

MLT-2970: ADVANCED PHLEBOTOMY

Cuyahoga Community College

Viewing: MLT-2970 : Advanced Phlebotomy

Board of Trustees:

May 2019

Academic Term:

Fall 2021

Subject Code

MLT - Medical Laboratory Technology

Course Number:

2970

Title:

Advanced Phlebotomy

Catalog Description:

Review of theory and techniques for phlebotomy procedures. Presentation of basic procedures involved in point-of-care testing and unregulated laboratory test procedures. Emphasis on universal precautions, safety, communication, interpersonal skills, and ethical considerations relating to patients. Seminar discussion of practicum experience.

Credit Hour(s):

1

Lecture Hour(s):

0

Lab Hour(s):

0

Other Hour(s):

1

Other Hour Details:

Seminar: 1 hour per week

Requisites

Prerequisite and Corequisite

Concurrent enrollment in MLT-1851 Medical Laboratory Practicum I; and MLT-1300 Introduction to Blood Collection, or departmental approval.

Outcomes

Course Outcome(s):

Discuss the basic concepts of communication, personal and patient interaction, stress management, professional behavior, and the legal implications of this work environment.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Indicate by participation in class discussion an awareness that phlebotomy procedures may vary between clinical facilities.
2. Identify the governing agencies having oversight of the clinical laboratory and define their role.
3. Indicate by participation in class discussion the necessity for effective communication skills between the phlebotomist and patients, co-workers, hospital personnel, and physicians.
4. Indicate by participation in class discussion a greater awareness of professionalism, decorum, ethics, and standards of the profession.

5. Differentiate between licensure and certification/registration.
6. Compare and contrast differences in cultural/ethnic interactions and modifications in behaviors which may be necessary.

Course Outcome(s):

Demonstrate effective oral and written communication skills.

Essential Learning Outcome Mapping:

Oral Communication: Demonstrate effective verbal and nonverbal communication for an intended audience that is clear, organized, and delivered effectively following the standard conventions of that language.

Written Communication: Demonstrate effective written communication for an intended audience that follows genre/disciplinary conventions that reflect clarity, organization, and editing skills.

Objective(s):

1. Maintain a daily journal of activities, accomplishments, failures, and feelings at the clinical site.
2. Prepare a resume draft suitable for obtaining a phlebotomy position.
3. Identify factors which positively and negatively affect the employment interview.
4. Perform a mock interview and submit a written critique of pros/cons of your interview, and corrective actions you will take to improve performance.

Course Outcome(s):

Demonstrate an understanding of requisitioning, specimen transport, and specimen processing.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Describe the laboratory criteria for identifying an appropriate request for specimen collection.
2. Relate legal responsibilities of the laboratory and phlebotomist to the physician's requests for all specimen collection and testing.
3. Explain methods for processing and transporting of blood specimens for routine and special testing within the hospital.
4. Explain methods for processing and transporting of blood specimens for testing at reference laboratories.
5. Describe the potential clerical and technical errors that may occur during specimen processing.
6. Describe the general effects of time on specimen quality and patient care in regards to processing and transporting blood specimens.
7. Describe the conditions that must be met if blood specimens and laboratory tests are to be used as legal evidence.

Course Outcome(s):

Demonstrate an understanding of quality assurance in phlebotomy.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Describe the system for monitoring quality assurance in the collection of blood specimens.
2. Identify policies and procedures used in the clinical laboratory to assure quality in obtaining blood specimens.

Course Outcome(s):

Demonstrate proper pre-analytical and post-analytical procedures for performing point-of-care testing.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Accurately perform one or more point-of-care tests by utilizing a standard operating procedure.
2. Perform required quality control in point-of-care testing, and demonstrate understanding of out-of-range results by performing proper follow-up.
3. Perform a capillary blood glucose and use a glucose meter to obtain a reportable glucose value.

Course Outcome(s):

Demonstrate knowledge of non-blood specimens and tests.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Perform the physical and chemical (dipstick) reading on a random urine.
2. Explain the methods used to collect different types of urine specimens and the rationale for collecting each type of sample.
3. Explain the proper procedure and collection of samples for glucose tolerance test.
4. Demonstrate proper sterile technique when collecting a throat sample.

Course Outcome(s):

Demonstrate basic knowledge of special collection procedures.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Differentiate between normal, critical, urgent, therapeutic, and toxic laboratory results.
2. Identify the difference between therapeutic and recreational drugs.
3. Indicate an understanding of the use of chain-of-custody forms used for legal specimens.
4. Identify the generic and brand-name for common therapeutic drugs.
5. Identify and explain the reason for drawing peak and trough levels for therapeutic drug samples.
6. Identify unique and special collection devices/additives, and state the appropriate tests.
7. Differentiate between venipuncture and the collection of arterial blood gases.
8. State the purpose of the Allen test for arterial identification.
9. Demonstrate proper sterile technique when collecting routine blood cultures.
10. Explain routine concerns and specific techniques utilized for pediatric and geriatric patients.

Methods of Evaluation:

1. Quizzes
2. Procedural assessments
3. Resume
4. Journal of clinical experience
5. Discussion of clinical experience

Course Content Outline:

1. Discussion of clinical experience
 - a. Variations in phlebotomy procedures between clinical facilities
 - b. Reflection of clinical experience in a daily journal
2. Health care settings/governmental agency
 - a. TJC – The Joint Commission
 - b. CAP – College of American Pathology
 - c. CLSI – Clinical and Laboratory Standards Institute
 - d. FDA – Food and Drug Administration
 - e. CMS – Centers for Medicare and Medicaid Services
 - f. HHS – Department of Health and Human Services

- g. DOT – Department of Transportation
- h. OSHA – Occupational Safety and Health Administration
- 3. Specimen collection and transportation
 - a. Legal responsibility of the phlebotomist
 - b. Routine and special testing
 - i. Within hospitals
 - ii. Reference laboratories
 - c. Effects of time on quality and patient care
 - d. Potential clerical and technical errors during specimen processing
 - e. Laboratory testing used as legal evidence
 - i. Chain of custody
- 4. Unique vacuum tubes and additives
 - a. Reference laboratory testing
 - b. Blood bank samples
 - c. Blood cultures
- 5. Arterial specimen collection vs. venous collections
 - a. Patient preparation procedures
 - b. Site of collection
 - c. Differences in lab results between specimen types
 - d. Allen test
- 6. Point-of-care testing
 - a. Standard operating procedures
 - b. Use of quality control
 - c. OSHA regulations in regards to POCT
 - d. Common point-of-care testing available
 - i. Glucose monitoring
 - ii. Cholesterol screening
 - iii. HCG
 - iv. Rapid Strep
- 7. Quality control and quality assurance
 - a. Quality management system
 - b. Quality assurance indicators
 - c. Use of quality control
- 8. Urinalysis (dipstick testing) and non-blood specimens
 - a. Urine collection methods
 - b. Collection procedure for glucose tolerance test
 - c. Sterile technique for throat sample
 - d. Fecal specimens
 - e. Body fluid specimen processing
- 9. Blood composition
 - a. Serum vs. plasma
 - b. Cellular components
 - i. White blood cells
 - 1. Neutrophils
 - 2. Lymphocytes
 - 3. Monocytes
 - 4. Eosinophils
 - 5. Basophils
 - ii. Red blood cells
 - iii. Platelets
- 10. Advanced phlebotomy topics
 - a. Blood cultures
 - b. Therapeutic drug peak and trough levels
 - c. Therapeutic and recreational drugs testing
 - d. Common generic and name brand drugs
 - e. Chain of Custody
- 11. Complications in blood collection

- a. Pre-analytical errors
 - i. Before specimen collection
 - ii. During specimen collection
 - iii. During specimen processing
 - b. Pediatric and geriatric patients
12. Professionalism and ethics
- a. Patient rights
 - b. Standard of Care
 - c. Types of consent
 - d. HIPAA – Health Insurance Portability and Accountability Act
 - e. Common issues in lawsuits against health care providers
 - f. Licensure vs. certification
13. Importance of effective communication
- a. Communication loop
 - b. Verbal communication
 - c. Non-verbal communication
 - d. Telephone etiquette
14. Job readiness skills/career exploration
- a. Resume and cover letter writing
 - b. Mock interview
 - c. Factors affecting an interview
15. Diverse racial/ethnic encounters
- a. Cultural sensitivity

Resources

McCall, R. E. and Tankersley, C. M. *Phlebotomy Essentials*. 6th. Philadelphia: J.B. Lippincott, 2015.

McCall, R.E. and Tankersley, C.M. *Phlebotomy Exam Review*. 7th. Philadelphia: J.B. Lipincott, 2019.

Strasinger, S. and DiLorenzo, M. *Phlebotomy Notes Pocket Guide to Blood Collection*. 1st ed. Philadelphia, PA: F.A. Davis, 2013.

U.S. Department of Labor and Occupational Safety and Health Administration. *Occupational Exposure to Bloodborne Pathogens: Final Rule (29 CFR 1910.1020)*. Federal Register. Dec 6: 64004-64182. 1991.

Top of page

Key: 3026