

**Health Science Career Cluster  
Introduction to Healthcare Science  
Course Number 25.52100**

**Course Description:**

Introduction to Healthcare Science is the foundational course for all Health Science pathways and is a prerequisite for all other Health Science pathway courses. This course will enable students to receive initial exposure to the many healthcare careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care are evaluated, as well as the legal and ethical responsibilities of today’s healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid. This course will provide students with a competitive edge to be the better candidate for either entry into the healthcare global marketplace and/or the post-secondary institution of their choice to continue their education and training.

There are no prerequisite courses required for this course; however, students that have access to the middle school Health Science standards will gain a foundational knowledge for this course.

**Course Standard 1**

**HS-IHS-1**

The following standard is included in all CTAE courses adopted for the Career Cluster/Pathways. Teachers should incorporate the elements of this standard into lesson plans during the course. The topics listed for each element of the standard may be addressed in differentiated instruction matching the content of each course. These elements may also be addressed with specific lessons from a variety of resources. This content is not to be treated as a unit or separate body of knowledge but rather integrated into class activities as applications of the concept.

**Standard: Demonstrate employability skills required by business and industry.**

The following elements should be integrated throughout the content of this course.

**1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.**

Person-to-Person Etiquette	Telephone and Email Etiquette	Cell Phone and Internet Etiquette	Communicating At Work	Listening
Interacting with Your Boss	Telephone Conversations	Using Blogs	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Using Social Media	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls		Effective Written Communication	Ways We Filter What We Hear
Interacting with Suppliers	Making Cold Calls		Effective Nonverbal Skills	Developing a Listening Attitude
	Handling Conference Calls		Effective Word Use	Show You Are Listening
	Handling Unsolicited Calls		Giving and Receiving Feedback	Asking Questions
				Obtaining Feedback
				Getting Others to Listen

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<b>Nonverbal Communication</b>	<b>Written Communication</b>	<b>Speaking</b>	<b>Applications and Effective Résumés</b>
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application
Reading Body Language and mixed Messages	Constructive Criticism in Writing	One-on-One Conversations	Writing a Cover Letter
Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé
Improving Nonverbal Indicators		Large Group Communication	Selling Yourself in a Résumé
Nonverbal Feedback		Making Speeches	Terms to Use in a Résumé
Showing Confidence Nonverbally		Involving the Audience	Describing Your Job Strengths
Showing Assertiveness		Answering Questions	Organizing Your Résumé
		Visual and Media Aids	Writing an Electronic Résumé
		Errors in Presentation	Dressing Up Your Résumé

**1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.**

<b>Teamwork and Problem Solving</b>	<b>Meeting Etiquette</b>
Thinking Creatively	Preparation and Participation in Meetings
Taking Risks	Conducting Two-Person or Large Group Meetings
Building Team Communication	Inviting and Introducing Speakers
	Facilitating Discussions and Closing
	Preparing Visual Aids
	Virtual Meetings

**1.3 Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations.**

<b>Problem Solving</b>	<b>Customer Service</b>	<b>The Application Process</b>	<b>Interviewing Skills</b>	<b>Finding the Right Job</b>
Transferable Job Skills	Gaining Trust and Interacting with Customers	Providing Information, Accuracy and Double Checking	Preparing for an Interview	Locating Jobs and Networking
Becoming a Problem Solver	Learning and Giving Customers What They Want	Online Application Process	Questions to Ask in an Interview	Job Shopping Online
Identifying a Problem	Keeping Customers Coming Back	Following Up After Submitting an Application	Things to Include in a Career Portfolio	Job Search Websites
Becoming a Critical Thinker	Seeing the Customer's Point	Effective Résumés:	Traits Employers are Seeking	Participation in Job Fairs
Managing	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	Searching the Classified Ads
	Handling Customer Complaints	When a Résumé Should be Used		Using Employment Agencies
	Strategies for Customer Service			Landing an Internship
				Staying Motivated to Search

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**1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.**

<b>Workplace Ethics</b>	<b>Personal Characteristics</b>	<b>Employer Expectations</b>	<b>Business Etiquette</b>	<b>Communicating at Work</b>
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers
Maintaining Honesty	Demonstrating Responsibility	Establishing Credibility	Avoiding Gossip	Dealing with a Difficult Boss
Playing Fair	Showing Dependability	Demonstrating Your Skills	Appropriate Work Email	Dealing with Difficult Customers
Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict
Showing Responsibility	Gaining Coworkers' Trust		Appropriate Work Texting	
Reducing Harassment	Persevering		Understanding Copyright	
Respecting Diversity	Handling Criticism		Social Networking	
Making Truthfulness a Habit	Showing Professionalism			
Leaving a Job Ethically				

**1.5 Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply teamwork skills.**

<b>Expected Work Traits</b>	<b>Teamwork</b>	<b>Time Management</b>
Demonstrating Responsibility	Teamwork Skills	Managing Time
Dealing with Information Overload	Reasons Companies Use Teams	Putting First Things First
Transferable Job Skills	Decisions Teams Make	Juggling Many Priorities
Managing Change	Team Responsibilities	Overcoming Procrastination
Adopting a New Technology	Problems That Affect Teams	Organizing Workspace and Tasks
	Expressing Yourself on a Team	Staying Organized
	Giving and Receiving Constructive Criticism	Finding More Time
		Managing Projects
		Prioritizing Personal and Work Life

**1.6 Present a professional image through appearance, behavior, and language.**

<b>On-the-Job Etiquette</b>	<b>Person-to-Person Etiquette</b>	<b>Communication Etiquette</b>	<b>Presenting Yourself</b>
Using Professional Manners	Meeting Business Acquaintances	Creating a Good Impression	Looking Professional
Introducing People	Meeting People for the First Time	Keeping Phone Calls Professional	Dressing for Success
Appropriate Dress	Showing Politeness	Proper Use of Work Email	Showing a Professional Attitude
Business Meal Functions		Proper Use of Cell Phone	Using Good Posture
Behavior at Work Parties		Proper Use in Texting	Presenting Yourself to Associates
Behavior at Conventions			Accepting Criticism
International Etiquette			Demonstrating Leadership
Cross-Cultural Etiquette			
Working in a Cubicle			

## Course Standard 2

### HS-IHS-2

**Demonstrate safe work practices and follow health & safety policies and procedures to prevent injury and illness.**

- 2.1 Explain the following agencies' role in healthcare practice:
  - a. Occupational Health and Safety Administration (OSHA)
  - b. Centers for Disease Control and Prevention (CDC)
  - c. U.S. Food and Drug Administration (FDA)
- 2.2 Demonstrate principles of body mechanics while ambulating, lifting, and positioning patients.
- 2.3 Demonstrate proper application and use of personal protective equipment (PPE) and personal safety procedures based on OSHA and the CDC during pre/post exposure.
- 2.4 Identify safety hazards associated with operating equipment in a healthcare setting.
- 2.5 Identify and explain safety signs, symbols, and labels.
- 2.6 Research and discuss all safety standards related to occupational exposure to hazardous chemicals, including the use of Safety Data Sheets (SDS).
- 2.7 Illustrate and demonstrate fire safety in a home and healthcare setting.
- 2.8 Demonstrate basic emergency procedures and protocol followed in natural disasters and other emergencies, including identifying a safe location, contacting emergency personnel, following facility protocols, etc.

## Course Standard 3

### HS-IHS-3

**Identify how key systems affect services performed and quality of care.**

- 3.1 Discuss the history of health services worldwide.
- 3.2 Differentiate healthcare delivery systems and healthcare related agencies such as types of practice settings, specialty medical and dental practices, government agencies, and related nonprofit organizations (ACS, AHA, ARC, March of Dimes, WHO, etc.).
- 3.3 Describe the patient's rights and responsibilities within the healthcare system.
- 3.4 Explain the impact that emerging issues have on the healthcare delivery system such as behavioral/mental health, bioethics, epidemiology, socioeconomics, and information technology.
- 3.5 Discuss common methods of payment for healthcare including insurance, medical coding, premium, co-payment, deductible, etc.
- 3.6 Describe the different types of insurance plans such as private, managed care (HMO, IPA, PPO), and government programs (ACA, Medicaid, Medicare, Tricare, Workers' Compensation).

## Course Standard 4

### HS-IHS-4

**Create a Career Path Plan.**

- 4.1 Compare careers within the health science career pathways:
  - a. Biotechnology Research & Development
  - b. Diagnostic Services
  - c. Health Informatics
  - d. Support Services
  - e. Therapeutic Services
- 4.2 Research levels of education, credentials, licensing, certifications, pay, and job outlook in various health careers.
- 4.3 Discuss complementary health practices and career opportunities.
- 4.4 Identify and develop entrepreneurial opportunities in healthcare. (See GaDOE CTAE Entrepreneurship Framework.)
- 4.5 Analyze the roles and responsibilities of individual members as part of the health care team, including their ability to promote the delivery of quality health care.
  - a. Identify characteristics of effective teams.
  - b. Recognize methods for building positive team relationships.

- c. Describe the characteristics of an effective leader.
  - d. Define different types of leadership: autocratic, democratic, and laissez faire.
  - e. Discuss the roles of an effective leader.
  - f. Describe an effective team player.
  - g. Demonstrate effective techniques for managing team conflict.
  - h. Explain why teamwork is an important part of healthcare and how it improves patient care.
- 4.6 Analyze personal career goals and develop a career plan.
- 4.7 Create an employability portfolio, including a resume, cover letter, community service, etc.

## Course Standard 5

### HS-IHS-5

#### **Research accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare environment.**

- 5.1 Differentiate between ethical and legal issues impacting healthcare.
- 5.2 Identify ethical issues and their implications related to healthcare.
- 5.3 Discuss religious, social, and cultural values as they impact healthcare.
- 5.4 Demonstrate respectful and empathetic treatment of ALL patients, clients, and families.
- 5.5 Explain how diversity affects healthcare delivery, including healthcare disparity and social determinants of health (such as zip code, internet disparity, etc.)
- 5.6 Recognize the Code of Ethics for the healthcare professional.

## Course Standard 6

### HS-IHS-6

#### **Demonstrate an understanding of the legal responsibilities, limitations, and implications of healthcare workers within the healthcare delivery setting.**

- 6.1 Analyze legal responsibilities and implications of criminal and civil law regarding abuse, assault, battery, harassment, invasion of privacy, libel, malpractice, negligence, slander, and tort.
- 6.2 Explain the standards for the safety, privacy, and confidentiality of health information, including HIPAA and privileged communication.
- 6.3 Describe advance directives.
- 6.4 Discuss the characteristics of a patient's basic rights within a healthcare setting.
- 6.5 Compare and contrast informed and implied consent.
- 6.6 Explain the concept of following a scope of practice.
- 6.7 Demonstrate following institutional policies and procedures in reporting incident reports and unethical behaviors that affect the health, safety, and welfare of others.
- 6.8 Describe legal aspects of digital healthcare (privacy, encryption of data, etc.).

## Course Standard 7

### HS-IHS-7

#### **Demonstrate methods of delivering and obtaining information, while communicating effectively with patients, team members and management (in person and/or virtual environments).**

- 7.1 Model appropriate verbal and nonverbal communication.
- 7.2 Identify common barriers to communication including physical, psychological, cultural, socioeconomic, and language attributes.
- 7.3 Distinguish between subjective and objective information.
- 7.4 Explain the elements of communication using a sender-receiver model.
- 7.5 Demonstrate age-appropriate, positive communication skills between a patient and a clinician in a variety of scenarios, including conflict resolution and de-escalation methods.
- 7.6 Demonstrate appropriate, positive communication skills between a healthcare employee and a coworker or leader in a variety of scenarios, including providing and receiving constructive criticism.
- 7.7 Demonstrate proper elements of written and electronic communication (spelling, grammar, and formatting).
- 7.8 Use common roots, prefixes, and suffixes to communicate information.

7.9 Interpret common medical abbreviations and terminology to communicate information.

## Course Standard 8

### HS-IHS-8

#### Practice healthy behaviors that promote disease prevention and self-care management.

- 8.1 Promote self-care behaviors of mental and physical health and wellness, including sleep, healthy diet, and regular physical activity.
- 8.2 Research various aspects of mental and behavioral health, including anxiety, depression, substance abuse, and suicide.
- 8.3 Describe public health strategies for prevention of disease (ex: community health education, immunizations, medical/dental/mental health screenings, routine physical exams, self-care behaviors, etc.).
- 8.4 Research complementary and alternative health practices as they relate to wellness and disease prevention (Eastern medicine, holistic medicine, homeopathic medicine, manipulative medicine)
- 8.5 Create a self-care plan.

## Course Standard 9

### HS-IHS-9

#### Analyze different types of microorganisms and their defining characteristics, and demonstrate steps to reduce the risk of infection or illness by preventing and controlling the spread of microbial growth.

- 9.1 Identify classifications of pathogens: bacteria, fungi, parasites, protozoa, and viruses.
- 9.2 Describe characteristics of microorganisms: aerobic, anaerobic, non-pathogenic, and pathogenic.
- 9.3 Illustrate and describe the chain of infection.
- 9.4 Describe modes of transmission (common means/air/food/water, direct, indirect, HAI, opportunistic, vectors).
- 9.5 Define bloodborne, airborne, contact, and droplet pathogens and the steps of prevention of each.
- 9.6 Analyze ways and incubation time frames that microorganisms are spread using the chain of infection model, including human immunodeficiency virus (HIV) / acquired immunodeficiency syndrome (AIDS), Hepatitis (A, B, C), Tuberculosis, Meningitis, antibiotic resistant microbes, and Herpes Viruses.
- 9.7 Discuss asepsis and the value in ensuring an aseptic field in healthcare.
- 9.8 Compare and demonstrate various physical (cleaning, hand washing, PPE, gloving sterile/non-sterile technique, etc.) and chemical methods (antiseptics, disinfection, sanitization, and sterilization) used to control or prevent microbial growth pre/post exposure per OSHA and CDC guidelines.
- 9.9 Discuss immunizations and the schedule for vaccinations.
- 9.10 Compare and contrast the different forms of immunity.
- 9.11 Explain when isolation precautions are to be followed.

## Course Standard 10

### HS-IHS-10

#### Demonstrate CPR, First Aid and the AED utilizing current standards.

- 10.1 Analyze differences in pulse and respiratory rates in adult, child, and infant.
- 10.2 Discuss the function of the respiratory and circulatory systems and what happens with these systems during cardiac arrest and then during cardiopulmonary resuscitation.
- 10.3 Demonstrate how to accurately assess vitals, including temperature, pulse, respiration, and blood pressure.
- 10.4 Successfully complete CPR, AED, and First Aid training (emphasizing performance skills in initial assessment, bleeding control, first aid for various shock victims, applying bandages/splints, and assessing/treating burns, poisoning, seizures, insect stings/bites, heat/cold exposure, and syncope) according to American Heart Association or American Red Cross, or other nationally recognized certifying agency.

## Course Standard 11

### HS-IHS-11

**Describe the stages of development from birth to adulthood (i.e., neonatal period, infancy, childhood, adolescence/puberty, adulthood, and geriatrics).**

- 11.1 Compare and contrast life stages in reference to growth and developmental needs.
- 11.2 Discuss the physical, spiritual, mental, social, and emotional/behavioral health needs throughout the different life stages.
- 11.3 Examine common theories of growth and development (Erickson, Maslow, etc.).
- 11.4 Discuss age-appropriate common healthcare needs.
- 11.5 Identify socioeconomic determinants of health and wellness per each stage of life.
- 11.6 Compare and contrast the stages of grief.

## Course Standard 12

### HS-IHS-12

**Utilize information technology applications required within all health career specialties.**

- 12.1 Identify components of an electronic health record (EHR) / electronic medical record (EMR).
  - a. Diagnostic tests
  - b. History and physical examination
  - c. Medication
  - d. Patient demographics
  - e. Progress notes
  - f. Treatment plan
- 12.2 Explore different types of health data collection tools such as telehealth and remote patient monitoring hardware/software, wearable medical devices, and phone apps.
- 12.3 Demonstrate the use of proper electronic documentation to demonstrate timeliness, completeness, and accuracy in recording mock scenario data.
- 12.4 Examine national, state, & local information systems' electronic policies, procedures, and regulations regarding to:
  - a. Facility policies
  - b. HIPAA
  - c. Medical coding
  - d. Social media
- 12.5 Describe the disciplinary consequences of inappropriate use of health data.
- 12.6 Describe appropriate methods to correct inaccurate information/errors personally entered into an electronic health or electronic medical record (EHR/EMR).
- 12.7 Demonstrate basic digital file organizational skills and information storage.
- 12.8 Demonstrate basic word processing, spreadsheet, and database applications.
- 12.9 Evaluate the validity of web-based resources.
- 12.10 Demonstrate appropriate use of digital communication in a work environment, such as email, text, and social media.

## Course Standard 13

### HS-IHS-13

**Apply mathematical computations related to healthcare procedures.**

- 13.1 Demonstrate competency using basic math skills and mathematical conversions as they relate to healthcare including:
  - a. metric measurements – centi- deci- kilo-, milli-, micro-, etc.
  - b. addition/subtraction, multiplication/division, fractions, averages, percentages, and ratios
  - c. standard/metric conversions – height, weight, household measurements, length, volume, temperature
- 13.2 Analyze diagrams, charts, graphs, and tables to interpret healthcare results.
- 13.3 Demonstrate use of the 24-hour clock/military time.

## Course Standard 14

### HS-IHS-14

**Explore how related student organizations are integral parts of career and technology education courses through leadership development, school, and community service projects, entrepreneurship development, and competitive events.**

- 14.1 Research the history of the state supported healthcare science CTSO (Career Technical Student Organization).
- 14.2 Discuss the mission, purpose, motto, colors, official dress, and other distinguishing characteristics of the state supported healthcare science CTSO.
- 14.3 Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development.
- 14.4 Create a personal leadership plan to participate in programs, conferences, community service and competitive events on the local, state, and national level that align with the competencies, skills, and knowledge of this course.