



# Indiana Content Standards for Educators

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## CAREER AND TECHNICAL EDUCATION—HEALTH CAREERS EDUCATION

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Health careers education teachers are expected to have a broad and comprehensive understanding of the knowledge and skills needed for this educator license, and to use that knowledge to help students prepare for the challenges and opportunities of the twenty-first century. This requires the ability to identify, comprehend, analyze, synthesize, and evaluate the basic principles, fundamental concepts, and essential content defined in these standards, and to apply that knowledge to the tasks of planning and delivering effective instruction and assessment.

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## **Career and Technical Education—Health Careers Education Educator Standards**

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### **Standard 1: Anatomy, Physiology, and Related Sciences**

Health careers education teachers have a broad and comprehensive understanding of basic anatomy and physiology and of chemistry, biochemistry, mathematics, and pharmacology.

### **Standard 2: Health Terminology, Technology, and Research Methods**

Health careers education teachers have a broad and comprehensive understanding of health terminology, technology, and research methods.

### **Standard 3: Individual and Community Health**

Health careers education teachers have a broad and comprehensive understanding of individual and community health.

### **Standard 4: Safety Practices and Emergency Health Care**

Health careers education teachers have a broad and comprehensive understanding of safety practices and emergency health care.

### **Standard 5: Technical Knowledge and Skills for Specific Health-Care Occupations**

Health careers education teachers have a broad and comprehensive understanding of technical knowledge and skills for the specific health-care occupations in which teachers are certified.

### **Standard 6: Health-Care Delivery Systems, Administrative Procedures, and Information Management**

Health careers education teachers have a broad and comprehensive understanding of health-care delivery systems, administrative procedures, and information management.

### **Standard 7: Legal and Ethical Responsibilities in Health Care**

Health careers education teachers have a broad and comprehensive understanding of legal and ethical responsibilities in health care.

### **Standard 8: Careers in Health Care**

Health careers education teachers have a broad and comprehensive understanding of the characteristics and requirements of careers in health care.

### **Standard 9: Core Knowledge and Skills for Health Careers Education Teachers**

Health careers education teachers have a broad and comprehensive understanding of core knowledge and skills in health careers education.

### **Standard 10: Health Careers Education Instruction and Assessment**

Health careers education teachers have a broad and comprehensive understanding of instruction and assessment in career and technical education and health careers education.

# Career and Technical Education—Health Careers Education Educator Standards

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## Standard 1: Anatomy, Physiology, and Related Sciences

**Health careers education teachers have a broad and comprehensive understanding of basic anatomy and physiology and of chemistry, biochemistry, mathematics, and pharmacology, including:**

- 1.1** basic principles of chemistry and biochemistry
- 1.2** basic anatomy of the human body and related terminology
- 1.3** metabolic process and mechanisms that maintain homeostasis
- 1.4** characteristics and functions of cells and tissues in the human body
- 1.5** characteristics, functions, and processes of human organs and organ systems
- 1.6** genetic processes by which traits are transmitted and inherited
- 1.7** characteristics of common diseases and disorders, including their symptoms and treatments
- 1.8** characteristics of commonly used pharmaceuticals and their means of action
- 1.9** applications of basic math skills in health-care situations

## Standard 2: Health Terminology, Technology, and Research Methods

**Health careers education teachers have a broad and comprehensive understanding of health terminology, technology, and research methods, including:**

- 2.1** terminology, including abbreviations, commonly used in medical and health-care professions
- 2.2** characteristics and functions of instruments and equipment commonly used in medical and health-care professions
- 2.3** characteristics and functions of assistive devices commonly used in medical and health-care professions
- 2.4** characteristics of and procedures for operating computer hardware and software commonly used in medical and health-care professions
- 2.5** types, characteristics, and uses of diagnostic tests commonly used in health care
- 2.6** concepts, processes, and research techniques used in laboratory and field investigations

## Standard 3: Individual and Community Health

**Health careers education teachers have a broad and comprehensive understanding of individual and community health, including:**

- 3.1** the importance of community health in society and strategies and procedures used to maintain and ensure community health
- 3.2** environmental factors that affect the health of individuals and populations
- 3.3** lifestyle factors that affect the health of individuals and populations
- 3.4** personal behaviors, such as proper nutrition, adequate sleep, personal hygiene, and appropriate exercise, that contribute to good health

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### **Standard 4: Safety Practices and Emergency Health Care**

**Health careers education teachers have a broad and comprehensive understanding of safety practices and emergency health care, including:**

- 4.1** principles and methods of infection control and controlling the spread and growth of microorganisms
- 4.2** principles and methods for using effective body mechanics to safely support, lift, and position patients
- 4.3** procedures for implementing universal precautions and for handling and disposing of hazardous materials
- 4.4** strategies for effective decision making and assessment in an emergency situation
- 4.5** methods for providing first aid in an emergency
- 4.6** methods for administering cardiopulmonary resuscitation (CPR) and using an automated external defibrillator (AED) in emergency situations
- 4.7** methods for taking and interpreting an individual's vital signs

### **Standard 5: Technical Knowledge and Skills for Specific Health-Care Occupations**

**Health careers education teachers have a broad and comprehensive understanding of technical knowledge and skills for the specific health-care occupations in which teachers are certified, including:**

- 5.1** technology, methods, processes, and procedures used in specific health-care occupations
- 5.2** strategies for maintaining an up-to-date and current knowledge base about technology, methods, processes, and procedures used in specific health-care occupations

### **Standard 6: Health-Care Delivery Systems, Administrative Procedures, and Information Management**

**Health careers education teachers have a broad and comprehensive understanding of health-care delivery systems, administrative procedures, and information management, including:**

- 6.1** types and characteristics of health-care delivery systems, including public, private, and governmental hospitals, clinics, and other facilities
- 6.2** types and characteristics of health insurance systems, including health maintenance organizations and government systems such as Medicare and Medicaid
- 6.3** social, political, and economic factors affecting health-care delivery systems and health insurance systems
- 6.4** administrative procedures and technology used for producing, managing, and maintaining medical and financial records
- 6.5** strategies, technology, and procedures for producing, managing, and maintaining electronic records and for converting paper-based records to electronic records

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### Standard 7: Legal and Ethical Responsibilities in Health Care

**Health careers education teachers have a broad and comprehensive understanding of legal and ethical responsibilities in health care, including:**

- 7.1** legal responsibilities of health-care professionals for maintaining accurate documentation and records
- 7.2** provisions of the Health Insurance Portability and Accountability Act (HIPAA)
- 7.3** provisions of the Patient’s Bill of Rights
- 7.4** laws and policies related to advance directives, informed consent, and designation of health-care proxies
- 7.5** laws and regulations defining duties and scope of practice of various health-care professions
- 7.6** differences between legal and ethical issues affecting health care
- 7.7** ethical issues related to health care, such as treating patients with diverse religious and cultural values
- 7.8** the importance of providing respectful and empathetic treatment to all patients and clients

### Standard 8: Careers in Health Care

**Health careers education teachers have a broad and comprehensive understanding of the characteristics and requirements of careers in health care, including:**

- 8.1** professional standards in dress, behavior, and language of health-care professionals and personal traits and attitudes desirable in a member of a health-care team
- 8.2** personal characteristics and skills necessary for success in the workplace
- 8.3** types and characteristics of career opportunities in health-care-related fields
- 8.4** skills, levels of education, experience, and credentialing requirements for employment in various health-care careers
- 8.5** strategies for career development in health care, including establishing personal goals, identifying potential careers, and developing career plans
- 8.6** strategies and skills for job seeking, including identifying job opportunities, writing résumés, completing applications, and participating in interviews
- 8.7** strategies and skills for lifelong learning in health care, including opportunities for continuing education and training in the field

## Career and Technical Education—Health Careers Education Educator Standards

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### **Standard 9: Core Knowledge and Skills for Health Careers Education Teachers**

**Health careers education teachers have a broad and comprehensive understanding of core knowledge and skills in health careers education, including:**

- 9.1** the structure and delivery of career and technical education in the United States and Indiana and state and federal laws and regulations pertaining to career and technical education
- 9.2** Common Core Standards for English Language Arts and Mathematics and their application in health careers education
- 9.3** basic interpersonal, communication, and teamwork skills needed in the health-care workplace
- 9.4** important individuals, developments, and events in the history of medicine, health care, career and technical education, and health careers education and their significance
- 9.5** social, political, legal, and ethical issues in health careers education
- 9.6** principles and practices for ensuring the safety of students in health-care classrooms, laboratories, and school-to-work experiences
- 9.7** strategies and procedures for coordinating and supervising students' school-to-work experiences and for assessing student learning during their school-to-work experiences
- 9.8** missions, goals, and organizational structures of career and technical student organizations related to health careers education; roles and responsibilities of faculty advisors to these organizations; and strategies for fostering leadership skills in students
- 9.9** strategies for outreach in health careers education, including strategies for working with local advisory committees
- 9.10** strategies for professional development and for maintaining and improving technical skills used in health-care occupations

## Career and Technical Education—Health Careers Education Educator Standards

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### Standard 10: Health Careers Education Instruction and Assessment

**Health careers education teachers have a broad and comprehensive understanding of instruction and assessment in career and technical education and health careers education, including:**

- 10.1** the Indiana Academic Standards for Health Careers Education
- 10.2** the National Healthcare Foundation Standards and Accountability Criteria and the ISTE National Educational Technology Standards
- 10.3** instructional strategies and resources for integrating instruction that promotes students' achievement of the Common Core Standards for English Language Arts and Mathematics
- 10.4** instructional strategies and resources, including inquiry-based instruction, for promoting students' understanding of concepts and skills related to health care
- 10.5** strategies and skills for planning, designing, and delivering instruction in health careers education, including the use of techniques and approaches that meet the needs of diverse learners
- 10.6** instructional strategies for promoting student learning and fostering the development of critical-thinking, higher-order thinking, problem-solving, and performance skills in health careers education
- 10.7** strategies and skills for creating a productive learning environment using knowledge of student behavior, organizational skills, and classroom management skills
- 10.8** communication methods that promote student learning and foster active inquiry, interaction, and collaboration in the health careers education classroom
- 10.9** strategies and skills for selecting, adapting, and using technological resources to enhance teaching and learning
- 10.10** strategies for promoting students' skills and knowledge required for future success in the workplace, in health-care-related careers, and in post-secondary education
- 10.11** strategies and skills for effectively assessing students' understanding and mastery of essential concepts and skills in health careers education



## Selected Bibliography of Standards and Sources Related to Career and Technical Education—Health Careers Education

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### State and National Standards and Curriculum Frameworks

1. Indiana Department of Education. *Indiana academic standards for health careers education*. <http://dc.doe.in.gov/Standards/AcademicStandards/StandardSearch.aspx>
2. National Consortium on Health Science and Technology Education. (2002). *Diagnostic services pathway standards & accountability criteria*. [http://www.healthscienceconsortium.org/docs/diag\\_svcs\\_pathway.pdf](http://www.healthscienceconsortium.org/docs/diag_svcs_pathway.pdf)
3. National Consortium on Health Science and Technology Education. (2002). *Health informatics pathway standards & accountability criteria*. [http://www.healthscienceconsortium.org/docs/health\\_info\\_pathway.pdf](http://www.healthscienceconsortium.org/docs/health_info_pathway.pdf)
4. National Consortium on Health Science and Technology Education. (2009). *National healthcare foundation standards and accountability criteria*. <http://www.healthscienceconsortium.org/docs/foundation-standards-ac-may-09.pdf>
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### Sources on Career and Technical Education—Health Careers Education Content

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8. Gyls, B. A., & Wedding, M. E. (2009). *Medical terminology systems* (6th ed.). Philadelphia, PA: F. A. Davis.
9. Limmer, D. J., O'Keefe, M. F., Grant, H., Murray, B., Bergeron, J. D., & Dickinson, E. (2008). *Emergency care* (11th ed.). Upper Saddle River, NJ: Prentice Hall.
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11. Kovner, A. R., & Knickman, J. R. (2008). *Health care delivery in the United States* (9th ed.). New York: Springer.
12. O'Sullivan, S. B., & Smitz, T. J. (2007). *Physical rehabilitation* (5th ed.). Philadelphia, PA: F. A. Davis.
13. Lewis, M. A., & Tamparo, C. D. (2007). *Medical law, ethics, and bioethics for medical professions* (6th ed.). Philadelphia, PA: F. A. Davis.
14. Sorrentino, S. A., & Kelly, R. T. (2007). *Mosby's textbook for nursing assistants: Textbook and workbook package*. Maryland Heights, MO: Mosby.
15. Robinson, D. S., & Bird, D. L. (2007). *Essentials of dental assisting*. Maryland Heights, MO: Saunders.
16. Tamparo, C. D., & Lewis, M. A. (2006). *Diseases of the human body* (4th ed.). Philadelphia, PA: F. A. Davis.

## Selected Bibliography of Standards and Sources Related to Career and Technical Education—Health Careers Education

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### Sources on Student Learning and Pedagogical Methodology

17. National Research Center for Career and Technical Education. (2010). *Capitalizing on context: Curriculum integration in career and technical education*. Louisville, KY: National Research Center for Career and Technical Education, University of Louisville.
18. National Research Center for Career and Technical Education. (2010). *Professional development for secondary career and technical education: Implications for change*. Louisville, KY: National Research Center for Career and Technical Education, University of Louisville.
19. Rehm, M. L. (2008). Career and technical education teachers' perceptions of culturally diverse classes: Rewards, difficulties, and useful teaching strategies. *Career and Technical Education Research, 33*(1), 45–64.
20. Scott, J. L., & Sarkees-Wircenski, M. (2008). *Overview of career and technical education* (4th ed.). Orland Park, IL: American Technical.
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23. Hansen, D. M., Aragon, S. R., & Stone, J. R. (2006). Inside the black box: Exploring the value added by career and technical student organizations to students' high school experience. *Career and Technical Education Research, 31*(3), 121–155.
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## Alignment of Educator Standards with State and National Standards

Indiana Educator Standards for Career and Technical Education—Health Careers Education	Indiana Course Content and Performance Expectation Standards for Career and Technical Education—Health Careers Education	National Healthcare Foundation Standards and Accountability Criteria	ISTE National Educational Technology Standards
<p><b><u>Standard 1: Anatomy, Physiology, and Related Sciences</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of basic anatomy and physiology and of chemistry, biochemistry, mathematics, and pharmacology.</p>	<p>AP.1–30, IHS1.2, IHS2.5, HCSY.8, HCT.3</p>	<p>1.1–1.3</p>	
<p><b><u>Standard 2: Health Terminology, Technology, and Research Methods</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of health terminology, technology, and research methods.</p>	<p>IHS1.3, IHS1.5, IHS2.2–3, HCSY.4, HCSY.10, HCT.2,4,6,8–9</p>	<p>2.2, 11.2</p>	
<p><b><u>Standard 3: Individual and Community Health</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of individual and community health.</p>	<p>IHS1.4, IHS1.8, CHS.5, HCSY.5–7, HCSY.9</p>	<p>9.1</p>	
<p><b><u>Standard 4: Safety Practices and Emergency Health Care</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of safety practices and emergency health care.</p>	<p>DHC.8–9, IHS1.7, IHS2.4, EMS.1,5,7</p>	<p>7.1–7.5, 10.1</p>	
<p><b><u>Standard 5: Technical Knowledge and Skills for Specific Health-Care Occupations</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of technical knowledge and skills for the specific health-care occupations in which teachers are certified.</p>	<p>DA1.1–7, DA2.1–4, DA3.1–6, DA4.1–4, DHC4–9, CHS.2–4, HCS.4–8, EMS.1,3–7, MA.1–6, PH.1–9, PT.1–11, 13–14</p>	<p>10.1, 11.1–11.2</p>	

## Alignment of Educator Standards with State and National Standards

Indiana Educator Standards for Career and Technical Education—Health Careers Education	Indiana Course Content and Performance Expectation Standards for Career and Technical Education—Health Careers Education	National Healthcare Foundation Standards and Accountability Criteria	ISTE National Educational Technology Standards
<p><b><u>Standard 6: Health-Care Delivery Systems, Administrative Procedures, and Information Management</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of health-care delivery systems, administrative procedures, and information management.</p>	<p>HCSY.1, PT.14, EMS.1, MA.4</p>	<p>3.1, 5.1, 11.1–11.2</p>	
<p><b><u>Standard 7: Legal and Ethical Responsibilities in Health Care</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of legal and ethical responsibilities in health care.</p>	<p>DHC.4, HCT.7, EMS.3, PH.2, PT.3</p>	<p>5.1–5.2, 6.1–6.3</p>	
<p><b><u>Standard 8: Careers in Health Care</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of the characteristics and requirements of careers in health care.</p>	<p>DHC.2–3, IHS2.6, HCP.1–2, CHS.1, HCS.1, HCSY.2, HCT.1, EMS.2, MA.1, PH.1, PT.1</p>	<p>3.1, 4.1–4.4, 8.1–8.2</p>	
<p><b><u>Standard 9: Core Knowledge and Skills for Health Careers Education Teachers</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of core knowledge and skills in health careers education.</p>	<p>DHC.1, IHS1.1, IHS1.6, IHS2.1, HCP.3, HCP.6, HCS.2–3, HCSY.3, MA.2–3</p>	<p>2.1, 2.3, 5.1–5.2, 6.1–6.3, 7.1–7.4</p>	<p>5a–5d</p>
<p><b><u>Standard 10: Health Careers Education Instruction and Assessment</u></b></p> <p>Health careers education teachers have a broad and comprehensive understanding of instruction and assessment in career and technical education and health careers education.</p>			<p>1a–1d; 2a–2d; 3a–3d; 4a–4d</p>