

Master Course Syllabus

Course Title: Phlebotomy Technician

Course Code: PLAB 1023

Course Description:

This course prepares students for employment as phlebotomists in clinics, hospital and commercial laboratories, large medical offices and blood banks. Students are provided instruction on how to obtain blood specimens from patients by venipuncture and skin puncture collection using proper infection control and safety practices, including vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture. Course also focuses on specimen collection on adults, children and infants. Emphasis will be placed on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, health care team interaction, ethics and medical terminology. In addition to the lecture portion of the class, students will draw blood from each other and if applicable, in clinical rotations in order to obtain the 100 successful sticks required for passing the course. All blood drawing will be under direct supervision of the instructor and/or other qualified personnel.

Prerequisites:

Required: A high school diploma or a G.E.D.

The applicant must read, write and speak English and possess adequate oral and written communication skills to permit regular, routine, timely and productive interactions with faculty members, staff, clinical supervisor's, patients and other students in person or through use of technology.

Required Immunizations:

See current requirements for immunization located in the application packet.

Credit Hours:

No credit hours are given for this course; the class is comprised of 90 contact hours of classroom instruction.

Student Learning Outcomes:

Upon completion of this course, the student should be able to:

- Demonstrate infection control and safety practices.
- Demonstrate basic understanding of the anatomy and physiology of body systems.
- Describe Quality Assurance as it related to specimen collection.
- Explain the role of specimen collection in the overall patient care system.
- Identify collection equipment.
- Identify various types of additives used.
- Know when to use special precautions.
- Know what substances can interfere with clinical analysis of blood constituents.
- Demonstrate venipuncture techniques on adults, children and infants.
- Explain requisitioning, transport and processing.
- Explain the laws, ethics and various accrediting agencies.
- Demonstrate interpersonal and teamwork skills related to the lab setting

Required Text:

Phlebotomy Handbook, 8th edition, Garza, Diana; Becan-McBride, Kathleen, Pearson Education Inc. 2010.
Recommended Online Study Guide: Online study companion (instructions in the inner left cover of student textbook). (Textbook is available at Blinn Bookstore.)

Required Materials:

- Scrubs
 - Classroom Scrubs will be identified at the beginning of the semester
- Appropriate Shoes

Grading System:

The lesson plan and class schedule informs students of scheduled assignments and topics. Periodic tests are given to allow frequent feedback and evaluation. Students **MUST** achieve the following for a student to participate in clinical rotation and to receive a certificate of completion.

- A grade of 70 or better in the didactic and laboratory portions of class.
- A grade of 70 or better on quizzes and exams cumulatively is required for a clinical rotation assignment.
- A grade of 70 or better is required on the Lab Practicum for a clinical rotation assignment.
- A minimum of 25 skin punctures/venipunctures possible and will be credited toward the clinical portion of phlebotomy (PLAB 1060).

The grading scale is as follows:

- A = 90 - 100%
- B = 80 - 89%
- C = 70 - 79%
- D = 60 - 69%
- F = < 60 %

Grade Book	
Quizzes	10%
Lab Practicum / Lab Final	30% / 20%
Exams	20%
Final Exam for Lecture	20%

Final Assessment Appeal Policy:

As per Blinn Workforce Education policy and if applicable, the policy is included in the Blinn College student handbook, as well as the website.

Civility Statement:

Members of the Blinn College community, which includes faculty, staff and students, are expected to act honestly and responsibly in all aspects of campus life. Blinn College holds all members accountable for their actions and words. Therefore, all members should commit themselves to behave in a manner that recognizes personal respect and demonstrates concern for the personal dignity, rights, and freedom of every member of the College community, including respect for College property and the physical and intellectual property of others.

If a student is asked to leave the classroom because of uncivil behavior, the student may not return to that class until the student arranges a conference with the instructor; it is the student's responsibility to arrange for this conference.

Course Requirements:

- Students are expected to utilize the time given to them during class, at the instructor's discretion. Students are required to complete all assignments on time. Students are expected to review and study their notes before class to reinforce what was learned during the previous class. It is strongly recommended that students are prepared for each class and that they take notes and participate as required.

Calendar:

Courses are offered with various schedules to accommodate the students. Courses may be scheduled in any of the following weekly formats:

- Class may meet two (2) times per week for four (4) hours, totaling eight (8) classroom hours each week.
- Class may meet three (3) times per week for four (4) hours, totaling twelve (12) classroom hours each week.
- Class may meet three (3) times per week for six (6) hours, totaling eighteen (18) classroom hours per week.
- Dual-credit classes meet 4 times/week (10 hours/week).

Assessments:

Test/Exam Schedule and Procedure:

- There will be quizzes after each chapter during the following class period (see schedule) for dates. Four (4) major lecture exams will be scheduled throughout the course.
- The lecture final exam will be comprehensive.
- The lab final exam will be comprehensive and will consist of a written exam.
- The lab practicum will be comprehensive and will consist of demonstrating all proper techniques learned throughout the course.

Remember: students must have an overall test grade average of 70 % to complete the requirements of this course before being eligible to participate in the clinical portion of class.

Attendance Policy:

To receive a Certificate of Completion, students must meet attendance requirements. **Nine (9) hours or more absences for whatever reason may be cause for dismissal from the course.**

Tardiness is determined according to minutes missed. One (1) to fifteen (15) minutes is considered a 15 minute tardy. Three (3) tardies constitute one (1) hour of absence. **Excessive tardiness and/or leaving early can be grounds for being dropped from the course.**

Regular and punctual attendance is required at all lecture and laboratory sessions as well as clinical rotations. Class roll will be taken and each student will be required to sign an Attendance Roster at the beginning of each class. If it absolutely necessary to leave class for any reason, excused or unexcused, the student must sign out on the Attendance Roster and include the time before leaving.

Students not meeting these requirements may be dropped from the course.

Policies and Procedures:

All students are required to adhere to the policies of Blinn College. These policies are listed in the Student Handbook. A copy of handbook is available at the Office of Workforce Education.

Dress Code:

1. Students are required to wear scrubs and closed toed shoes (no canvas shoes or sandals) to each class.
2. Students will dress in a professional manner.
3. Artificial nails are NOT allowed due to infection control issues.
4. Jewelry should be limited and used conservatively.
5. No revealing clothing will be allowed.
6. When performing laboratory exercises and during clinical rotations students will wear buttoned lab coats and gloves. No Excuses! (Supplied by Blinn College).
7. Cell phones are not allowed during classroom, lab, or clinicals. Any cell phone interruption during class time will not be tolerated. If extenuating circumstances arise, discuss with the instructor.

Phlebotomy Technician

Lesson Plan

- I. Introduction**
- II. Content**

Lesson 1

Chapter 1: Phlebotomy Practice and Quality Assessment

1. Phlebotomy Practice and Definition
2. The Clinical Laboratory & Specimen Collection Services
3. Competencies, Certification, and Professionalism for Phlebotomists
4. Quality Improvement and Assessment
5. Chapter 1 Activities

Lesson 2

Chapter 2: Communication, Computerization, and Documentation

1. Communication Strategies for Health Care Workers
2. Computer and Documentation Basics
3. Laboratory Test Requisitions, Specimen Labels, and Blood Collection Lists
4. Specimen Labels
5. Reporting Laboratory Results
6. Documentation Essentials and the Medical Record
7. Chapter 2 Activities

Lesson 3

Chapter 3: Professional, Ethics, Legal and Regulatory Issues

1. Laws versus Ethics
2. Ethics Overview
3. Patient's Rights
4. Governmental Laws
5. Basic Legal Principles
6. Legal Terminology
7. Legal Claims and Defense
8. Cases Resulting from Improper Technique and Negligence
9. Examples of Past Phlebotomy Lawsuits
10. HIV-related issues
11. Professional Liability Insurance
12. Clinical Lab Improvement Amendments
13. Chapter 3 Activities

Lesson 4

Chapter 4: Infection Control Pathogen and Infections

1. Personal Safety from Infection During Specimen Handling
2. Employees' Health
3. Chain of Infection
4. Standard Precautions
5. Infection Control and Safety in the Clinical Laboratory
6. Disinfectants and Antiseptics
7. Chapter 4 Activities

Lesson 5

Chapter 5: Safety and First Aid

1. Goal of Safety in the Health Care Institution
2. Fire Safety
3. Electrical Safety
4. Radiation Safety
5. Mechanical Safety
6. Chemical Safety
7. Equipment and Safety in Patient's Rooms
8. Patient Safety Outside the Room
9. Patient Safety Related to Latex Products
10. Disaster Emergency Plan
11. Emergency Procedures
12. Chapter 5 Activities

Lesson 6

Chapter 6: Medical Terminology and Anatomy and Physiology of Organ Systems

1. Medical Terminology
2. Anatomy and Physiology Overview
3. Major Organ Systems
4. Chapter 6 Activities

Lesson 7

Chapter 7: The Cardiovascular and Lymphatic Systems

1. The Cardiovascular System
2. The Heart
3. The Vessels and Circulation
4. The Blood
5. Hemostasis and Coagulation
6. Laboratory Tests of the Cardiovascular System
7. The Lymphatic System
8. Chapter 7 Activities

Lesson 8

Chapter 8: Blood Collection Equipment

1. Introduction to Blood Collection Equipment
2. Anticoagulants and Preservatives
3. Safety Syringes
4. Tourniquets and Venoscope
5. Bleeding Time Equipment
6. Gloves for Blood Collection

7. Antiseptics, Sterile Gauze Pads, and Bandages
8. Microcollection Equipment
9. Blood Drawing Chair
10. Infant Phlebotomy Station
11. Specimen Collection Trays
12. Chapter 8 Activities

Lesson 9

Chapter 9: Preanalytical Complications Causing Medical Errors in Blood Collection

1. Overview
2. Categories of Preanalytical Variables
3. Complications Associated with Test Requests and Identification
4. Complications Associated with the Specimen Collection Procedure
5. Chapter 9 Activities

Lesson 10

Chapter 10: Venipuncture Procedures

1. Blood Collection
2. Health Care Worker Preparation
3. Precautions and Needlestick Prevention Strategies
4. Approaching, Assessing, and Identifying the Patient
5. Chapter 10 Activities

Lesson 11

Chapter 11: Capillary Blood Specimens

1. Identifications for Skin Procedures
2. Composition of Capillary Blood
3. Basic Technique for Collecting Diagnostic Capillary Blood
4. Chapter 11 Activities

Lesson 12

Chapter 12: Specimen Handling, Transportation, and Processing

1. Specimen Handling after the Venipuncture
2. Specimen Delivery Methods
3. Processing the Specimen on Arrival at the Clinical Laboratory
4. Reporting Laboratory Results
5. Chapter 12 Activities

Lesson 13

Chapter 13: Pediatric and Geriatric Procedures

1. Pediatric Patients
2. Precautions to Protect the Child
3. Latex Allergy Alert
4. Pediatric Phlebotomy Procedures

5. Geriatric Patients
6. Physical Problems Common in Older Individuals
7. Chapter 13 Activities

Lesson 14

Chapter 14: Point-of-Care Collections

1. Introduction
2. Glucose Monitoring
3. Quality in Point-of-Care Testing and Disinfecting Analyzers
4. Blood Gas and Electrolyte Analysis
5. Point-of-Care Testing for Acute Heart Damage
6. Blood Coagulation Monitoring
7. Hematocrit, Hemoglobin, and other Hematology Parameters
8. Cholesterol Screening
9. Bleeding Time Test
10. Other POCT Tests and Future Trends
11. Chapter 14 Activities

Lesson 15

Chapter 15: Arterial, Intravenous (IV), and Special Collection Procedures

1. Blood Cultures
2. Glucose Tolerance Test
3. Postprandial Glucose Test
4. Modified Oral Glucose Test
5. Lactose Tolerance Test
6. Arterial Blood Gases
7. Therapeutic Drug Monitoring (TDM)
8. Collection for Trace Metals (Elements)
9. Genetic Molecular Tests
10. IV Line Collections
11. Cannulas and Fistulas
12. Donor Room Collections
13. Autologous Transfusion
14. Therapeutic Phlebotomy
15. Chapter 15 Activities

Lesson 16

Chapter 16: Urinalysis, Body Fluids, and Other Specimens

1. Introduction
2. Urine Collection
3. Cerebrospinal Fluid
4. Fecal Specimens
5. Seminal Fluid
6. Amniotic Fluid
7. Other Body Fluids
8. Culture Specimens

9. Throat and Nasopharyngeal Culture Collections
10. Skin Tests
11. Gastric Analysis
12. Breath Analysis for Peptic Ulcers
13. Sweat Chloride by Iontophoresis
14. Chapter 16 Activities

Lesson 17

Chapter 17: Drug Use, Forensic Toxicology, Workplace Testing, Sports Medicine, and Related Areas

1. Overview and Prevalence of Drug Use
2. Common Drug Analysis Methods and Interferences
3. Forensic Toxicology Specimens
4. Chain of Custody
5. Workplace Drug Testing
6. Tampering with Specimens
7. Drug Testing in the Private Sectors
8. Drug Use in Sports
9. Preferred Specimens for Drug Tests
10. Neonatal Drug Testing
11. Blood Alcohol and Breath Testing
12. Chapter 17 Activities

**Refer to class schedule for individual instructor's dates, classes, topics, procedures and exams.

III. Closing

Comprehensive review of lecture and lab procedures

IV. Evaluation

Comprehensive final exam

V. Demonstrations

Comprehensive lab final
Clinical rotation grade of 70 or better, if applicable
Completion of 100 successful blood draws