skills; and
    - (i) demonstrate first aid skills
    - (ii) demonstrate vital signs skills
    - (iii) demonstrate cardiopulmonary resuscitation skills
    - (iv) demonstrate automated external defibrillator skills
  - (I) identify basic skills specific to a health science profession such as medical assistant, dental assistant, emergency medical technician-basic, phlebotomy technician, and pharmacy technician.
    - (i) identify basic skills specific to a health science profession
- (10) The student evaluates ethical behavioral standards and legal responsibilities of a health science professional. The student is expected to:
- (A) research and describe the role of professional associations and regulatory agencies;
    - (i) research the role of professional associations
    - (ii) research the role of regulatory agencies
    - (iii) describe the role of professional associations
    - (iv) describe the role of regulatory agencies
  - (B) examine legal and ethical behavior standards such as Patient Bill of Rights, advanced directives, and HIPAA; and
    - (i) examine legal standards
    - (ii) examine ethical behavior standards
  - (C) investigate the legal, ethical, and professional ramifications of unacceptable or discriminatory behavior.
    - (i) investigate the legal ramifications of unacceptable or discriminatory behavior
    - (ii) investigate the ethical ramifications of unacceptable or discriminatory behavior
    - (iii) investigate the professional ramifications of unacceptable or discriminatory behavior

(11) The student exhibits the leadership skills necessary to function in a healthcare setting. The student is expected to:

- (A) identify essential leadership skills of health science professionals;
  - (i) identify essential leadership skills of health science professionals
- (B) assess group dynamics in real or simulated groups; and
  - (i) assess group dynamics in real or simulated groups
- (C) integrate consensus-building techniques.
  - (i) integrate consensus-building techniques

(12) The student maintains a safe work environment. The student is expected to:

- (A) describe governmental regulations and guidelines from entities such as the World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), Occupational Safety and Health Administration (OSHA), U.S. Food and Drug Administration (FDA), The Joint Commission, and the National Institute of Health (NIH), and Texas Department of State Health Services (DSHS);
  - (i) describe governmental regulations from entities
  - (ii) describe governmental guidelines from entities
- (B) explain protocols related to hazardous materials and situations such as personal protective equipment (PPE) and blood borne pathogen exposure;
  - (i) explain protocols related to hazardous materials
  - (ii) explain protocols related to hazardous situations
- (C) describe how to assess and report unsafe conditions;
  - (i) describe how to assess unsafe conditions
  - (ii) describe how to report unsafe conditions
- (D) identify the benefits of recycling and waste management for cost containment and environmental protection; and
  - (i) identify the benefits of recycling for cost containment
  - (ii) identify the benefits of recycling for environmental protection
  - (iii) identify the benefits of waste management for cost containment
  - (iv) identify the benefits of waste management for environmental protection
- (E) demonstrate proper body mechanics to reduce the risk of injury.
  - (i) demonstrate proper body mechanics to reduce the risk of injury

(13) The student assesses wellness strategies for the prevention of disease. The student is expected to:

- (A) research wellness strategies for the prevention of disease;
  - (i) research wellness strategies for the prevention of disease
- (B) evaluate positive and negative effects of relationships on physical and emotional health;
  - (i) evaluate positive effects of relationships on physical health
  - (ii) evaluate positive effects of relationships on emotional health

- (iii) evaluate negative effects of relationships on physical health
- (iv) evaluate negative effects of relationships on emotional health
- (C) explain the benefits of positive relationships between community members and health professionals in promoting a healthy community;
  - (i) explain the benefits of positive relationships between community members and health professionals in promoting a healthy community
- (D) research and analyze the effects of access to quality health care;
  - (i) research the effects of access to quality health care
  - (ii) analyze the effects of access to quality health care
- (E) research alternative health practices and therapies; and
  - (i) research alternative health practices
  - (ii) research alternative therapies
- (F) explain the changes in structure and function of the body due to trauma and disease.
  - (i) explain the changes in structure of the body due to trauma
  - (ii) explain the changes in structure of the body due to disease
  - (iii) explain the changes in function of the body due to trauma
  - (iv) explain the changes in function of the body due to disease