GRAYSON COLLEGE

PLAB 1223

PHLEBOTOMY

SPRING 2017

GRAYSON COLLEGE

MEDICAL LABORATORY TECHNOLOGY

PLAB 1223 - PHLEBOTOMY

TEXTBOOKS:

Required:

1. Warekois, R. S. & Robinson, R. (2016). Phlebotomy: Worktext and Procedures Manual. (4th ed.). St. Louis: Elsevier.

Recommended: Numerous additional texts covering this topic are available in the GCC library, the MLT library or from the Instructor.

COURSE DESCRIPTION:

PLAB 1223. Phlebotomy. (1-4-2) One hours lecture. Four hours lab. Two hours credit. Skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Concurrent enrollment in MLAB 1260 required.

LEARNING OUTCOMES:

Demonstrate knowledge of infection control and safety; demonstrate understanding of quality assurance and the importance of specimen collection in the overall patient care system; and demonstrate knowledge of collection equipment, various types of additives used, special precautions necessary, and substances that can interfere in clinical analysis of blood constituents. Demonstrate proper techniques to perform venipuncture and capillary puncture on adults, children, and infants; and demonstrate the knowledge of requisitioning specimen transport and specimen processing.

* GOALS:

Upon completion of this course the graduate should be prepared to function as a member of the health care team with the following duties and/or responsibilities:

1. Obtain adequate and correct blood specimens by capillary puncture or venipuncture on adults and by capillary puncture on children
2. Label specimens accurately and completely
3. Distribute specimens to the appropriate area of the laboratory
4. Prepare specimens and perform special procedures (e.g. blood smears, glucose tolerance test, bleeding time, etc.)

5. Promote the comfort and well-being of the patient
6. Observe safety policies and procedures
7. Prepare collection trays for specimen collection
8. To apply the problem solving approach to distinguish situations that necessitate independent action from those that require referral to a supervisor.
9. To display a professional attitude toward colleagues.
10. To prepare records and transmit results accurately.
11. Project an image of professionalism in appearance and conduct at all times.

COURSE REQUIREMENTS:

In order to achieve a passing grade, the following requirements must be met:
1. Satisfactory Campus Lab performance. (A grade of 70% or better.)
2. Participation in lecture totaling at least 40 hours
3. Satisfactory campus laboratory performance
4. Completion of the comprehensive course final
5. Regular attendance for lecture and Campus Lab is required (see General Policies for Course).

PROGRAM COMPLETION AWARDS:

Upon satisfactory completion of the Phlebotomy curriculum (PLAB 1223 and PLAB 1260) the student will receive a certificate from Grayson College and is eligible to take a national certification examination such as the one offered by the American Society for Clinical Pathology.

GENERAL POLICIES FOR COURSE:

ATTENDANCE:

Regular attendance for lecture and campus lab is required. Responsibility for work missed in lecture or campus lab is placed upon the student.

ELECTRONIC DEVICES:

Electronic devices (phones, tablets, watches, mobile devices, etc.) are allowed in the classroom and in campus lab. However, they must have a non-audio mode (such as vibrate), and must be set to that mode. If you need to make a call during class on your phone, you must leave the classroom. Recording of classroom activities, including lectures, is prohibited.

METHODS AND PROCEDURES OF INSTRUCTION:

The course consists of lecture/discussion sessions at the South Technical Center on the Grayson College South Campus for a total of at least 40 lecture hours. Prior to beginning a clinical rotation, the student will attend lecture in the campus laboratory to learn basic phlebotomy skills. When these basic skills have been adequately mastered, the student will begin clinical rotation. Dates and times of clinical rotations will be arranged for each student.

EVALUATION OF STUDENT ACHIEVEMENT OF OBJECTIVES:

Achievement of objectives will be determined by written examinations and Campus Lab Check-off Lists. The examinations may be a combination of multiple choice, true-false, and/or matching questions. There will be a comprehensive final, over all topics covered during the semester. At the beginning of the semester, prior to attending clinical, each student will be observed in campus lab performing a venipuncture. The venipuncture check-off list will be utilized to determine competency, at that time. There will also be a venipuncture check-off performed at the end of the semester, for which the student receives a grade.

COURSE GRADE WILL BE DETERMINED BY THE FOLLOWING PROCESS:

Category	*Total*
Exams	60%
Phlebotomy Check-off	10%
Comprehensive Final	10%
Assignments	10%
Campus Lab	10%
	Total = 100%

In order to pass the course, an average of 70% must be achieved on the Phlebotomy Unit Tests.

NUMERICAL VALUE OF GRADES:

A = 100% – 89.5%
B = < 89.5% – 79.5%
C = < 79.5% – 69.5%
D = < 69.5% – 59.5%
F = < 59.5% – 0.00%

ASSIGNMENTS:

1. Read each chapter as it is assigned. (See Lecture and Exam Schedule)
2. Study the outline of major topics at the beginning of each chapter.
3. Study the objectives listed for each chapter.
4. When assigned, look up the definitions for the words found at the end of the chapter under the Key Terms and turn in for credit. The definitions will be due on the day of the exam over the assigned chapters.
5. When assigned, answer the Study Questions found at the end of each chapter. Turn for credit. Write out the answer as a statement. The study questions will be due on the day of the exam over the assigned chapters.

COURSE OBJECTIVES:

TERMINAL PERFORMANCE OBJECTIVES (TPO):

Upon completion of the assignments and participation in class discussion, the student should be able to answer at least 70% of the questions on an examination in Phlebotomy.

SPECIFIC COURSE OBJECTIVES:

After reading each chapter, participating in class discussion, and answering the review questions, the student should be able to accomplish the objectives stated below:

Chapter 1: Introduction to Phlebotomy

After completing this chapter, you should be able to:

1. Define phlebotomy.
2. List at least five job skills that are important for phlebotomists to have, and explain why each is important.
3. Describe the major duty of phlebotomists, and discuss four other responsibilities that are important.
4. List six personal qualities that characterize a professional, and explain how phlebotomists demonstrate these qualities.
5. Differentiate accreditation, certification, and licensure.
6. Identify professional organizations with an interest in phlebotomy.
7. Explain why informed consent and confidentiality are important legal issues for phlebotomists.

Chapter 2: Health Care Structure

After completing this chapter, you should be able to:

1. Describe the overall structure of a typical hospital.

2. Explain the roles of each of the following hospital branches, and list the kinds of jobs included:
    a. fiscal and information services
    b. support services
    c. nursing services
    d. professional services
3. Describe the departments and functions of the professional services branch of the hospital.
4. List the kinds of personnel who may work in the laboratory.
5. Describe the functions of the anatomic and surgical pathology laboratory.
6. List the major departments of the clinical laboratory.
7. Describe the kinds of samples typically analyzed and the kinds of tests that may be performed in each of the following clinical laboratory sections:
    a. hematology
    b. coagulation and hemostasis
    c. chemistry
    d. specimen collection and processing
    e. microbiology
    f. urinalysis and clinical microscopy
    g. serology or immunology
    h. blood bank or immunohematology
    i. molecular diagnostics
    j. referrals
8. Explain the role of molecular diagnostics and flow cytometry in laboratory testing.
9. Explain how laboratory quality is monitored, and list at least four organizations that are involved in ensuring quality laboratory testing.
10. Describe other health care settings where a phlebotomist may work.

Chapter 3: Safety

After completing this chapter, you should be able to:

1. Explain the role of the Occupational Safety and Health Administration (OSHA) in workplace safety.
2. List eight types of safety hazards.
3. Describe six precautions that can reduce the risk of injury.
4. Explain steps to be taken to lessen the risk of physical or sharps hazards.
5. List the items that must be included on a hazardous chemical label according to the OSHA Hazardous Communication Standard.
6. List two other kinds of labels used to identify hazardous materials.
7. Explain the purpose of the materials safety data sheet.
8. Describe the components of a chemical hygiene plan.
9. Discuss safety precautions to be used when handling hazardous chemicals.
10. Identify the radioactive hazard symbol.
11. Describe precautions to be taken to reduce the risk of electrical hazards.

12. Describe the four classes of fire, and identify the type or types of fire extinguisher used to combat each.
13. Explain what to do in case of the following:
    a. bleeding wound
    b. no sign of breathing
    c. shock
    d. latex sensitivity
14. Describe how to maintain the work area in a safe condition.

Chapter 4: Infection Control

After completing this chapter, you should be able to:

1. Define infection, and differentiate between community-acquired and health care–associated infections.
2. Explain how organisms found in a hospital are different than those found in the community.
3. Describe four ways that infectious agents may be transmitted, and give examples of each.
4. Discuss the importance of proper hand hygiene in breaking the chain of infection.
5. Describe the proper hand-washing technique, including the sequence of steps.
6. Define personal protective equipment (PPE), and describe at least four types.
7. Describe the order and procedure for putting on and removing PPE.
8. Define Occupational Safety and Health Administration (OSHA), and explain its role in infection control.
9. Define bloodborne pathogen, and give examples.
10. Explain how bloodborne pathogens may be transmitted.
11. Explain the components of standard precautions.
12. Define expanded precautions, and describe the types.
13. Given an isolation classification, select the appropriate PPE.
14. Explain general procedures for cleaning up a blood spill.

Chapter 5: Medical Terminology

After completing this chapter, you should be able to:

1. Define selected roots, suffixes, and prefixes.
2. Translate the English or common word for a condition or system into the appropriate medical form.
3. Use selected medical terms or expressions in their proper context.
4. Define and use correctly specific medical terms that apply to phlebotomy.
5. Define selected medical abbreviations, and use them correctly in accordance with Joint Commission requirements.

Chapter 6: Human Anatomy and Physiology

After completing this chapter, you should be able to:

1. Describe the three levels of organization of the human body.
2. Name four structures of the cell, and describe the functions of each.
3. Name four kinds of tissue, and explain the roles of each.
4. Define each anatomic term discussed, and use it to locate various structures and position a patient.
5. Describe the eight major body cavities, and list at least one organ contained in each.
6. For each of the following body systems, describe major features, organs, and functions and list associated diseases and common laboratory tests:
    a. skeletal
    b. muscular
    c. integumentary
    d. nervous
    e. digestive
    f. urinary
    g. respiratory
    h. endocrine
    i. reproductive

Chapter 7: Circulatory, Lymphatic, and Immune Systems

After completing this chapter, you should be able to:

1. Describe the circulation of blood from the heart to the lungs and other body tissues.
2. Differentiate arteries, veins, and capillaries.
3. Locate the major arteries and veins of the human body.
4. Define systole, diastole, and sphygmomanometer.
5. List and define at least 10 diseases of the heart and blood vessels.
6. Describe the components of whole blood.
7. Describe the three cellular elements of the blood, including their major functions.
8. Explain the process of hemostasis.
9. For red blood cells (RBCs), white blood cells (WBCs), and hemostasis, list at least three diseases that affect each.
10. Describe laboratory tests that may be used to detect diseases of RBCs, WBCs, and hemostasis.
11. Differentiate lymphatic circulation from that of blood.
12. Explain the functions of the lymphatic system.
13. Differentiate among nonspecific, humoral, and cellular immunity.
14. Describe the functions of T and B cells.

Chapter 8: Venipuncture Equipment

After completing this chapter, you should be able to:

1. List the equipment that should be available for venipuncture.
2. Describe the purpose of a tourniquet, and list types that may be used to locate a vein.
3. Differentiate between an antiseptic and a disinfectant, and list those that may be used for blood collection.
4. Locate the bevel, shaft, hub, and point of a needle, and describe safety features that may be included.
5. Define gauge.
6. Name the parts of a syringe, and describe how the syringe system differs from the evacuated tube system.
7. Explain when a syringe system or winged infusion set (butterfly) is used in blood collection.
8. Describe the proper use of the tube holder (needle adapter).
9. Differentiate whole blood, serum, and plasma, and list at least one use for each.
10. Describe at least nine additives, including their mode of action and uses.
11. List at least 10 colors for tube tops. Identify the additive(s) in each, and state one use for each.
12. State the correct order in which various types of tubes should be collected.
13. Describe the proper disposal of a used needle.

Chapter 9: Routine Venipuncture

After completing this chapter, you should be able to:

1. List the information that is commonly found on a test requisition.
2. List, in order, the steps in a routine venipuncture.
3. Discuss the information that must be verified for inpatient identification (ID) before the blood collection procedure.
4. Explain how the ID of outpatients differs from that of inpatients.
5. Describe patient preparation and positioning.
6. Describe how to assemble the evacuated tube system.
7. Explain how to apply a tourniquet, and list three consequences of improper application.
8. List the veins that may be used for blood collection, and give the advantages and disadvantages of each.
9. Describe how to improve selection of a vein.
10. Explain how to clean the venipuncture site.
11. Describe how to properly insert the needle into the vein.
12. Describe how to change tubes.
13. Discuss how the needle should be removed when the last tube of blood has been collected.

14. List proper steps for patient handling after the venipuncture.
15. List the information that must be included on the label of each tube.
16. Describe how venipuncture using a syringe differs from that using the evacuated tube system.

Chapter 10: Dermal Puncture

After completing this chapter, you should be able to:

1. List situations in which a dermal puncture might be preferred.
2. Explain why it is necessary to inform the physician when capillary blood is collected.
3. Describe skin puncture devices, including safety features they may have.
4. Discuss containers that may be used to collect capillary blood.
5. List the steps in the BD Unopette dilution method.
6. Explain how circulation may be increased at the puncture site.
7. Discuss proper dermal puncture site selection.
8. Explain why it is important to control the depth of the puncture.
9. List, in order, the steps for dermal puncture.
10. Describe how the cut should be made when a finger is used as the puncture site.
11. Explain why the first drop of blood is discarded.
12. List precautions to be observed when collecting capillary blood.
13. State the order of the draw in collecting capillary blood.
14. Explain the use of the bleeding time (BT) test.
15. List the equipment required to perform a BT test.
16. List, in order, the steps for performing a BT test.
17. Explain the procedure for performing an ancillary blood glucose test.

Chapter 11: Venipuncture Complications

After completing this chapter, you should be able to:

1. Explain the procedure to be followed in these situations:
    a. The patient is not in his or her room.
    b. The patient has no identification band.
    c. The patient is sleeping, unconscious, or apprehensive.
    d. A member of the clergy or a physician is with the patient.
    e. Visitors are present.
    f. The patient cannot understand you.
    g. The patient refuses to have blood drawn.
2. List at least four sites that must be avoided when collecting blood, and explain why.
3. Describe techniques that can be used to help locate a vein.

4. Discuss limitations and precautions to be followed if a leg or hand vein is considered for venipuncture.
5. List at least two situations in which alcohol should not be used to clean the venipuncture site, and state at least one alternative.
6. Describe four potential problems associated with tourniquet application.
7. Define syncope, and explain what to do when a patient experiences this condition during the collection of blood.
8. Describe the actions to be taken if a patient has a seizure, complains of nausea, or vomits.
9. List three reasons blood may not flow into a tube, and explain how to prevent or correct the problem.
10. Explain what should be done in the following situations:
    a. An artery is inadvertently punctured.
    b. No blood is collected on the first try.
    c. The patient requests something.
    d. There is prolonged bleeding from the puncture site.
11. List the causes of a hemolyzed sample, and name the test results that may be affected.
12. List tests that may be affected by a patient's position.
13. Describe five long-term complications associated with venipuncture, and explain how they can be avoided.
14. State the reasons a sample may be rejected by the laboratory.

Chapter 12: Blood Collection in Special Populations

After completing this chapter, you should be able to:

1. Describe two physiologic differences between children and adults that should be considered when collecting blood from infants and children.
2. Describe steps that can be taken to help reduce a child's anxiety and make the venipuncture experience more pleasant.
3. Explain how blood collection supplies and the venipuncture procedure are modified for infants and children.
4. List the steps in dorsal hand venipuncture in children.
5. Define bilirubin, explain its significance, and describe precautions that must be observed when collecting blood for bilirubin testing.
6. Explain the usual procedure for collecting blood for neonatal screening tests, and list five tests that may be done.
7. Explain physical changes that may occur with aging that should be considered when collecting blood.
8. List conditions that may require blood draws for an extended period and alternative collection sites for patients with such conditions.
9. Define vascular access device, and describe eight types.
10. Describe how blood should be collected from a vascular access device.
11. List steps to be followed when collecting blood from a patient with an intravenous line in place.

Chapter 13: Arterial Blood Collection

After completing this chapter, you should be able to:

1. Explain how arterial blood differs from venous blood.
2. Describe what is measured in arterial blood gas (ABG) testing, and explain the significance of abnormal results.
3. List the equipment needed to collect arterial blood, and discuss the differences from routine venipuncture equipment.
4. List the arteries that can be used for blood gas collection, and describe the advantages and disadvantages of each.
5. Explain the principle and procedure for testing collateral circulation.
6. Define respiratory steady state, and list the steps that should be taken to ensure that it exists when blood is collected.
7. Describe the steps in ABG collection.
8. Discuss at least five complications that may occur with arterial puncture.
9. List at least seven sample collection errors that may affect ABG testing.
10. Describe capillary blood gas testing, including uses, limitations, and procedure.

Chapter 14: Special Collections and Procedures

After completing this chapter, you should be able to:

1. Define basal state.
2. Define and explain the uses of:
   a. Fasting specimens
   b. Timed specimens
   c. 2-hour postprandial specimens
3. Describe the procedure for performing the various tolerance tests.
4. Define diurnal variation, and list the blood constituents that may be affected by it.
5. Define therapeutic drug monitoring (TDM), describe the differences among a random level and peak and trough levels, and explain how TDM samples are collected.
6. Describe the reasons and procedures for collecting blood for culture.
7. Explain the steps in collecting blood from donors for transfusion.
8. Define and explain the uses of autologous donation and therapeutic phlebotomy.
9. Explain how samples to be tested for or suspected of containing cold agglutinins, cryofibrinogen, or cryoglobulin should be handled.
10. List samples that should be chilled until tested.
11. List samples that are light sensitive, and explain how they should be handled.
12. Describe the precautions to be taken when collecting legal or forensic specimens.

13. List samples that are time sensitive, and explain how they should be handled.
14. Explain how to prepare blood smears, describe features of unacceptable smears, and list the possible causes.
15. Explain how to prepare smears to be examined for malaria.

Chapter 15: Special Non-blood Collection Procedures

After completing this chapter, you should be able to:

1. Describe six kinds of urine samples, explain how each is collected, and state one use for each.
2. Instruct a patient how to collect a midstream clean-catch urine specimen.
3. Explain how a urine sample can be collected from an infant, and state at least one limitation.
4. Discuss why a fecal sample may be requested, list three types of samples, and describe collection methods.
5. Discuss how and why semen samples may be collected.
6. Explain the proper procedure for collecting a throat sample and a nasopharyngeal sample.
7. Explain the reason and the procedure for collecting a sweat/chloride sample.
8. Describe how cerebrospinal fluid is collected, and explain how the tubes collected should be distributed.
9. Define each of the following terms, and list at least one reason for collecting each fluid:
    a. pericardial fluid
    b. peritoneal (ascitic) fluid
    c. pleural fluid
    d. synovial fluid
10. Explain how amniotic fluid is formed, and describe three reasons for testing it.

Chapter 16: Specimen Transport, Handling, and Processing

After completing this chapter, you should be able to:

1. Discuss what might happen to a sample that is not properly handled and processed.
2. Describe four ways in which samples can be safely transported to the lab.
3. Explain why tubes should be transported in an upright position.
4. State the acceptable time between specimen collection and separation of cells from plasma or serum, and explain why this is necessary.
5. List two exceptions to time constraints, and state the maximum time that each may be held.
6. List two tests for which samples must be kept warm, and explain how to do this.

7. Describe how to handle samples that must be chilled.
8. List at least three analytes that are light sensitive, and explain how to protect them.
9. Describe the safety equipment that must be used when processing samples.
10. Explain why samples must be allowed to clot fully before processing, and state the average time for complete clotting to occur in a red-topped tube and when clot activators are used.
11. Explain the principle and proper operation of a centrifuge.
12. Describe the proper procedure for removing a stopper.
13. List at least five reasons for specimen rejection.

Chapter 17: Point-of-Care Testing

After completing this chapter, you should be able to:

1. Define point-of-care testing (POCT), and explain its advantages and disadvantages.
2. Discuss the importance of quality-assurance activities in POCT.
3. Describe the testing principle and clinical usefulness of the following:
    a. activated coagulation time
    b. blood gases and electrolytes
    c. cardiac troponin T
    d. cholesterol
    e. dipstick urinalysis
    f. glucose
    g. hemoglobin
    h. occult blood
    i. pregnancy testing
    j. prothrombin time
4. Describe the major features of an electrocardiogram and outline important points of patient preparation.

Chapter 18: Quality Phlebotomy

After completing this chapter, you should be able to:

1. Define quality assurance (QA), quality control (QC), total quality management, and continuous quality improvement, and discuss their differences and roles in quality phlebotomy.
2. Describe the contents of the procedure manual, and explain how the phlebotomist can use it.
3. Explain the role of the directory of services, and describe the information it contains.
4. List three types of analytic variables.
5. Describe at least five errors that may occur as a result of improper requisition handling, and explain QA procedures to monitor for them.

6. Describe procedures that should be followed for the QC of phlebotomy equipment.
7. Explain why expired tubes should not be used.
8. Define delta check, and explain its use in QA.
9. List nine patient activities that may affect laboratory test results, and give at least one example of a test affected by each.
10. List at least four blood collection sites that may lead to sample contamination, and list six sites that may result in pain or injury to the patient.
11. Discuss at least two errors that may result from improper tourniquet application.
12. Explain the risks of failing to cleanse the puncture site carefully, and discuss one method to monitor for such errors.
13. Describe precautions that must be taken when iodine is used as a cleansing agent, and list at least two laboratory tests that can be affected.
14. Discuss at least eight precautions that must be taken in collecting and labeling specimens.
15. Explain the phlebotomist's role in ensuring a positive patient perception of the level of care received.
16. Explain the steps to be followed in the case of an accidental needle stick, and describe QA procedures that may be used.
17. Discuss the monitoring of variables during sample transport.
18. Explain the effects of sample-processing variables on sample quality (e.g., separation times and centrifugation).
19. Describe how refrigerators and freezers are monitored.
20. Explain how multiple aliquots prepared from a single sample should be handled.

Chapter 19: Legal Issues in Phlebotomy

After completing this chapter, you should be able to:

1. Discuss why legal issues are important to the phlebotomist.
2. Differentiate the following types of laws: statutory, case, administrative, public, and private.
3. Define plaintiff, defendant, felony, misdemeanor, and tort.
4. Define liability, and give examples of situations in which a phlebotomist may be held accountable for the consequences of an action.
5. Explain how the accepted standard of care is determined, and give examples of these standards as they relate to phlebotomy.
6. Define malpractice, and explain what is necessary to prove it.
7. Differentiate between punitive and compensatory damages.
8. Describe steps the phlebotomist can take to avoid being accused of malpractice.
9. Explain the importance of confidentiality.
10. Define protected health information under Health Insurance Portability and Accountability Act (HIPAA) regulations.
11. Describe how the phlebotomist can safeguard a patient's privacy.

Specific Terminal Performance Objectives:

By completion of the phlebotomy class the student should be able to successfully perform a venipuncture, which includes the following objectives:

1. Have patient state name.
2. Wash hands with disinfectant.
3. Put on gloves.
4. Identify patient by matching armband with requisition.
5. Prepare equipment and materials.
    a. Obtain gauze, alcohol pad, needle, holder, tourniquet and necessary tube(s).
    b. Assemble needle onto holder.
    c. Place tube in holder.
    d. Place equipment within easy reach.
6. Explain venipuncture procedure to patient.
7. Position patient.
8. Place the tourniquet around the patient's arm above the elbow.
9. Instruct the patient to close the fist to help anchor the veins and make them more noticeable.
10. Locate a suitable vein at the bend of the elbow.
11. Palpate the vein with the fingertip to determine the direction of the vein, and to estimate its size and depth, making a mental picture of its location, if visually unapparent.
12. Release the tourniquet if venipuncture is not performed within 1 - 2 minutes.
13. Cleanse the skin of the puncture site using alcohol soaked gauze.
14. Allow alcohol to air dry, avoiding contamination of the site.
15. Retie tourniquet, if previously released
16. Uncap needle and with holder in one hand, use the thumb or fingers of other hand to pull the skin below site taut.
17. Hold the holder/needle assembly at a 15 - 30 degree angle and insert the needle into the vein.
18. Instruct the patient to open the fist as soon as there is good blood flow into the tube.
19. Allow the tube to fill to a sufficient amount and change tubes, if needed.
20. Release the tourniquet when the desired amount of blood is in the last tube.
21. Place a dry, sterile gauze over the puncture site immediately after withdrawing the needle from the vein (do not press down on the needle)
22. Instruct the patient to press the gauze over the site for 3 - 5 minutes with the arm extended.
23. Discard needle into needle disposal container (do not recap).
24. Label tube(s) according to laboratory guidelines
25. Check patient to be sure that bleeding has stopped; apply bandage, if necessary.
26. Clean up area.
27. Remove and discard gloves appropriately.
28. Wash hands with disinfectant.

INTEGRATION OF SCANS COMPETENCIES:

* Indicates Course Goals, Objectives, and/or Activities designed to achieve SCANS Competencies.

INTEGRATION OF SCANS COMPETENCIES
WITH COURSE GOALS, OBJECTIVES, AND ACTIVITIES

COURSE NUMBER PLAB 1223
COURSE NAME Phlebotomy

SCANS COMPETENCIES AND FOUNDATION SKILLS	COURSE GOALS, OBJECTIVES, AND ACTIVITIES
RESOURCES	
ALLOCATES TIME	Arrives for lab sessions at the assigned time Obtains adequate and correct blood specimens Prepares specimens and performs special procedures Displays increasing competency
ALLOCATES MONEY	
ALLOCATES MATERIAL AND FACILITY RESOURCES	Distributes specimens to appropriate area of laboratory Prepares specimens and perform special procedures Prepares collection trays
ALLOCATES HUMAN RESOURCES	
INFORMATION	
ACQUIRES & EVALUATES INFORMATION	Records results Demonstrates progressive accuracy, precision, and speed Recognizes situations which should be reported Associates unusual test results with indicated conditions or diseases
ORGANIZES & MAINTAINS INFORMATION	Follows written and verbal instructions Labels specimens Keeps records
INTERPRETS & COMMUNICATES INFORMATION	Labels specimens immediately upon collection Distributes specimens Reports results according to standard operating

	procedure
USES COMPUTERS TO PROCESS INFORMATION	Participates in computer assisted instruction Reports results according to standard operating procedure
INTERPERSONAL	
PARTICIPATES AS A MEMBER OF A TEAM	Functions independently as a member of the phlebotomy team
TEACHES OTHERS	Promotes comfort and well-being of patient Prepares patient for testing
SERVES CLIENTS/CUSTOMERS	Obtains adequate specimens Promotes comfort and well-being of patient Projects an image of professionalism in appearance and conduct Keeps patient information confidential
EXERCISES LEADERSHIP	Seeks assistance when necessary
NEGOTIATES TO ARRIVE AT DECISION	
WORKS WITH CULTURAL DIVERSITY	Promotes comfort and well-being of patient Functions as a member of the phlebotomy team
SYSTEMS	
UNDERSTANDS SYSTEMS	Prepares specimens and performs special procedures Observes safety policies and procedures Selects specimen types and determines suitability
MONITORS & CORRECTS PERFORMANCE	Observes safety policies and procedures Performs procedures under supervision of laboratory staff Displays progressively increasing ability Functions independently as a member of the phlebotomy team Keeps class records current
IMPROVES & DESIGNS SYSTEMS	Keeps class records current Participates in continuing education
TECHNOLOGY	
SELECTS TECHNOLOGY	Collects samples using proper equipment Prepares patient and equipment Selects appropriate puncture site Determines type of specimen needed for test ordered

APPLIES TECHNOLOGY TO TASK	Prepares specimens Performs special procedures
MAINTAINS & TROUBLESHOOTS TECHNOLOGY	Assesses the patient's physical condition Recognizes complications associated with phlebotomy Assesses criteria for sample recollection or rejection Solves common problems
BASIC SKILLS	
READING	Identifies the patient Labels specimens accurately and completely Distributes specimens to appropriate departments Follows written instructions Transcribes information
WRITING	Labels specimens accurately and completely Transcribes information Keeps records Records results
ARITHMETIC	Keeps class records current
MATHEMATICS	
LISTENING	Promotes comfort and well-being of patient Following verbal instructions Participates in continuing education
SPEAKING	Promotes comfort and well-being of patient Assesses the patient's physical disposition Projects an image of professionalism in conduct Seeks clarification when needed
THINKING SKILLS	
CREATIVE THINKING	Promotes comfort and well-being of patient Associates unusual test results with indicated conditions or diseases
DECISION MAKING	Recognizes situations which should be reported Associates unusual test results with indicated conditions or diseases Selects appropriate puncture site Assesses criteria for specimen recollection or rejection Determines type of specimen needed

PROBLEM SOLVING	Solves common problems Recognizes situations which should be reported Obtains results within limits set for each test Selects specimen types and determines suitability
SEEING THINGS IN THE MIND'S EYE	Follows written and verbal instructions Acts in a professional manner Cooperates to maintain lab and equipment in good condition
KNOWING HOW TO LEARN	Follows written and verbal instructions Demonstrates increasing dexterity Demonstrates progressive accuracy, precision, and speed Demonstrates knowledge of theoretical concepts
REASONING	Prepares specimens and performs special procedures Assesses patient's physical disposition Solves common problems and complications of the procedure Selects specimen types and determines suitability Assesses criteria for sample recollection or rejection
PERSONAL QUALITIES	
RESPONSIBILITY	Projects an image of professionalism in appearance and conduct Arrives for lab sessions at assigned time Adheres to GCC dress code Observes safety rules and regulations Observes affiliate rules and regulations Protects patient confidentiality
SELF-ESTEEM	Projects an image of professionalism in appearance and conduct Adheres to GCC dress code Demonstrates progressive accuracy, precision, and speed
SOCIABILITY	Promotes comfort and well-being of patient Projects an image of professionalism in appearance and conduct Displays progressively increasing ability to function as a member of a phlebotomy team
SELF-MANAGEMENT	Acts in a professional manner

	Keeps patient information confidential Arrives for lab sessions at the assigned time Observes safety rules and regulations Performs procedures with minimal supervision Functions independently as a member of a phlebotomy team Keeps class records current
INTEGRITY/HONESTY	Acts in a professional manner Keeps patient information confidential Records results exactly as determined Recognizes situations which should be reported

DISABILITY STATEMENT:

Students with special needs should contact the Disability Services Coordinator in the Learning Assistance Center no later than the first week of classes. Once appropriate documentation for the disability is received, the Disability Services Coordinator will coordinate delivery of approved accommodations with students and their instructors.

STATEMENT REQUIRED BY THE COLLEGE:

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance and an attitude that seeks to take full advantage of the educational opportunity.

GCC is not responsible for illness/injury that occurs during the normal course of classroom/lab/clinical experiences.

INSTRUCTOR INFORMATION:

Instructor Name: Alan Jackson

Office Phone: 903-463-8779 Email: jacksona@grayson.edu

Office Location: STC 202 Office Hours: See Canvas or Outside Office

Written By: *Alan Jackson*
Last Revision: *January 2017*

COURSE OUTLINE

I. Introduction to Phlebotomy
   A. Introduction to Phlebotomy
   B. Health Care Structure
   C. Safety
   D. Infection Control

II. Phlebotomy Basics
   A. Medical Terminology
   B. Human Anatomy and Physiology
   C. Circulatory, Lymphatic, and Immune Systems

III. Specimen Collection
   A. Venipuncture Equipment
   B. Routine Venipuncture
   C. Dermal Puncture
   D. Venipuncture Complications
   E. Blood Collection in Special Populations
   F. Arterial Blood Collection
   G. Special Collections and Procedures
   H. Special Nonblood Collection Procedures

IV. Specimen Handling
   A. Specimen Transport, Handling, and Processing
   B. Point-of-Care Testing

V. Professional Issues
   A. Quality Phlebotomy
   B. Legal Issues in Phlebotomy

GRAYSON COLLEGE

Phlebotomy

PLAB 1223

POLICY ACKNOWLEDGEMENT FORM

DIRECTIONS:

1. Read/review the Phlebotomy Class Policies in the course syllabus.

2. Sign this form indicating your understanding of and your willingness to comply with these policies.

My signature below indicates that I have read the Phlebotomy Class Policies for the course, in full, and indicates that I understand these regulations and am willing to comply with them.

My signature below indicates that I understand that I am financially responsible for any emergency care which I might receive as a result of illness or injury while assigned to a clinical affiliate of the Grayson College Phlebotomy program.

Printed Name: _____

Signature: _____

Date: _____

GRAYSON COLLEGE

Phlebotomy
PLAB 1223

LIABILITY RELEASE FORM

I understand that as part of the normal educational process involved in completing the course and earning a certificate in Phlebotomy, I will be required to participate in the following activities in Campus Lab.

I understand that I will be performing the following procedures and will have these procedures performed on me:

1. Venipunctures
2. Skin Punctures
3. Bleeding Times

I also understand that there are a few risks involved, such as bruising and minor scarring.

I voluntarily agree to participate in these activities as part of my Phlebotomy training.

Printed Name: _____

Signature: _____

Date: _____

CAMPUS LAB
Venipuncture
Check-Off List – For Practice and Evaluation

INSTRUCTIONS: Listed below is a step-by-step procedure for a routine, uncomplicated venipuncture. Although it may not include all the steps that you may use, it does cover all the necessary steps. All steps listed must be performed correctly. You are allowed two attempts to pass this procedure. The campus lab instructor will observe the student and use the key to indicate the student's performance of this skill.

KEY: P = Performed NI = Needs Improvement NP = Not Performed				
PROCEDURES: You must:	**P**	**NI**	**NP**	**Comments**
1. Have patient state name.				
2. Wash hands with disinfectant.				
3. Put on gloves.				
4. Identify patient by matching armband with requisition.				
5. Prepare equipment and materials.				
a. Obtain gauze, alcohol pad, needle, holder, tourniquet and necessary tube(s).				
b. Assemble needle onto holder.				
c. Place tube in holder.				
d. Place equipment within easy reach.				
6. Explain venipuncture procedure to patient.				
7. Position patient.				
8. Place the tourniquet around the patient's arm above the elbow. **CAUTION:** Do not allow the tourniquet to remain on the arm for more than 1 - 2 minutes.				
9. Instruct the patient to close the fist to help anchor the veins and make them more noticeable.				
10. Locate a suitable vein at the bend of the elbow.				
11. Palpate the vein with the fingertip to determine the direction of the vein, and to estimate its size and depth. Make a mental picture of its location, if visually unapparent.				
12. Release the tourniquet if venipuncture is not performed within 1 - 2 minutes.				

KEY: P = Performed NI = Needs Improvement NP = Not Performed				
PROCEDURES: You must:	**P**	**NI**	**NP**	**Comments**
13. Cleanse the skin of the puncture site using alcohol soaked gauze.				
14. Allow alcohol to air dry. Avoid contaminating the site.				
15. Retie tourniquet, if previously released				
16. Uncap needle and with holder in one hand, use the thumb or fingers of other hand to pull the skin below site taut.				
17. Hold the holder/needle assemble at a 15 - 30 degree angle and insert the needle into the vein.				
18. Instruct the patient to open the fist as soon as there is good blood flow into the tube.				
19. Allow the tube to fill to a sufficient amount and change tubes, if needed.				
20. Release the tourniquet when the desired amount of blood is in the last tube.				
21. Place a dry, sterile gauze over the puncture site immediately after withdrawing the needle from the vein (do not press down on the needle)				
22. Instruct the patient to press the gauze over the site for 3 - 5 minutes with the arm extended.				
23. Discard needle into needle disposal container (do not recap).				
24. Label tube(s) according to laboratory guidelines				
25. Check patient to be sure that bleeding has stopped; apply bandage, if necessary.				
26. Clean up area.				
27. Remove and discard gloves appropriately.				
28. Wash hands with disinfectant.				
Comments:				

Student: _____ **Date:** _____

Instructor: _____ **Date:** _____

CAMPUS LAB
Capillary Puncture
Check-Off List – For Practice Only

INSTRUCTIONS: Listed below is a step-by-step procedure for a routine, uncomplicated capillary puncture. Although it may not include all the steps that you may use, it does cover all the necessary steps. All steps listed must be performed correctly. You are allowed two attempts to pass this procedure. The campus lab instructor will observe the student and use the key to indicate the student's performance of this skill.

KEY: P = Performed NI = Needs Improvement NP = Not Performed				
PROCEDURES: You must:	**P**	**NI**	**NP**	**Comments**
1. Have patient state name.				
2. Wash hands with disinfectant.				
3. Put on gloves.				
4. Identify patient by matching armband with requisition.				
5. Prepare equipment and materials.				
a. Obtain gauze, alcohol pad, lancet, and necessary collection devices.				
b. Place equipment within easy reach.				
6. Explain procedure to patient.				
7. Select site and hold finger steady.				
8. Cleanse site with alcohol and allow to dry.				
9. Puncture site with quick, firm stroke.				
10. Wipe away first drop of blood.				
11. Hold finger tightly to obtain sample. Do not squeeze near puncture site.				
12. Collect blood into appropriate collection devices.				
13. Place gauze on puncture site.				
14. Instruct patient to hold gauze tightly for 3 - 5 minutes.				
15. Label tube(s) according to laboratory guidelines.				

KEY: P = Performed NI = Needs Improvement NP = Not Performed				
PROCEDURES: You must:	**P**	**NI**	**NP**	**Comments**
16. Check patient.				
17. Clean up area.				
18. Remove and discard gloves appropriately.				
19. Wash hands with disinfectant.				
20. Return samples to laboratory and distribute to appropriate department(s).				
Comments:				

Student: _____ **Date:** _____

Instructor: _____ **Date:** _____

CAMPUS LAB
Bleeding Time
Check-Off List – For Practice Only

INSTRUCTIONS: Listed below is a step-by-step procedure for a bleeding time. Although it may not include all the steps that you may use, it does cover all the necessary steps. All steps listed must be performed correctly. You are allowed two attempts to pass this procedure. The campus lab instructor will observe the student and use the key to indicate the student's performance of this skill.

KEY: P = Performed NI = Needs Improvement NP = Not Performed				
PROCEDURES: You must:	**P**	**NI**	**NP**	**Comments**
1. Have patient state name.				
2. Wash hands with disinfectant.				
3. Put on gloves.				
4. Identify patient by matching armband with requisition.				
5. Prepare equipment and materials.				
a. Obtain gauze, alcohol pad, lancet, and necessary procedural supplies.				
b. Place equipment within easy reach.				
6. Explain procedure to patient.				
7. Select site.				
8. Cleanse site with alcohol and allow to dry.				
9. Perform bleeding time according to laboratory procedure and manufacturer's directions.				
a. Cleanse site.				
b. Inflate B/P cuff to 40 mmHg.				
c. Puncture skin and start timer simultaneously.				
d. Blot blood at 30 second intervals until bleeding stops.				
e. Release B/P cuff when bleeding has stopped.				
f. Place bandage on puncture site.				

KEY: P = Performed NI = Needs Improvement NP = Not Performed				
PROCEDURES: You must:	**P**	**NI**	**NP**	**Comments**
g. Record results.				
10. Make decision to continue or terminate prolonged tests.				
11. Instruct patient not to remove bandage for 24 hours.				
12. Clean up area.				
13. Remove and discard gloves appropriately.				
14. Wash hands with disinfectant.				
15. Return results to laboratory and distribute to appropriate department.				
Comments:				

Student: _____ **Date:** _____

Instructor: _____ **Date:** _____