

# MLT-1851: MEDICAL LABORATORY PRACTICUM I

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## Cuyahoga Community College

**Viewing: MLT-1851 : Medical Laboratory Practicum I**

**Board of Trustees:**

May 2019

**Academic Term:**

Fall 2019

**Subject Code**

MLT - Medical Laboratory Technology

**Course Number:**

1851

**Title:**

Medical Laboratory Practicum I

**Catalog Description:**

Supervised clinical experience. Students rotate through inpatient or outpatient phlebotomy departments of local clinical sites for 26.25 hours per week (8 weeks) meeting performance objectives for laboratory phlebotomy technician.

**Credit Hour(s):**

2

**Other Hour(s):**

210

**Other Hour Details:**

26.25 hour per week for 8 weeks (210 total hours)

## Requisites

**Prerequisite and Corequisite**

MLT-1300 Introduction to Blood Collection or concurrent enrollment, and concurrent enrollment in MLT-2970 Advanced Phlebotomy, and departmental approval.

## Outcomes

**Course Outcome(s):**

Demonstrate knowledge of the health care delivery system and medical terminology.

**Objective(s):**

1. Identify the health care providers in hospitals and clinics and the phlebotomist's role as a member of this health care team.
  2. Describe the various hospital departments and their major functions in which the phlebotomist may interact in his/her role.
  3. Describe the organizational structure of the clinical laboratory department.
  4. Discuss the roles of the clinical laboratory personnel and their qualifications for these professional positions.
  5. List the types of laboratory procedures performed in the various disciplines of the clinical laboratory department.
  6. Describe how laboratory testing is used in assessing body functions and disease.
  7. Apply the use of common medical terminology when necessary.
  8. Define the phlebotomist's role in collecting and/or transporting specimens to the laboratory.
  9. Maintain confidentiality of privileged information on individuals, according to federal regulations (e.g., HIPAA).
  10. Demonstrate an understanding of the major points of the American Hospital Associations' Patient's Bill of Rights and the Patient's Bill of Rights from the workplace.
  11. Comply with the American Hospital Associations' Patient's Bill of Rights and the Patient's Bill of Rights from the workplace.
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**Course Outcome(s):**

Demonstrate knowledge of infection control and safety.

**Objective(s):**

1. Function as an entry Laboratory Phlebotomist in a clinical setting through practical application of theoretical knowledge and basic skills.
2. Identify policies and procedures for maintaining laboratory safety.
3. Demonstrate accepted practices for infection control, isolation techniques, aseptic techniques and methods for disease prevention.
4. Identify the modes of transmission of infection and methods for prevention.
5. Identify and properly label biohazardous specimens.
6. Perform proper infection control techniques, such as hand hygiene, gowning, gloving, masking, and double bagging.
7. Define the term "healthcare-acquired infection".
8. Comply with federal, state and locally mandated regulations regarding safety practices.
9. Observe the OSHA Blood Borne Pathogens Standard and Needle Safety Precaution Act.
10. Use prescribed procedures to handle electrical, radiation, biological and fire hazards.
11. Use appropriate practices, as outlined in the OSHA Hazard Communications Standard, including the correct use of the Safety Data Sheet as directed.
12. Describe measures used to insure patient safety in various patient settings, i.e., inpatient, outpatient, pediatrics, etc.
13. Define and use medico legal terms and discuss policies and protocol designed to avoid medico legal problems.

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**Course Outcome(s):**

Demonstrate basic understanding of the anatomy and physiology of body systems and anatomic terminology in order to relate major areas of the clinical laboratory to general pathologic conditions associated with the body systems.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Function as an entry Laboratory Phlebotomist in a clinical setting through practical application of theoretical knowledge and basic skills.
2. Describe how laboratory testing is used in assessing body functions and disease.
3. Describe the basic functions of each of the main body systems, and demonstrate basic knowledge of the circulatory, urinary, and other body systems necessary to perform assigned specimen collection tasks.
4. Identify the veins of the arms and hands on which phlebotomy is performed.
5. Explain the functions of the major constituents of blood, and differentiate between whole blood, serum and plasma.
6. Describe the properties of arterial blood, venous blood and capillary blood.
7. Identify potential sites for venipuncture and capillary puncture.
8. Recognize factors which directly affect procedures and results.

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**Course Outcome(s):**

Demonstrate understanding of the importance of specimen collection and specimen integrity in the delivery of patient care.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Function as an entry Laboratory Phlebotomist in a clinical setting through practical application of theoretical knowledge and basic skills.
2. Develop speed and accuracy in performance of phlebotomy or diagnostic tests commonly performed by Laboratory Phlebotomists.
3. Recognize factors which directly affect procedures and results.
4. Describe the legal and ethical importance of proper patient/sample identification.
5. Describe the types of patient specimens that are analyzed in the clinical laboratory.
6. Define the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
7. List the general criteria for suitability of a specimen for analysis, and reasons for specimen rejection or recollection.

8. Explain the importance of timed, fasting and stat specimens, as related to specimen integrity and patient care.

**Course Outcome(s):**

Demonstrate knowledge of collection equipment, various types of additives used, special precautions necessary and substances that can interfere in clinical analysis of blood constituents.

**Objective(s):**

1. Function as an entry Laboratory Phlebotomist in a clinical setting through practical application of theoretical knowledge and basic skills.
2. Identify the various types of additives used in blood collection, and explain the reasons for their use.
3. Identify the evacuated tube color codes associated with the additives.
4. Describe the proper order of draw for specimen collections.
5. Describe substances that can interfere in clinical analysis of blood constituents and ways in which the phlebotomist can help to avoid these occurrences.
6. List and select the type of equipment needed to collect blood by venipuncture and capillary puncture.
7. Identify special precautions necessary during blood collections by venipuncture and capillary puncture.
8. List the effects of tourniquet, hand squeezing and heating pads on specimens collected by venipuncture and capillary puncture.
9. Recognize proper needle insertion and withdrawal techniques, including direction, angle, depth and aspiration, for venipuncture.
10. Describe the limitations and precautions of alternate collection sites for venipuncture and capillary puncture.
11. Explain the causes of phlebotomy complications.
12. Describe signs and symptoms of physical problems that may occur during blood collection.
13. Perform a minimum of 100 successful venipuncture following standard operating procedures.
13. Demonstrate a successful capillary puncture following standard operating procedures.

**Course Outcome(s):**

Demonstrate understanding of requisitioning, specimen transport and specimen processing.

**Objective(s):**

1. Recognize factors which directly affect procedures and results.
2. Log in specimens and keep accurate records.
3. List the general criteria for suitability of a specimen for analysis, and reasons for specimen rejection or recollection.
4. Explain the importance of timed, fasting and stat specimens, as related to specimen integrity and patient care.
5. Describe the process by which a request for a laboratory test is generated.
6. Instruct patients in the proper collection and preservation for non-blood specimens.
7. Explain methods for transporting and processing specimens for routine and special testing.
8. Explain methods for processing and transporting specimens for testing at reference laboratories.
9. Identify and report potential pre-analytical errors that may occur during specimen collection, labeling, transporting, and processing.
10. Describe and follow the criteria for collection and processing of specimens that will be used as legal evidence, i.e., paternity testing, chain of custody, blood alcohol levels, etc.

**Course Outcome(s):**

Demonstrate understanding of quality assurance and quality control in phlebotomy.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. 1. Explain, identify, and apply quality control procedures in each of the departments.
2. Recognize and avoid objective, subjective, and technical errors in diagnostic procedures.
3. Recognize factors which directly affect procedures and results.
4. Identify and report potential pre-analytical errors that may occur during specimen collection, labeling, transporting, and processing.
5. Describe and follow the criteria for collection and processing of specimens that will be used as legal evidence, i.e., paternity testing, chain of custody, blood alcohol levels, etc.

6. Describe quality assurance in the collection of blood specimens.
7. Identify policies and procedures used in the clinical laboratory to assure quality in the obtaining of blood specimens.
8. Define and use medico legal terms and discuss policies and protocol designed to avoid medico legal problems.

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**Course Outcome(s):**

Communicate (verbally and nonverbally) effectively and appropriately in the workplace.

**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.

**Objective(s):**

1. Assume responsibility for his/her own work and demonstrate ethical and professional behavior in the clinical setting.
2. Maintain confidentiality of privileged information on individuals, according to federal regulations (e.g., HIPPA).
3. Demonstrate respect for diversity in the workplace.
4. Demonstrate an understanding of the major points of the American Hospital Associations' Patient's Bill of Rights and the Patient's Bill of Rights from the workplace.
5. Comply with the American Hospital Associations' Patient's Bill of Rights and the Patient's Bill of Rights from the workplace.
6. Model professional appearance and appropriate behavior.
7. Follow written and verbal instructions.

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**Methods of Evaluation:**

1. Written examinations (at the discretion of the clinical facility).
2. Practical evaluation of phlebotomy skills (checklist)
3. Assessment of observed professional development skills (checklist)

**Course Content Outline:**

1. Specimen collection, handling, processing
2. Laboratory computer systems
3. Quality control and assurance
4. Safety
5. HIPAA
6. Professionalism

**Resources**

McCall, R. and Tankersley, M. *Phlebotomy Essentials*. 6th. Philadelphia, Pa: LWW, 2016.

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McCall, Ruth and Tankersley, Cathee. *Phlebotomy Exam Review*. 6th. Philadelphia: Wolters Kluwer , 2016.

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