

**Health Science Cluster
Healthcare IT and Biotechnology
Course Number 25.03400**

Course Description:

This course provides students with an exploratory introduction Healthcare IT and Biotechnology and to several healthcare careers and the safety procedures and interpersonal communication skills required for them. The course will enable students to receive initial exposure to healthcare science skills; attitudes applicable to healthcare including the concepts of health, wellness, and preventative care; and responsibilities of today’s healthcare provider. Mastery of skills through project-based learning, technical skills practice, and group activities will provide students with an opportunity to decide if they want to continue this course of study in high school and/or at a post-secondary institution. This course is considered broad-based with high impact.

Course Standard 1

MS-HS-HITB-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	Communicating at Work	Listening
Interacting with Your Boss	Telephone Conversations	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls	Effective Written Communication	Ways We Filter What We Hear
		Effective Nonverbal Skills	Developing a Listening Attitude
		Effective Word Use	Show You Are Listening
		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
Reading Body Language and mixed Messages		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	Terms to Use in a Résumé

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Nonverbal Feedback		Making Speeches	Organizing Your Résumé
Showing Confidence Nonverbally		Answering Questions	Writing an Electronic Résumé
Showing Assertiveness		Visual and Media Aids	
		Errors in Presentation	

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
	Preparing Visual Aids

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

a. Investigate educational requirements, job responsibilities, employment trends, and opportunities within the national career clusters using credible sources.

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	Staying Motivated to Search
	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	
		When a Résumé Should be Used		

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
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers

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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			

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.

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
Use Technology Ethically & Efficiently	Expressing Yourself on a Team	Staying Organized
Interact Appropriately in a Digital World	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
Behavior at Conventions		Proper Use of Cell Phone	Using Good Posture
Working in a Cubicle		Proper Use in Texting	Presenting Yourself to Associates
			Accepting Criticism
			Demonstrating Leadership

Course Standard 2

MS-HS-HITB-2

Demonstrate the correct work safety practices and infection control precautions required to ensure a safe work environment in a healthcare setting.

- 2.1 Identify the proper body mechanics for a safe healthcare work environment.
- 2.2 Compare and contrast viruses, bacteria and fungi found in a healthcare work setting.
- 2.3 List and organize standard precautions found in a healthcare work setting to protect patients and healthcare workers.
- 2.4 Develop and organize the chain of infection and modes of transmission in a healthcare work setting.

- 2.5 Differentiate the biosafety levels observed in a healthcare work setting.

Course Standard 3

MS-HS-HITB-3

Explain the strategies used in the field of Health Informatics/ Health Information Technology to protect and ensure patient privacy.

- 3.1 Make observations basic principles of patient confidentiality (HIPAA).
 - a. Identify common HIPAA violations.
 - b. Outline common HIPAA practices.
- 3.2 Discuss how technology is used in patient documentation.
 - a. Compare and contrast benefits and risks of paper versus electronic medical records.
- 3.3 Explore the field of telemedicine and uses throughout Georgia.
- 3.4 Apply concepts to demonstrate the following skills related to Health Informatics/ Health Information Technology.
 - a. Collect patient data and chart in an HER.
 - b. Compare and contrast benefit/ risks of paper and electronic medical records.
 - c. Demonstrate scheduling a client appointment.
 - d. Demonstrate video conferencing etiquette.
 - e. Identify common HIPAA violations and practices.

Course Standard 4

MS-HS-HITB-4

Explain and practice common Health Informatics/ Health Information Management/Medical Office procedures.

- 4.1 List and describe appropriate medical terminology used in the medical office setting.
- 4.2 Demonstrate the correct sequence of obtaining a patient history and physical data.
- 4.3 Explain how diagnostic coding is used for medical reimbursement.
- 4.4 Apply concepts to demonstrate the following skills related to Medical Office:
 - a. Effectively obtain a patient history,
 - b. Measure and document patient height and weight,
 - c. Match diagnostic codes with common diseases.

Course Standard 5

MS-HS-HITB-5

Summarize the careers, apply skills, and understand anatomy concepts used in the field of Biotechnology Research and Development.

- 5.1 Analyze the careers associated with the field of genetics, biomedical engineering, toxicology, microbiology, and forensics.
- 5.2 Explore the structure of DNA and its relationship to cells, analyze the benefits of biomedical research, ethical and legal issues of biotechnology.
- 5.3 Apply concepts to demonstrate the following skills related to Biotechnology Research and Development.
 - a. Display the ability to effectively collect fingerprints,
 - b. Describe the steps related to separating DNA,
 - c. Create and make observations about Punnett square diagrams.
 - d. Research and present a bio-ethical issue related to a current event.
 - e. Complete simulated blood typing and make observations.

Course Standard 6

MS-HS-HITB-6

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.

- 6.1 Research the history of the state supported healthcare science CTSO (Career Technical Student Organization).
- 6.2 Discuss the mission, purpose, motto, colors, official dress and other distinguishing characteristic of the state supported healthcare science CTSO.
- 6.3 Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development.
- 6.4 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.