Course Syllabus
PLAB 1223 – Phlebotomy

Catalog Description: Skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, ethics, and medical terminology.

Lecture hours = 2, Lab hours = 1

Prerequisites: Enrollment in this course requires enrollment in the MLT or MA program OR department head approval and successful completion of the admissions process.

Semester Credit Hours: 2
Lecture Hours per Week: 2
Lab Hours per Week: 1
Contact Hours per Semester: 48

State Approval Code: 51.1009

Instructional Goals and Purposes: The purpose of this course is to teach and develop the skill of blood collection.

Learning Outcomes:
1. Demonstrate infection control and safety practices.
2. Describe quality assurance as it relates to specimen collection.
3. Explain the role of specimen collection in the overall patient care system.
4. Identify collection equipment, various types of additives used, special precautions necessary, and substances that can interfere in clinical analysis of blood constituents.
5. Demonstrate venipuncture and capillary puncture techniques on adults, children, and infants.
6. Explain requisitioning, transport and processing.

Specific Course Objectives (includes SCANS):
After studying all materials and resources presented in the course, the student will be able to:

1. Chapter 1
   a. Demonstrate basic knowledge of terminology for healthcare settings including the national healthcare organizations that contributed to the evolution of phlebotomy and the role of the phlebotomist today. (1b-v, 1a-i, 1c-ii)
   b. Describe the basic concepts of verbal and nonverbal communication as they relate to the professional image and proper telephone protocol in the healthcare setting. (SCANS 1a-v, 1b-ii, 2c-iii)
2. Chapter 2
   a. Demonstrate basic knowledge of terminology for national organizations, agencies, and regulations that support quality assurance in health care. (1a-i, 1b-v, 1c-ii)
b. Define quality and performance improvement measurements as they relate to phlebotomy, and describe the components of a quality assurance (QA) program and identify areas in phlebotomy subject to quality control (QC). (1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)

3. Chapter 3
a. Demonstrate knowledge of terminology and practices related to Infection Control and identify agencies associated with infection control precautions, procedures, and programs. (1b-v, 1a-i, 1c-ii)

b. Identify hazards, warning symbols, and safety rules related to the laboratory, patient areas, and biological, electrical, fire, radiation, and chemical safety, and discuss actions to take if incidents occur. (1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)

4. Chapter 4
a. Demonstrate proper pronunciation of medical terms and unique plural endings. (1b-v, 1a-i, 1c-ii)

b. Use common medical abbreviations and symbols, and explain how items on the “Do Not Use” list can cause problems. (1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)

5. Chapter 5
a. Demonstrate basic knowledge of the terminology, functions, and organization of the body. (1b-v, 1a-i, 1c-ii)

b. Describe functions, identify components or major structures, and correctly use terminology associated with each body system. (1a-v, 1b-ii, 2c-iii)

6. Chapter 6
a. Demonstrate basic knowledge of the terminology, structures, functions, organization, and processes of the circulatory system. (1b-v, 1a-i, 1c-ii)

b. Name and locate major arm and leg veins and evaluate the suitability of each for venipuncture. (1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)

7. Chapter 7
a. List, describe, and explain the purpose of the equipment and supplies needed to collect blood specimens by venipuncture, and define associated terms and abbreviations. (1a-v, 1b-ii, 2c-iii)

b. Describe ETS tube stopper color coding used to identify the presence or absence of an additive, connect additives and stopper colors with laboratory departments and tests, and list the order of draw and explain its importance. (1a-v, 1b-ii, 2c-iii)

8. Chapter 8
a. Demonstrate knowledge of each venipuncture step from the time the test request is received until the specimen is delivered to the lab, and define associated terminology. (1b-v, 1a-i, 1c-ii)

b. Describe how to perform a venipuncture using ETS, syringe, or butterfly, list required patient and specimen identification information, describe how to handle patient ID discrepancies, and state the acceptable reasons for inability to collect a specimen. (1a-v, 1b-ii, 2c-iii)

9. Chapter 9
a. Demonstrate basic knowledge of the preanalytical variables that influence laboratory test results, define associated terminology, and identify the tests most affected by each one. (1b-v, 1a-i, 1c-ii)

b. Describe how to handle patient complications and conditions pertaining to blood collection, address procedural error risks, and specimen quality concerns, and analyze reasons for failure to draw blood. (1a-v, 1b-ii, 2c-iii)

10. Chapter 10
a. Define and use capillary puncture terminology, identify capillary puncture equipment, and list the order of draw for capillary specimens and describe the theory behind it. (1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)

b. Describe capillary specimen composition, identify differences between capillary, arterial, and venous specimen composition and reference values, decide when capillary puncture is indicated, and demonstrate knowledge of site selection criteria. (1a-v, 1b-ii, 2c-iii)

11. Chapter 11
a. Describe sterile technique in blood culture collection, explain why it is important, and list the reasons why a physician might order blood cultures. (1a-v, 1b-ii, 2c-iii)

b. Define point-of-care testing (POCT), explain the principle behind the POCT examples listed in this chapter, and identify any special equipment required. (1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)
12. **Chapter 12**  
a. Demonstrate basic knowledge of the elements of a computer system, define associated terminology and understand the flow of specimens through the laboratory information system.  
   *(1b-v, 1a-i, 1c-ii)*  
b. Explain routine and special specimen handling procedures for laboratory specimens, and identify preanalytical errors that may occur during collection, labeling, transporting, and processing. *(1a-v, 1b-ii, 2c-iii)*  

13. **Chapter 13**  
a. Demonstrate knowledge of nonblood specimens and tests, and define associated terminology.  
   *(1b-1v, 1a-i, 1c-ii)*  
b. Describe collection, labeling, and handling procedures for nonblood specimens. *(1a-v, 1b-ii, 2c-iii)*  

14. **Lab #1**  
a. Understand the reason why each piece of equipment is used during blood collection process.  
   *(1b-i, 1b-v)*  
b. Differentiate between regular straight stick needles and a syringe. *(1b-iii, 1b-vi)*  

15. **Lab #2**  
a. Displaying appropriate bedside manner. *(1b-v, 1a-i, 1c-ii)*  
b. Conducting an acceptable patient interview (identifying the patient). *(1b-v, 1a-i, 1c-ii)*  
c. Developing strategies to neutralize language barriers. *(1b-vi, 2b-vi)*  

16. **Lab #3**  
a. Students must demonstrate ability to draw blood by greeting and identifying patient, use proper ascetic technique preparing the patient, assembling necessary blood collection devices, applying tourniquet for correct amount of time, palpating vein, changing tubes in correct order, and labeling all necessary tubes. *(1b-v, 1a-i, 1c-ii)*  

**Course Content:**  
A general description of lecture/discussion topics included in this course are listed in the Learning Objectives / Specific Course Objectives sections of this syllabus.  

Students in all sections of this course will be required to do the following:  

1. Proctored Exams  
2. Comprehensive Final Exam  
3. Laboratory Assignments/Quizzes  
4. Quizzes/Assignments + Case Studies  

**Methods of Instruction/Course Format/Delivery:**  
This course is offered in an online format. However, there will be three mandatory Saturday labs, which will be listed along with their corresponding time by the instructor. Students will be fully responsible with keeping track of all assignments due dates, lab dates and time, as well as being aware of the testing center times for the four mandatory proctored exams.  

Students are expected to demonstrate basic competency in reading, writing, oral communication, math, and computer skills. Proficiency will be measured by quizzes, assignments, laboratory assignments and quizzes, three regular examinations and a comprehensive final exam.  

**Major Assignments / Assessments:**  
The following items will be assigned and assessed during the semester and used to calculate the student's final grade.
Assignments
1. Quizzes (Chapters 1-13)
2. Case Studies (Chapter 1-7, 9,10)

Assessment(s):
1. Laboratory Assignments/Quizzes (Pre, During, and Post Lab)
2. Proctored Exam #1 (Chapters 1-6)
3. Proctored Exam #2 (Chapters 7-10)
4. Proctored Exam #3 (Chapters 11-13)
5. Comprehensive Final Exam (Chapters 1-13)

Course Grade:
The grading scale for this course is as follows:
- Major Exams (Covering Lecture and Laboratory Information): 40%
- Quizzes/Assignments + Attendance: 25%
- Laboratory Assignments/Quizzes: 20%
- Comprehensive Final Exam: 15%

Total: 100%

Texts, Materials, and Supplies:

Required Readings:

Recommended Readings:

Other:
- For current texts and materials, use the following link to access bookstore listings: [http://www.panolacollegestore.com](http://www.panolacollegestore.com)
- For testing services, use the following link: [http://www.panola.edu/elearning/testing.html](http://www.panola.edu/elearning/testing.html)
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Administration Building or go to [http://www.panola.edu/student-success/disability-support-services/](http://www.panola.edu/student-success/disability-support-services/) for more information.
- Withdrawing from a course is the student’s responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.
SCANS CRITERIA

1) Foundation skills are defined in three areas: basic skills, thinking skills, and personal qualities.
   a) Basic Skills: A worker must read, write, perform arithmetic and mathematical operations, listen, and speak effectively. These skills include:
      i) Reading: locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.
      ii) Writing: communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.
      iii) Arithmetic and Mathematical Operations: perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.
      iv) Listening: receive, attend to, interpret, and respond to verbal messages and other cues.
      v) Speaking: Organize ideas and communicate orally.

   b) Thinking Skills: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively. These skills include:
      i) Creative Thinking: generate new ideas.
      ii) Decision Making: specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative.
      iii) Problem Solving: recognize problems and devise and implement plan of action.
      iv) Visualize (“Seeing Things in the Mind’s Eye”): organize and process symbols, pictures, graphs, objects, and other information.
      v) Knowing How to Learn: use efficient learning techniques to acquire and apply new knowledge and skills.
      vi) Reasoning: discover a rule or principle underlying the relationship between two or more objects and apply it when solving a problem.

   c) Personal Qualities: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.
      i) Responsibility: exert a high level of effort and persevere toward goal attainment.
      ii) Self-Esteem: believe in one’s own self-worth and maintain a positive view of oneself.
      iii) Sociability: demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings.
      iv) Self-Management: assess oneself accurately, set personal goals, monitor progress, and exhibit self-control.
      v) Integrity and Honesty: choose ethical courses of action.

2) Workplace competencies are defined in five areas: resources, interpersonal skills, information, systems, and technology.
   a) Resources: A worker must identify, organize, plan, and allocate resources effectively.
      i) Time: select goal-relevant activities, rank them, allocate time, and prepare and follow schedules.
      ii) Money: Use or prepare budgets, make forecasts, keep records, and make adjustments to meet objectives.
      iii) Material and Facilities: Acquire, store, allocate, and use materials or space efficiently. Examples: construct a decision time line chart; use computer software to plan a project; prepare a budget; conduct a cost/benefits analysis; design an RFP process; write a job description; develop a staffing plan.

   b) Interpersonal Skills: A worker must work with others effectively.
      i) Participate as a Member of a Team: contribute to group effort.
      ii) Teach Others New Skills.
      iii) Serve Clients/Customers: work to satisfy customer's expectations.
iv) Exercise Leadership: communicate ideas to justify position, persuade and convince others, responsibly challenge existing procedures and policies.

v) Negotiate: work toward agreements involving exchange of resources, resolve divergent interests.

vi) Work with Diversity: work well with men and women from diverse backgrounds. Examples: collaborate with a group member to solve a problem; work through a group conflict situation, train a colleague; deal with a dissatisfied customer in person; select and use appropriate leadership styles; use effective delegation techniques; conduct an individual or team negotiation; demonstrate an understanding of how people from different cultural backgrounds might behave in various situations.

c) **Information**: A worker must be able to acquire and use information.

i) Acquire and Evaluate Information.

ii) Organize and Maintain Information.

iii) Interpret and Communicate Information.

iv) Use Computers to Process Information.

Examples: research and collect data from various sources; develop a form to collect data; develop an inventory record-keeping system; produce a report using graphics; make an oral presentation using various media; use on-line computer data bases to research a report; use a computer spreadsheet to develop a budget.

d) **Systems**: A worker must understand complex interrelationships.

i) Understand Systems: know how social, organizational, and technological systems work and operate effectively with them.

ii) Monitor and Correct Performance: distinguish trends, predict impacts on system operations, diagnose deviations in systems' performance and correct malfunctions.

iii) Improve or Design Systems: suggest modifications to existing systems and develop new or alternative systems to improve performance.

Examples: draw and interpret an organizational chart; develop a monitoring process; choose a situation needing improvement, break it down, examine it, propose an improvement, and implement it.

e) **Technology**: A worker must be able to work with a variety of technologies.

i) Select Technology: choose procedures, tools or equipment including computers and related technologies.

ii) Apply Technologies to Task: understand overall intent and proper procedures for setup and operation of equipment.

iii) Maintain and Troubleshoot Equipment: Prevent, identify, or solve problems with equipment, including computers and other technologies.

Examples: read equipment descriptions and technical specifications to select equipment to meet needs; set up and assemble appropriate equipment from instructions; read and follow directions for troubleshooting and repairing equipment.