

Health Science Career Cluster
Allied Health and Medicine
Course Number: 25.43700

Course Description:

This course is designed to offer students (preferably upper classmen - juniors or seniors) the opportunity to become effective and efficient multi-skilled healthcare providers as they develop a working knowledge of various allied health opportunities. Students focusing on a career path in the healthcare field may apply classroom/lab knowledge and skills in the clinical setting as they participate in direct or simulated client care. The curriculum allows instructors to provide options for classroom/student growth opportunities in area(s) of interest to the student. These options may be determined by community need, available resources, and/or student interest, etc. This course was developed according to a basic 50-minute class time frame, but may be adjusted according to local system schedules. Instructors may select which classroom content standards 1-14 best meet his/her individual classroom needs in addition to the required clinical/capstone project to equal total class time available for the course.

A. Clinical site or classroom simulated experience

This component of Allied Health is designed to give students practical application of previously studied knowledge and skills. These experiences can occur in a variety of locations (including classroom lab) appropriate to the student's level of experience and availability of community resources as determined by the instructor. These exercises should be designed to enhance and supplement the above standards. Appropriate permission from school, parents, and the facility as well as other documentation requirements (such as transportation), and facility requirements (such as student insurance) must be adhered to and arranged.

Any Healthcare Science course that includes a clinical component (excluding a shadowing experience field trip) must adhere to identified guidelines under (WBL) work-based learning (available at ctae.gadoe.org under WBL manual. Training for the Healthcare Science teacher on these guidelines will be provided.

B. Allied Health Capstone Project

Research academic requirements for a professional career of interest.

- a) Create a plan for academic achievement in a chosen field.
- b) Present career interest project (HOSA career health display could be used as an example.).
- c) Update personal portfolio to include: 1. resumes; 2. listings of technical skill competencies mastered for the chosen career field as developed by the instructor; 3. community service learning experiences (approved); and 4. reflection essays of the overall course and the student's career choice. The prerequisite for this course is Introduction to Healthcare Science and Essentials of Healthcare.

Course Standard 1

HS-AHM-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.

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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
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

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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
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

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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.

Course Standard 2

HS-AHM-2

Research advanced technical skills in respiratory care. Respiratory Services (500 minutes)

- 2.1 Review scope of practice for respiratory services.
- 2.2 Identify normal and abnormal respiratory effort.
- 2.3 Correctly apply pulse oximeter for measurement of oxygen saturation, and recognize the difference between normal and abnormal readings.
- 2.4 Observe medical personnel assisting clients with respiratory management devices such as nasal cannula, simple oxygen mask, Venturi mask, non-rebreath, nasopharyngeal airway (NPA), oropharyngeal airway (OPA), and tracheostomy.
- 2.5 Demonstrate proper technique and use of bag mask ventilation (AMBU) on a manikin.

Course Standard 3

HS-AHM-3

Analyze advanced technical skills within the imaging services field. Imaging Services (450 minutes)

- 3.1 Review scope of practice for imaging services.
- 3.2 Differentiate between the types and functions of diagnostic imaging techniques, including the following:
 - Computer-Assisted Tomography (CAT)

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- Magnetic Resonance Imaging (MRI)
 - Positron Emissions Tomography (PET)
 - ultrasound imaging
 - X-Rays
 - arrhythmia monitoring
 - pulmonary monitoring
 - obstetrical/neonatal monitoring
- 3.3 Examine the types of medical information/records each diagnostic imaging technique generates including:
- Computer-Assisted Tomography (CAT)
 - Magnetic Resonance Imaging (MRI)
 - Positron Emissions Tomography (PET)
 - ultrasound Imaging
 - X-Rays
 - arrhythmia monitoring
 - pulmonary monitoring
 - obstetrical/neonatal monitoring
- 3.4 Discuss the impact of new technology on diagnostic imaging techniques and treatments.

Course Standard 4

HS-AHM-4

Research advanced technical skills in the surgical services field to include nutrition and fluid intake, elimination, and ostomy and wound care. Surgical services (1350 minutes)

- 4.1 Review scope of practice for surgical services.
- 4.2 Demonstrate measurement of fluid intake and output to include documentation.
- 4.3 Observe IV site for signs/symptoms of infiltration and report findings to the nurse.
- 4.4 Describe variations in wounds and methods for reporting.
- 4.5 Describe pain associated with wounds and techniques for assessing, reporting, and managing pain.
- 4.6 Show donning and removing of surgical garments to include gown, mask, sterile gloves, and eyewear (if needed).
- 4.7 Exhibit techniques for application of sterile dressings, bandages, and binders to include documentation.
- 4.8 Demonstrate creating and maintaining of sterile field.
- 4.9 Identify various surgical instruments.
- 4.10 Demonstrate packaging of equipment for sterilization.

Course Standard 5

HS-AHM-5

Perform advanced technical skills within rehabilitation services. Rehabilitation Services (900 minutes)

- 5.1 Review scope of practice for rehabilitation services.
- 5.2 Describe types and management of clients with immobilization devices.
- 5.3 Set up clients correctly in special devices for promoting mobility and circulation.
- 5.4 Demonstrate proper use of rehabilitation devices (transfer belt, cane, crutches, and walker).
- 5.5 Explain the care and use of prosthetic and orthotic devices.
- 5.6 Demonstrate techniques for applying hot and cold treatments to include documentation.

Course Standard 6

HS-AHM-6

Perform advanced technical skills within pharmaceuticals. Pharmacy Services (500 minutes)

- 6.1 Review scope of practice for pharmacy services.
- 6.2 Describe the origin of various types of drugs, comparing and contrasting each source type.
- 6.3 Compare the mechanism of action of drugs.
- 6.4 Explain how drugs are grouped into therapeutic classes.
- 6.5 Compare and contrast the advantages and disadvantages of different routes of drug administration.
- 6.6 Describe the four major processes of pharmacokinetics.
- 6.7 Demonstrate the ability to convert units within and among the metric household and apothecaries systems.
- 6.8 Calculate basic medication dosages.

Course Standard 7

HS-AHM-7

Perform advanced technical skills within dietary services. Dietary Services (450 minutes)

- 7.1 Review scope of practice for dietary services.
- 7.2 Develop a clinical nutrition plan on a selected diagnosis, including rationale of dietary modification.
- 7.3 Compare the six groups of essential nutrients, including functions and sources.
- 7.4 Create a sample daily menu using the five major food groups and recommendations.
- 7.5 Use the body mass index graph to determine an individual's BMI.
- 7.6 Calculate an individual's daily required caloric intake to maintain current weight.
- 7.7 Describe and explain the purposes of at least eight therapeutic diets.

Course Standard 8

HS-AHM-8

Research the field of Complementary and Alternative Medicine (CAM) to include, but not limited to, such practices as chiropractic care, acupuncture, reflexology, massage therapy, homeopathic medicine, aromatherapy, and stress reduction techniques.

Complementary and Alternative Medicine (450 minutes)

- 8.1 Review scope of practice for CAM services.
- 8.2 Describe the type and purpose of CAM.
- 8.3 Connect "real world" applications of CAM use and the integration into health care and health promotion.
- 8.4 Demonstrate the proper technique for performing lower arm massage and safety precautions taken during the procedure.

Course Standard 9

HS-AHM-9

Perform advanced technical skills within mental health services. Mental Health Services (450 minutes)

- 9.1 Review scope of practice for mental health services.
- 9.2 Differentiate the careers in the mental health services.
- 9.3 Distinguish the types of mental health illnesses.

- 9.4 Compare types of anxiety and mood disorders and discuss treatment.
- 9.5 Investigate how substance abuse pertains to mental illness.
- 9.6 Compare mental health services within the home care setting versus the clinical setting.

Course Standard 10

HS-AHM-10

Research public health services and epidemiology, utilizing www.cdc.gov as the primary source. Public Health and Epidemiology (1350 minutes)

- 10.1 Review scope of practice for public health and epidemiology services.
- 10.2 Identify and describe the core areas that comprise public health.
- 10.3 Explain the responsibilities of each core area in public health.
- 10.4 Discuss and analyze public health's ethical principles.
- 10.5 Explain how public health professionals tracked and identified the AIDS virus.
- 10.6 Discuss the importance of education in public health.
- 10.7 Describe the basic steps epidemiologists take when investigating an outbreak.
- 10.8 Define and give examples of emerging and re-emerging of infectious diseases.
- 10.9 Explain why infectious diseases are still one of the leading causes of death worldwide.
- 10.10 Analyze at least ten of the world's most common infectious diseases.
- 10.11 Examine available technology to combat infectious disease in developing countries.

Course Standard 11

HS-AHM-11

Perform advanced technical skills within medical office services. Medical Office Assistant (2250 minutes)

- 11.1 Review scope of practice for medical office services.
- 11.2 Perform procedures related to administrative office skills, including:
 - managing patient accounts, writing receipts, and balancing accounts,
 - writing checks,
 - scheduling appointments,
 - answering phone calls,
 - completing insurance claims to include diagnostic coding for reimbursement, and
 - managing electronic health care records.
- 11.3 Perform procedures related to back office skills, including:
 - Physical and history:
 - o List procedures that are typically performed before a general physical examination.
 - o Demonstrate the procedure for conducting a patient history interview.
 - o Demonstrate techniques used in the measurement of weight, height and vital signs of adult, children and infants.
 - Suture/staple removal:
 - o Describe the special surgical procedures performed in an office setting.
 - o Identify the instruments used in minor surgery and describe their functions.
 - o Compare and contrast the procedures for medical and surgical asepsis in minor surgery.
 - o Analyze the Medical Office Assistant's (MOA) duties in preparing a patient for minor surgery.
 - o Describe the types of local anesthetics for minor surgery and the MOA's role in their administration.
 - o Summarize the MOA's duties in the postoperative period.
 - o Demonstrate the correct procedure for suture and staple removal.

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- Assisting with physical examinations:
 - Summarize the MOA's role in preparing the examination room.
 - Describe the importance of such factors as temperature, lighting, and ventilation in setting up the examination room.
 - Outline the steps necessary to prepare the patient for an examination.
 - Identify, arrange, and prepare instruments and supplies used in a general physical examination.
 - Demonstrate how to position and drape a patient in each of the common examination positions.
 - Explain how to eliminate hazards to physical safety in the examination room.
- Hearing and vision screenings:
 - Describe ways to detect vision problems.
 - Analyze how vision and hearing changes with the aging process.
 - List the types of hearing loss.
 - Explain the procedures for screening and diagnosing vision and hearing problems.
 - Compare and contrast various treatments for vision and hearing disorders.
 - Explain how patients can be educated about preventive ear and eye care.

Course Standard 12

HS-AHM-12

Perform advanced technical skills within medical laboratory services using simulated equipment based on school, county, and facility protocol. Medical Laboratory Services (900 minutes)

- 12.1 Review scope of practice for medical laboratory services.
- 12.2 Simulate the process of obtaining blood glucose samples correctly (per county policy), recording, and reporting findings to the nurse.
- 12.3 Simulate techniques for collecting urine and stool specimens including documentation.
- 12.4 Simulate proper procedure for capillary blood tests.
- 12.5 Identify and simulate basic techniques for venipuncture procedures.

Course Standard 13

HS-AHM-13

Perform advanced technical skills within cardiology services. Cardiology Services (450 minutes)

- 13.1 Review scope of practice for allied health careers in Cardiology Services.
- 13.2 Compare and contrast normal sinus, bradycardia, tachycardia, and asystole rhythms by evaluating manual or digital rhythm strips.
- 13.3 Set up the client and apply leads for EKG or cardiac monitoring correctly.
- 13.4 Contrast between EKG and Echocardiogram procedures and the diagnostic capacity of each.

Course Standard 14

HS-AHM-14

Perform advanced technical skills within emergency services. Emergency Services (2250 minutes)

- 14.1 Review scope of practice for emergency services.
- 14.2 Identify and demonstrate first aid procedures for the following:
 - poisoning
 - bleeding wounds

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- shock
 - burns
 - heat and cold exposure
 - bone injuries
 - sudden illness [CVA (Cerebrovascular Accident), heart attack, fainting, seizures, and diabetic reactions]
 - specific injuries (ear, eye, head, spine, chest, abdominal, and genital)
- 14.3 Perform scene size-up and initial assessment.
- 14.4 Perform rapid trauma and focused assessment.

Course Standard 15

HS-AHM-15

Perform advanced technical skills within dentistry services. Dentistry (900 minutes)

- 15.1 Review the scope of practice for dentistry services.
- 15.2 Identify and describe the structures and the anatomy of a tooth.
- 15.3 Identify and explain teeth using the universal/national numbering system and the federation Dentaire international system.
- 15.4 Chart conditions of the teeth.
- 15.5 Identify dental instruments and prepare dental trays.
- 15.6 Demonstrate brushing and flossing techniques.