Texas CTE: Health Science

Health Informatics

Implementation. A

1 The provisions of this section shall be implemented by school districts beginning with the 2022- 2023 school year. A.1

2 School districts shall implement the employability skills student expectations listed in §127.15(d)(2) of this chapter (relating to Career and Technical Education Employability Skills) as an integral part of this course. A.2

General requirements. This course is recommended for students in Grades 11 and 12. Prerequisite: Medical Terminology. Recommended prerequisites: Principles of Health Science and Business Information Management I. Students shall be awarded one credit for successful completion of this course. B

b General requirements. This course is recommended for students in Grades 11 and 12. Prerequisite: Medical Terminology. Recommended prerequisites: Principles of Health Science and Business Information Management I. Students shall be awarded one credit for successful completion of this course. B

Introduction. C

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. C.1

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. C.2

3 The Health Informatics course is designed to provide knowledge of one of the fastest growing areas in both academic and professional fields. Healthcare information technology has 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. This course will include a focus on billing and coding. C.3

4 **Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other organizations that foster leadership and career development in the profession such as student chapters of related professional associations.** C.4

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.** C.5

Knowledge and skills. D

1 **The student interprets fundamental knowledge of concepts of health information systems technology and the tools for collecting, storing, and retrieving health care data. The student is expected to:** D.1

- A discuss, define, and differentiate the common health information systems such as electronic medical records and electronic health records, practice management software, master patient index (MPI), patient portals, remote patient monitoring, and clinical decision support; and D.1.A
- B explain how various health information systems support the administrative, financial, clinical, and research needs of a health care enterprise. D.1.B

2 **The student employs the various types of databases in relation to health informatics. The student is expected to:** D.2

- A define the function of a database management system; D.2.A
- B identify the purpose of data modeling; D.2.B
- C define the customary steps in the data modeling process; D.2.C
- D differentiate between entities, attributes, and relationships in a data model; and D.2.D
- E explain various types of organizational databases. D.2.E

3 **The student distinguishes between data and information. The student is expected to:** D.3

- A discuss the importance of data security, accuracy, integrity, reliability, and validity; and D.3.A
- B demonstrate an understanding of data information concepts for health information systems, electronic health records, and patient registries. D.3.B

4 **The student examines the evolution of the health information system. The student is expected to:** D.4

- A evaluate the growing role of the electronic health record; D.4.A
- B review the progress of the development of the electronic health record; D.4.B
- C explain functional requirements for electronic health records; and D.4.C
- D explain the concept and importance of the interoperability of electronic health records and other health information systems. D.4.D

5 The student examines the process of medical diagnostic and coding concepts as well as current procedural practices. The student is expected to: D.5

- A examine Health Insurance Portability and Accountability Act (HIPAA) guidelines for confidentiality, privacy, and security of a patient's information within the medical record; D.5.A
- B differentiate between insurance fraud and insurance abuse; D.5.B
- C discuss the linkage between current procedural terminology (CPT) codes; International Classification of Diseases, 10th revision, Clinical Modification (ICD-10-CM) codes; and medical necessity for reimbursement for charges billed; D.5.C
- D search ICD-10-CM code system for correct diagnosis code using patient information; D.5.D
- E identify the two types of codes in the health care common procedure coding system (HCPCS); and D.5.E
- F explain how medical coding affects the payment process. D.5.F

6 The student identifies agencies involved in the health insurance claims process. The student is expected to: D.6

- A define fiscal intermediary; D.6.A
- B define Medicaid and Medicare; D.6.B
- C discuss health care benefit programs such as TRICARE and Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA); D.6.C
- D explain how to manage a worker's compensation case; D.6.D
- E complete a current health insurance claim form such as the Centers for Medicare and Medicaid Service (CMS-1500) form; and D.6.E
- F identify three ways to transmit electronic claims. D.6.F