

EASTERN ARIZONA COLLEGE
Laboratory Assisting: Overview, Principles and Procedures
Course Design
2018-2019

Course Information

Division Allied Health
Course Number HCE 152
Title Laboratory Assisting: Overview, Principles and Procedures
Credits 4
Developed by Carolyn McCormies/ Revised by Jodie Martin
Lecture/Lab Ratio 4 Lecture/0 Lab

Transfer Status

ASU	NAU	UA
Non Transferable	Elective Credit	Non Transferable

Activity Course No
CIP Code 51.0800
Assessment Mode Pre/Post Test (50 Questions/50 Points)
Semester Taught Fall
GE Category None
Separate Lab No
Awareness Course No
Intensive Writing Course No
Diversity and Inclusion Course No

Prerequisites

1. HCE 186 with a grade of “C” or higher or concurrent enrollment in HCE 186 or instructor approval;
2. Must be at least 18 years of age at the start of the class;
3. Present current CPR card issued by the American Heart Association (BLS Healthcare Provider) or American Red Cross (Professional Rescuer);
4. Present proof of two-step TB skin test or chest X-ray within the past six (6) months;
5. Present proof of MMR (measles, mumps, & rubella), Hepatitis B, Varicella (chickenpox), Tdap (tetanus, diphtheria, & pertussis) and Influenza Vaccine (Flu Shot) immunizations;
6. Present proof of 10 Panel Drug Screen (Urine Drug Screen);
7. Present proof of fingerprint clearance card;
8. The prospective student will submit documentation of the prerequisites with the completed Proof of Prerequisites Form to the Records and Registration Office prior to registration.

Educational Value

For individuals who are interested in becoming a laboratory assistant.

Description

Designed to prepare individuals to enter the health profession as a laboratory assistant. Emphasis is on the role of a laboratory assistant, certification and regulatory agencies, process improvement, laboratory mathematics, documentation, legal implications, specimen integrity, principles and procedures for pre-analytical processing of laboratory specimens. Application of quality assurance, infection control, and laboratory safety. Performing specimen processing, pre-analytical processes, and point of care testing. Performing clerical and computer functions based on medico-legal guidelines for documentation.

Supplies

Scrub or lab gown, clean and comfortable shoes

Competencies and Performance Standards

1. Describe the organization and function of the medical laboratory.

Learning objectives

What you will learn as you master the competency:

- a. Explain the function of a medical or clinical laboratory.
- b. Draw an organizational chart of a typical hospital laboratory.
- c. Describe the functions of the different levels of laboratory personnel.
- d. List the major departments and a test that would be performed in each department.

Performance Standards

Competence will be demonstrated:

- o in completion of the tests
- o in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- o learner participates in class activities
- o learner studies assigned reading
- o learner practices assigned tasks

2. Discuss the role and responsibilities of a laboratory assistant.

Learning objectives

What you will learn as you master the competency:

- a. List personal qualities that are desirable in a medical laboratory professional.
- b. Describe the educational requirements for medical technologists and medical laboratory technician.
- c. Explain the relationship between the medical laboratory professional and the patient.

Performance Standards

Competence will be demonstrated:

- o in completion of the tests
- o in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- o learner participates in class activities
- o learner studies assigned reading
- o learner practices assigned tasks

3. Explain laboratory regulations, accrediting, and certification agencies.

Learning objectives

What you will learn as you master the competency:

- a. Explain the function of accrediting agencies and credentialing agencies.
- b. Explain how medical laboratories are regulated.
- c. Explain the purpose of proficiency testing.
- d. Explain the purpose of laboratory accreditation.

Performance Standards

Competence will be demonstrated:

- o in completion of the tests
- o in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- o learner participates in class activities
- o learner studies assigned reading
- o learner practices assigned tasks

4. Explain the role of quality assurance in the clinical laboratory.

Learning objectives

What you will learn as you master the competency:

- a. Explain the importance of quality assurance in the laboratory.
- b. Explain the use of standards and controls to ensure quality.
- c. Explain the difference between accuracy and precision.

Performance Standards

Competence will be demonstrated:

- o in completion of the tests
- o in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- o learner participates in class activities
- o learner studies assigned reading
- o learner practices assigned tasks

5. Explain laboratory safety rules that must be followed to guard against chemical, physical, and biological hazards.

Learning objectives

What you will learn as you master the competency:

- a. Describe the Occupational Safety and Health Administration (OSHA) safety laws.
- b. Discuss classifications of laboratory hazards.
- c. State basic rules for laboratory safety.
- d. Explain Bloodborne Pathogens Standard and the Standard Precautions issued in 1996.
- e. Explain exposure control plan.
- f. Explain the impact of HIV and HBV on safety in the health care setting.

Performance Standards

Competence will be demonstrated:

- in completion of the tests
- in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- learner participates in class activities
- learner studies assigned reading
- learner practices assigned tasks

6. Identify professional and ethical conduct, stress management, and interpersonal communication skills.

Learning objectives

What you will learn as you master the competency:

- a. Adhere to professional and ethical conduct.
- b. Adopt stress management.
- c. Maintain interpersonal communication skills.

Performance Standards

Competence will be demonstrated:

- in completion of the tests
- in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- learner participates in class activities
- learner studies assigned reading
- learner practices assigned tasks

7. Perform pre-analytical processes and specimen processing in each laboratory department.

Learning objectives

What you will learn as you master the competency:

- a. Demonstrate use of laboratory equipment including laboratory glassware and microscope.
- b. Adhere to infection control and laboratory safety.
- c. Perform pre-analytical and specimen processing in basic hematology.
- d. Perform pre-analytical and specimen processing in hemostasis: coagulation.
- e. Perform pre-analytical and specimen processing in urinalysis.
- f. Perform pre-analytical and specimen processing in basic chemistry.
- g. Perform pre-analytical and specimen processing in basic microbiology.
- h. Perform pre-analytical and specimen processing for blood bank.

Performance Standards

Competence will be demonstrated:

- in completion of the tests
- in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- learner participates in class activities
- learner studies assigned reading
- learner practices assigned tasks

8. Perform initial testing phases using laboratory instrumentation, information systems, and supplies.

Learning objectives

What you will learn as you master the competency:

- a. Perform initial testing phases on laboratory specimens in hematology.
- b. Perform initial testing phases on laboratory specimens in coagulation.
- c. Perform initial testing phases on laboratory specimens in urinalysis.
- d. Perform initial testing phases on laboratory specimens in chemistry.
- e. Perform initial testing phases on laboratory specimens in microbiology.

Performance Standards

Competence will be demonstrated:

- in completion of the tests
- in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- learner participates in class activities
- learner studies assigned reading
- learner practices assigned tasks

9. Interpret quality of results using quality control and quality assurance principles.

Learning objectives

What you will learn as you master the competency:

- a. Identify potential interfering substances.
- b. Assess quality of results using quality control and quality assurance principles.

Performance Standards

Competence will be demonstrated:

- in completion of the tests
- in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- learner participates in class activities
- learner studies assigned reading
- learner practices assigned tasks

10. Perform point-of-care testing.

Learning objectives

What you will learn as you master the competency:

- a. Perform point-of-care testing in hematology.
- b. Perform point-of-care testing in chemistry.

Performance Standards

Competence will be demonstrated:

- o in completion of the tests
- o in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- o learner participates in class activities
- o learner studies assigned reading
- o learner practices assigned tasks

11. Document laboratory actions and clerical functions using medico-legal guidelines.

Learning objectives

What you will learn as you master the competency:

- a. Describe laboratory actions for documentation.
- b. Adhere to protocols, medico-legal guidelines, and correcting entries.
- c. Perform clerical functions using protocols and laboratory guidelines.

Performance Standards

Competence will be demonstrated:

- o in completion of the tests
- o in demonstration of the performance on assigned procedures

Criteria - Performance will be satisfactory when:

- o learner participates in class activities
- o learner studies assigned reading
- o learner practices assigned tasks

Types of Instruction

Classroom Presentation & Demonstration

Grading Information

Grading Rationale

Tests	60%
Final Exam	15%
Homework/Assignments	25%

If students miss more than three (3) classes, they are dropped.

Grading Scale

A	90-100% of total point value
B	80-89.99% of total point value
C	70-79.99% of total point value
D	60-69.99% of total point value
F	0-59.99% of total point value