

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Medical Laboratory Technology</u>
COURSE RUBRIC AND NUMBER	<u>MLAB 2238</u>
COURSE TITLE	<u>Advanced Topics in Medical Laboratory Technician/Assistant</u>
COURSE CREDIT HOURS	<u>2 2 : 0</u> Credits Lec Lab

I. Catalog Description

Examines the integration of all areas of the clinical laboratory and correlates laboratory test data with diagnostic applications and pathophysiology using critical thinking skills. A grade of "C" or better is required in this course to take the next course. **Prerequisite: MLAB 2360. Corequisite: MLAB 2361. (2:0).**

II. Course Objectives

- A. Unit I. Review Acquired Skills, Knowledge, and Abilities as a Medical Laboratory Technician. Upon satisfactory completion of this unit, the student will be able to:
1. Demonstrate good communication skills with laboratory staff, healthcare personnel, and patients.
 2. Demonstrate HIPAA protocols when communicating via telephone, facsimile, E-mail, and/or interpersonally.
 3. Demonstrate compliance with government, state, and organizational safety regulations involving Biological, Chemical, Fire, Electrical, Physical and Radioactive Hazards.
 4. Demonstrate Standard Precautions at all times.
 5. Perform quality Phlebotomy techniques, both venipuncture and dermal puncture, on infants, children, adolescents, adults, and elderly patients incorporating patient consent, appropriate blood collection system, evacuated tube/microtainer, order of draw, and skin preparation requirements.
 6. Avoids pre-analytical, analytical, and post analytical errors when collecting, transporting, processing, using rejection/acceptance criteria, and aliquoting of patient samples.
 7. Participate in Quality Assurance, Quality Control and Proficiency Testing protocols incorporating precision, accuracy, Levey Jennings Charts and Westgard Rules to determine acceptability of test results.
 8. Demonstrate knowledge, skills, and abilities to perform, interpret, and report out, patient results in the Clinical Chemistry and Special Chemistry Departments of a Medical/Clinical Laboratory.
 9. Demonstrate knowledge, skills, and abilities to perform, interpret, and report out, patient results in the Hematology Department of a Medical/Clinical Laboratory.
 10. Demonstrate knowledge, skills, and abilities to perform, interpret, and report out, patient results in the Coagulation and Hemostasis Department of a Medical/Clinical Laboratory.
 11. Demonstrate knowledge, skills, and abilities to perform, interpret, and report out, patient results in the Urinalysis Department of a Medical/Clinical Laboratory.
 12. Demonstrate knowledge, skills, and abilities to perform, interpret, report out results, issue Donor blood components and/or perform Therapeutic Phlebotomies in the Immunohematology (Blood Bank) Department of a Medical/Clinical Laboratory.
 13. Demonstrate knowledge, skills, and abilities to perform, interpret, and report patient results in the Microbiology (Parasitology, Mycology, and Virology) Department(s) of a Medical/Clinical Laboratory.

14. Demonstrate knowledge, skills, and abilities to perform, interpret, and report out, patient results in the Immunology/Serology Department of a Medical/Clinical Laboratory.

B. Unit II. Career Opportunities and the Preparation of Qualifying Documents

Upon satisfactory completion of this unit, the student will be able to:

1. Create a personal resume.
2. Create a personal cover letter
3. Create a personal business card
4. Identify additional opportunities in which clinical knowledge, skills, and abilities can be used.
5. Locate possible opportunities for analytical/clinical skills in:
 - a. Laboratories
 - 1) Medical
 - 2) Research
 - 3) Educational
 - b. Industry
 - 1) Community Blood Supply
 - 2) Instrument Technical Support
 - 3) Sales Representative
 - 4) Food Industry
 - c. Manufacturing
 - 1) Instrument production
 - 2) Training Support
 - d. Educational Instruction
6. Discuss the advantages and disadvantages of acquiring National Certification as an MLT.
7. List additional types of educational opportunities that can be acquired to advance in the Medical/Clinical Laboratory Field.

C. Unit III. Diagnostic Applications in Medical Laboratory Sciences

Upon satisfactory completion of this unit, the student will be able to:

1. Recognize the scope of responsibility as an entry level Medical Laboratory Technician to provide accurate test results to health care providers and their patients.
2. Correlate laboratory test data with diagnostic applications for different body systems relating to each clinical lab department.
3. Discuss the pathophysiology of RBC's, WBC's, PLT's, Body Fluids, and Microorganisms in health and disease.
4. Interpret laboratory results.

III. THECB Learning Outcomes (WECM)

1. Assess the principles of clinical laboratory tests and correlate laboratory test data to the diagnosis and treatment of disease.

IV. Evaluation

A. Preassessment

Students should have successfully completed the Specialized Admissions process to enter the Medical Laboratory Technology Program. Prerequisites and/or Corequisites may be required for MLAB courses.

B. Postassessment

1. Quizzes, lecture exams, and a final comprehensive written examination will be used to assess students' competency in didactic objectives.
2. Lab competency exams and lab practical exams are used to assess students' achievement of psychomotor objectives.
3. Lab practical exams require students to demonstrate a particular skill learned in the lab component of the class.
4. Written unit exams will consist of the following question types: multiple-choice, completion, essay, matching, spelling, analysis, and definition or any combination of these.

C. Final Examination

A comprehensive Final Exam is scheduled for this course which will cover all clinical laboratory areas (Hematology, Immunohematology, Urinalysis, Chemistry, Immunology, Coagulation, Microbiology, Parasitology, Mycology, and Virology).

D. Evaluation

To evaluate students' achievement of course objectives, student grades are tabulated using a final grade break down sheet. To successfully complete MLAB2338 Advanced Topics in Medical Laboratory Technician/Assistant, the student must achieve at least a 70% in course components. The students overall grade must be no less than "C". (Note: All health programs require a grade of no less than "C," therefore no "D's" will be awarded for this course)

E. Remediation

If a student scores less than 70% on any exam, the instructor will encourage the student to conference with the instructor or tutor, to review problem areas. Different learning and studying techniques will be discussed.

F. Grading

Grading Scale used in calculating students' final grade for MLAB 2338 Advanced Topics in Medical Laboratory Technician:

<u>Evaluation Tools</u>	<u>% Value</u>	<u>Grading Scale</u>
New Employee Orientation	10%	A = 90-100%
Lecture Exam I	20%	B = 80-89%
Lecture Exam II	20%	C = 70-79%
Lecture Exam III	20%	D = 60 – 69%
Comprehensive Final	30%	F = 59% and below

Each grade will initially be determined in decimals to the tenths. The final grade however, will only be recorded as a whole number. The guide used will be to round 0.1 through 0.4 to the lower whole number, and 0.5 through 0.9 are raised to next whole number. Example: If at the end of the course a student earns 87.4, the grade will be reflected as 87%. If the student earns 87.6 the grade is rounded to 88%. No decimals will be shown on the final grade scanners.

V. Disability Statement (American with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.