Health Science Career Cluster
Diagnostics Phlebotomy
Course Number: 25.57400

Course Description:
This course is designed to help students become prepared for the phlebotomy technician certification exam, upon completion of all required components. Topics covered in this course include employability skills, careers, terminology and equipment, safety and compliance, quality assurance, site-specific anatomy, patient preparation for venipuncture, performing of venipuncture, and special processing and transport. During this course, simulated venipuncture may be performed. However, for national certification, live sticks are required. If school systems choose not to allow live sticks during this course, the certifying agencies may allow a provisional certification with the live stick requirement being completed after high school graduation. The pre-requisites for this course are Introduction to Healthcare and Essentials of Healthcare.

Course Standard 1
HS-DP-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.

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

<table>
<thead>
<tr>
<th>Nonverbal Communication</th>
<th>Written Communication</th>
<th>Speaking</th>
<th>Applications and Effective Résumés</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicating Nonverbally</td>
<td>Writing Documents</td>
<td>Using Language Carefully</td>
<td>Completing a Job Application</td>
</tr>
<tr>
<td>Reading Body Language and mixed Messages</td>
<td>Constructive Criticism in Writing</td>
<td>One-on-One Conversations</td>
<td>Writing a Cover Letter</td>
</tr>
</tbody>
</table>
### 1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

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

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

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

<table>
<thead>
<tr>
<th>Workplace Ethics</th>
<th>Personal Characteristics</th>
<th>Employer Expectations</th>
<th>Business Etiquette</th>
<th>Communicating at Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrating Good Work Ethic</td>
<td>Demonstrating a Good Attitude</td>
<td>Behaviors Employers Expect</td>
<td>Language and Behavior</td>
<td>Handling Anger</td>
</tr>
<tr>
<td>Behaving Appropriately</td>
<td>Gaining and Showing Respect</td>
<td>Objectionable Behaviors</td>
<td>Keeping Information Confidential</td>
<td>Dealing with Difficult Coworkers</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Expected Work Traits</th>
<th>Teamwork</th>
<th>Time Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrating Responsibility</td>
<td>Teamwork Skills</td>
<td>Managing Time</td>
</tr>
<tr>
<td>Dealing with Information Overload</td>
<td>Reasons Companies Use Teams</td>
<td>Putting First Things First</td>
</tr>
<tr>
<td>Transferable Job Skills</td>
<td>Decisions Teams Make</td>
<td>Juggling Many Priorities</td>
</tr>
<tr>
<td>Managing Change</td>
<td>Team Responsibilities</td>
<td>Overcoming Procrastination</td>
</tr>
<tr>
<td>Adopting a New Technology</td>
<td>Problems That Affect Teams</td>
<td>Organizing Workspace and Tasks</td>
</tr>
<tr>
<td></td>
<td>Expressing Yourself on a Team</td>
<td>Staying Organized</td>
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<tr>
<td></td>
<td>Giving and Receiving Constructive Criticism</td>
<td>Finding More Time</td>
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<td>Managing Projects</td>
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<td>Prioritizing Personal and Work Life</td>
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</tbody>
</table>
Course Standard 2

HS-DP-2
Explore options in the clinical lab industry, including phlebotomy and the organizational structure.

2.1 Identify and describe current employment options in the clinical lab profession and the required education and training.

2.2 Identify members of the clinical lab team; differentiate between roles, department and responsibilities of team members, and place all members in appropriate positions on the organizational chart.

Course Standard 3

HS-DP-3
Utilize appropriate laboratory/medical terminology and venipuncture equipment.

3.1 Demonstrate the appropriate use of clinical lab nomenclature to include medical terminology related to clinical lab testing and requisitions.

3.2 Differentiate between physician requisition, sample collection, and accession process.

3.3 Identify phlebotomy reference sources including tube collection order of draw; translating a brand name to order of draw for venipuncture; special use sample collection and identification number; correct spelling or definition of medical terms; methods of patient identification; and ETS (Evacuated Tube Systems).

3.4 Classify and explain the types and purpose of evacuated tubes by color code, anticoagulants and additives, and special characteristics.

3.5 Select and assemble appropriate venipuncture equipment for collection areas or mobile work stations, including ETS, syringes, winged-blood collection sets, needles, sharp containers, evacuated collection tubes, transfer devices, tourniquets, personal protective equipment (PPE), antiseptic swabs (according to protocol), gauze pads and bandages, slides, and marking pens.

Course Standard 4

HS-DP-4
Abide by regulations governing workplace safety, infection control, operational standards, patient confidentiality, and facility protocol.

4.1 Demonstrate adhering to regulations regarding workplace safety [e.g., Occupational Safety and Health Administration (OSHA) and National Institute for Occupational Safety and Health (NIOSH)].

4.2 Demonstrate abiding by regulations regarding operational standards (e.g., Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Clinical and Laboratory Standards Institute (CLSI)).

4.3 Demonstrate patient privacy (protected health information) as outlined in HIPAA (Health Insurance Portability and Accountability Act) regulations.

4.4 Demonstrate following exposure control plans in the event of occupational exposure.

4.5 Demonstrate exhibiting appropriate infection control standards and safety equipment, to include biohazards set forth by OSHA and the Communicable Disease Center (CDC).

4.6 Implement infection control procedures to break the chain of infection; transmission via direct and indirect contact, droplets, airborne, and hospital acquired infections.

4.7 Demonstrate first aid and Basic Life Support techniques and initiate when necessary.

4.8 Observe standards of operation and workplace safety regulations for:
   - needle stick safety and precaution act,
   - blood borne pathogen,
   - safety practices of HIV (Human Immune Deficiency Virus), Hepatitis B & C.
4.9 Show the appropriate use of PPE (personal protective equipment) and effective hand sanitization procedures.
4.10 Demonstrate reacting to emergency situations following agency procedures and facility protocol.

Course Standard 5
HS-DP-5
Maintain quality control measures within the medical facility to prevent medical errors and provide appropriate patient care.

5.1 Identify and describe the national regulatory agencies for quality assurance and healthcare: JC (Joint Commission), CLIA (Clinical Laboratory Improvement Act), CAP (College of American Pathologists), NAACLS (National Accrediting Agency for Clinical Laboratory Sciences), and CLSI (Clinical and Laboratory Standards Institute).

5.2 Describe quality assurance program components and quality control related to phlebotomy, including the following:
   • patient record documentation
   • procedural manuals
   • collection manuals

5.3 Recognize quality control measurements, including risk management, and demonstrate methods of performance improvement.

5.4 Perform outcome measurements, including the number of times patient samples had to be redrawn due to error through the collection of data to improve quality processes.

5.5 Demonstrate the usage of information management components, including bar code systems and documentation in the electronic health records.

Course Standard 6
HS-DP-6
Identify site specific anatomy related to venipuncture.

6.1 Identify and explain the three major preferred sites for venipuncture in the antecubital fossa and distinguish the “H” and “M” shaped patterns.

6.2 Locate other potential veins for venipuncture, when necessary.

6.3 Utilize appropriate palpation techniques in vein location.

Course Standard 7
HS-DP-7
Follow steps and guidelines necessary to prepare patients for blood collection procedures.

7.1 Apply appropriate safety standards for patient preparation.
7.2 Review requisition, confirm test requirements (e.g., fasting and medication) and status, and identify patient special considerations such as:
   • diet restrictions
   • latex sensitivity
   • timed / status

7.3 Perform proper patient identification procedures, verification and discrepancy rectification to insure accuracy.

7.4 Conduct initial patient observation utilizing appropriate communication techniques, including explanation of procedure to the patient.

7.5 Ensure consent is given by patient, either implied or informed.

7.6 Assess site selection, based on knowledge of anatomy and physiology, for sample collection that is appropriate for patient age and condition, in order to minimize patient risk.
7.7 Apply antiseptic agent utilizing proper aseptic techniques.

**Course Standard 8**

**HS-DP-8**

Perform venipuncture and capillary blood collection, utilizing appropriate equipment and techniques.

- 8.1 Demonstrate utilizing knowledge of anatomy and physiology, related to site selection.
- 8.2 Demonstrate applying appropriate employee safety standards for collection techniques and patient safety.
- 8.3 Confirm appropriate ETS (evacuated tube system) and tube additives.
- 8.4 Demonstrate assembling primary blood collection equipment, including quality verification (sterility and expiration date).
- 8.5 Demonstrate proper application, tying, removal, and standards for timing when utilizing a tourniquet.
- 8.6 Demonstrate proper techniques, including order of draw, for venipuncture needle insertion and removal.
- 8.7 Demonstrate performing the steps in a venipuncture procedure utilizing evacuated tube system, syringe, and winged collection set.
- 8.8 Demonstrate ensuring inversion of evacuated tubes after collection, to maintain additive/specimen ratio.
- 8.9 Demonstrate proper techniques, including order of draw, for capillary specimen collection, as required by patient age and condition.
- 8.10 Demonstrate performing capillary (dermal) puncture steps in the correct order.
- 8.11 Recognize common complications from primary collection (e.g., lack of blood flow, hematoma, petechiae, and nerve injury).
- 8.12 Identify and describe problematic patient signs and symptoms throughout collection (e.g., syncope, diaphoresis, nausea, seizure).

**Course Standard 9**

**HS-DP-9**

Observe specialized laboratory tests that may involve specific techniques for patient preparation, timing of sample collection, other blood collection techniques, and sample handling. *(Performing these skills may be considered more advanced, and may not be allowed according to Georgia law.)*

- 9.1 Demonstrate by simulation or observe the following:
  - peripheral blood smear preparation
  - blood culture collections, including assisting other healthcare professionals
  - blood donation phlebotomy
  - blood sample collection for inborn errors of metabolism (e.g., PKU, galactosemia)
- 9.2 Calculate volume requirements to avoid causing iatrogenic anemia.
- 9.3 Accommodate the technical and communication challenges of blood collection for the pediatric and geriatric populations.

**Course Standard 10**

**HS-DP-10**

Ensure compliance with facility procedures and protocol when documenting and reporting and when handling and transporting specimens.

- 10.1 Confirm proper labeling procedures, including patient identification and time.
- 10.2 Demonstrate performance and assessment of routine and special specimen handling.
10.3 Demonstrate avoiding pre-analytical errors when collecting blood specimens (e.g., (QNS) Quantity Not Sufficient and hemolysis).
10.4 Ensure proper quality control for all procedures, including Clinical Laboratory Improvement Amendments (CLIA)-waived.
10.5 Demonstrate exhibiting proper patient communication when explaining non-blood, specimen collection procedures (e.g., urinalysis and stool).
10.6 Demonstrate utilizing proper safety protocol when handling patient-collected non-blood specimens.
10.7 Demonstrate transporting specimens based on handling requirements (e.g., temperature, light, and time).
10.8 Demonstrate ensuring the following proper guidelines for non-laboratory specimen transport (e.g., forensic studies and blood alcohol):
   - custody guidelines
   - transportation requirements
   - communication coordination
10.9 Demonstrate preparing samples for transportation to a reference (outside) laboratory.
10.10 Demonstrate evaluating procedures for effectively communicating critical values according to established protocol, related to point-of-care testing. (Not allowed to be done by Phlebotomists in Georgia).
10.11 Demonstrate evaluating the procedure for reporting critical values for point-of-care testing and distributing laboratory results to ordering providers. (Not allowed to be done by Phlebotomists in Georgia).
10.12 Demonstrate proficiency in the following use of technology for processing specimen data.
   - input and retrieval
   - specimen flow through the laboratory utilizing the information management system