

**Health Science 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 Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science 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, 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. The pre-requisite for this course is advisor approval.

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

Nonverbal Communication	Written Communication	Speaking	Applications and Effective Résumés
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application

Georgia Department of Education

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.

Teamwork and Problem Solving	Meeting Etiquette
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.

Problem Solving	Customer Service	The Application Process	Interviewing Skills	Finding the Right Job
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

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

Workplace Ethics	Personal Characteristics	Employer Expectations	Business Etiquette	Communicating at Work
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger

Georgia Department of Education

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 team work skills.

Expected Work Traits	Teamwork	Time Management
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.

On-the-Job Etiquette	Person-to-Person Etiquette	Communication Etiquette	Presenting Yourself
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			

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence L9-10RST 1-10 and L9-10WHST 1-10:

Georgia Standards of Excellence ELA/Literacy standards have been written specifically for technical subjects and have been adopted as part of the official standards for all CTAE courses. Additional Georgia Standards of Excellence ELA/Literacy standards for Speaking and Listening are listed in the foundational course standards below.

Course Standard 2

HS-IHS-2

Demonstrate standard safety practices for all classroom, laboratory and field experiences. Understand the existing and potential hazards to clients, co-workers, and self, and prevent injury or illness through safe work practices by following current health and safety policies and procedures.

- 2.1 Identify safety hazards and reduce risk associated with them.
- 2.2 Comply with safety signs, symbols and labels.
- 2.3 Analyze the role and the responsibilities of the healthcare provider (student) in the classroom, laboratory, and various workplace settings in an emergency situation.
- 2.4 Apply basic Emergency procedures and protocol in basic emergency situations and events.
- 2.5 Explain the following agencies' role in healthcare practice: OSHA, CDCP, CLIA, FDA, and ISO.
- 2.6 Apply principles of body mechanics.
- 2.7 Utilize personal protective equipment (PPE) and apply personal safety procedures based on OSHA (Occupational Health and Safety Administration and the Centers for Disease Control and Prevention (CDCP)).

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence

ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 3

HS-IHS-3

Describe how various healthcare roles fit into the office/department, the organization and the overall health care environment. Identify how key systems affect services performed and quality of care.

- 3.1 Analyze the healthcare delivery system (public, private, government, and non-profit).
- 3.2 Evaluate the factors influencing healthcare delivery systems.
- 3.3 Describe the responsibilities of consumers within the healthcare system and how to engage patients and families in their own healthcare.
- 3.4 Explain the impact of emerging issues such as technology, epidemiology, bioethics, and socioeconomics on healthcare delivery systems.
- 3.5 Discuss common methods of payment for healthcare.

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Course Standard 4

HS-IHS-4

Develop a Career Plan.

- 4.1 Compare careers within the health science career pathways: therapeutic, diagnostic, health informatics, environmental support, and biotechnology research and development.
- 4.2 Discuss levels of education, credentialing requirements, and employment trends in healthcare.
- 4.3 Analyze personal career goals and develop a career plan.
- 4.4 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.
- 4.5 Discuss complementary health practices and career opportunities.
- 4.6 Recognize methods for building positive team relationships and communication.
- 4.7 Analyze attributes and attitudes of an effective leader.
- 4.8 Apply effective techniques for managing team conflict.
- 4.9 Identify and develop entrepreneurial opportunities in healthcare.

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Course Standard 5

HS-IHS-5

Evaluate the impact of diversity and ethics on healthcare delivery.

- 5.1 Evaluate how diversity affects healthcare delivery.
- 5.2 Compare and contrast personal and workplace ethics.
- 5.3 Recognize ethical issues and their implications related to healthcare.
- 5.4 Examine ethical dilemmas that may occur in healthcare.
- 5.5 Demonstrate respectful and empathetic treatment of ALL patients/clients (patient/customer service).

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Course Standard 6

HS-IHS-6

Demonstrate an understanding of the legal responsibilities, limitations, and implications of their actions within the healthcare delivery setting. Evaluate the importance of their duties according to regulations, policies, laws and legislated rights of clients.

- 6.1 Analyze the basic legal responsibilities of healthcare workers in regards to torts, malpractice, and negligence, invasion of privacy, privileged communication, patient/client confidentiality, and informed consent.
- 6.2 Discuss patients' rights and responsibilities.
- 6.3 Explain standards for Health Insurance Portability and Accountability Act (HIPAA).
- 6.4 Describe advance directives.
- 6.5 Evaluate the importance of institutional policies and procedures.

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Course Standard 7

HS-IHS-7

Identify and demonstrate the various methods of providing and obtaining information from patients, family members, other agencies, and other members of the healthcare team.

- 7.1 Interpret verbal and nonverbal communication.
- 7.2 Recognize barriers to communication.
- 7.3 Report subjective and objective information.
- 7.4 Recognize the elements of communication using a sender-receiver model.
- 7.5 Apply speaking and active listening skills.
- 7.6 Recognize elements of written and electronic communication (spelling, grammar, and formatting).
- 7.7 Use roots, prefixes, and suffixes to communicate information.
- 7.8 Utilize current and acceptable medical abbreviations and terminology within the electronic medical record and in other forms of medical communication.
- 7.9 Recognize legal and ethical implications of electronic communications.

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Course Standard 8

HS-IHS-8

Practice preventive health behaviors personally and professionally.

- 8.1 Apply behaviors that promote health and wellness.
- 8.2 Describe strategies to maintain a healthy lifestyle.
- 8.3 Create a stress management plan.

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Course Standard 9

HS-IHS-9

Analyze different types of microorganisms and their defining characteristics to reduce the risk of infection or illness. Demonstrate physicochemical methods and the use of PPE in preventing and controlling the spread of microbial growth.

- 9.1 Define and describe the need for asepsis and infection prevention in the classroom, laboratory, and in the healthcare environment.
- 9.2 Compare and demonstrate various physical (hand washing and PPE) and chemical methods (cleaning, disinfection, and sterilization) used to control or prevent microbial growth.
- 9.3 Examine the evolution and spread of antibiotic resistant pathogens.
- 9.4 Analyze ways microorganisms are spread using the chain of infection model.
- 9.5 Utilize personal protective equipment (PPE) and apply personal safety procedures based on OSHA (Occupational Health and Safety Administration) and the Centers for Disease Control and Prevention (CDCP).
- 9.6 Describe methods of controlling the spread and growth of microorganisms.
- 9.7 Discuss Hospital Acquired Infection (HAI), the HAI standards and reporting of HAI.
- 9.8 Discuss immunizations and the schedule for vaccinations.

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SMI5: Students will compare and contrast parameters affecting microbial growth, ways of controlling growth of microorganisms, and examine the effects that physicochemical factors can have on microbes.

- c. Compare various physical and chemical methods used to control or prevent microbial growth.
- d. Explain the various modes of action of specific antibiotics in preventing the growth of microorganisms.
- f. Examine the evolution and spread of antibiotic resistant pathogens.

SMI7: Students will analyze symbiotic and pathogenic relationships in host-microbe interactions.

- c. Compare mechanisms of how communicable diseases are spread among individuals within a population and how genetic changes in pathogenic microbes (such as influenza virus) result in new outbreaks of disease.

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 locate pulse points and how to check pulse and respiratory rates.
- 10.4 Successfully complete CPR, AED, and First Aid training according to American Heart Association or American Red Cross, or other nationally recognized certifying agency.

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SAP1: Students will analyze anatomical structures in relationship to their physiological functions.

- b. Investigate the interdependence of the various body systems to each other and to the body as a whole.

SAP4: Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.

- b. Analyze, and explain the relationships between the respiratory and cardiovascular systems as they obtain oxygen needed for the oxidation of nutrients and removal of carbon dioxide.

Course Standard 11

HS-IHS-11

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

- 11.1 Compare and contrast life stages as it relates to growth and developmental needs.
- 11.2 Discuss the social, physical, mental, and spiritual needs throughout the different life stages.
- 11.3 Examine the common theories of growth and development (Erickson, Maslow's).
- 11.4 Discuss age-appropriate healthcare needs.

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence

ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

SAP5: Students will analyze the role of the reproductive system as it pertains to the growth and development of humans.

- c. Describe the stages of development from birth to adulthood (i.e. neonatal period, infancy, childhood, adolescence and puberty, and maturity).

Course Standard 12

HS-IHS-12

Utilize information technology applications required within all career specialties.

Demonstrate use as appropriate to healthcare applications.

- 12.1 Identify methods and types of data collected in healthcare.
- 12.2 Use health record data collection tools (such as input screens, document templates).
- 12.3 Differentiate between types and content of health records (patient, pharmacy, and laboratory).
- 12.4 Ensure that documentation in the health record reflects timeliness, completeness, and accuracy.
- 12.5 Adhere to information systems policies and procedures as required by national, state, local, and organizational levels.
- 12.6 Apply the fundamentals of privacy and confidentiality policies and procedures.
- 12.7 Identify legal and regulatory requirements related to the use of personal health information.
- 12.8 Identify and apply policies and procedures for access and disclosure of personal health information.
- 12.9 Describe the consequences of inappropriate use of health data in terms of disciplinary action.
- 12.10 Describe appropriate methods to correct inaccurate information/errors personally entered into an electronic medical record (EMR).
- 12.11 Apply basic computer concepts and terminology in order to use computers and other mobile devices.
- 12.13 Demonstrate basic computer operating skills.
- 12.14 Demonstrate use of basic file organization and information storage.
- 12.15 Use basic word processing, spreadsheet, and database applications.
- 12.16 Evaluate the validity of web-based resources.
- 12.17 Demonstrate use of appropriate email and social media.

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Course Standard 13

HS-IHS-13

Apply mathematical computations related to healthcare procedures.

- 13.1 Utilize metric and household, conversions and measurements as related to healthcare procedures and treatments.
- 13.2 Analyze diagrams, charts, graphs, and tables to interpret healthcare results.
- 13.3 Record time using the 24-hour.

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SCSh3: Students will identify and investigate problems scientifically.

- c. Collect, organize and record appropriate data.
- d. Graphically compare and analyze data points and/or summary statistics.
- e. Develop reasonable conclusions based on data collected.

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 characteristic 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, region, state, and national level that align with the competencies, skills and knowledge of this course.

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