

El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	<u>Medical Assisting Technology</u>
COURSE RUBRIC AND NUMBER	<u>MDCA 1452</u>
COURSE TITLE	<u>Medical Assistant Laboratory</u> <u>Procedures</u>
COURSE CREDIT HOURS	<u>4 3 :</u> <u>3</u> Credits Lec. Lab

I. Catalog Description

Discusses application of governmental health care guidelines. Includes specimen collection and handling, quality assurance, and quality control. A grade of “C” or better is required in this course to take the next course. **Prerequisites: MDCA 1305 and MDCA 1313 and MDCA 1409, (3:3). Lab fee. Professional Practice Insurance required.**

II. Course Objectives

- A. Unit I. Introduction to the Medical Laboratory
 - 1. Discuss the organization and function of the medical laboratory.
 - 2. Discuss the qualifications, job functions, and ethical responsibilities of medical laboratory personnel.
 - 3. Identify and define selected abbreviations commonly used in the medical laboratory.
 - 4. Use the metric system to perform measurements.
 - 5. Discuss laboratory safety rules that must be followed to guard against chemical, physical, and biological hazards.
 - 6. Verify patient date of birth.
 - 7. Take history and physical and assist doctor in procedures.
 - 8. Apply OSHA regulations.
 - 9. Recognize and react to security codes .

- B. Unit II. Urinalysis
 - 1. Identify the organs and the urinary system
 - 2. Identify the parts of the kidney and state the function of each part.
 - 3. Explain how urine is formed.
 - 4. Describe proper urine collection and preservation methods.
 - 5. Perform a physical examination of urine.
 - 6. Perform a chemical examination of urine.
 - 7. Identify components of urine sediment.
 - 8. Perform a microscopic examination of urine sediment.
 - 9. Explain how urinalysis results can give information about the status of a patient health.
 - 10. Perform a urine pregnancy test.
 - 11. Perform patient education.
 - 12. Notify labs for pick ups.
 - 13. Obtain results.

C. Unit III. Hematology

1. Explain the function of the hematology laboratory.
2. Identify circulatory system components and discuss the formation of blood.
3. Perform a venipuncture.
4. Perform a capillary puncture.
5. Perform a hemoglobin and hematocrit determination.
6. Perform a manual red and white blood cell count.
7. Make and stain a blood smear.
8. Identify blood cells from a stain blood smear.
9. Perform a differential leukocyte count.
10. Calculate erythrocyte indices values and explain their significance.
11. Identify selected abnormal blood cells from blood smears or from visual aids.
12. Perform a reticulocyte count.
13. Discuss principles of hematology automation.
14. Explain the mechanism of hemostasis.
15. Discuss disorders of hemostasis.
16. Perform a bleeding time test.
17. Perform a prothrombin time (PT) test.
18. Perform an activated partial thromboplastin time (PTT) test.
19. Observe universal precautions.
20. Report incidents e.g. needle sticks blood.
21. Obtain results.
22. Notify lab for pick ups.

D. Unit IV. Blood Chemistry

1. Discuss the importance of clinical chemistry.
2. Identify fifteen clinical chemistry tests frequently performed and explain the significance.
3. Explain the importance of property collecting and handling specimens.
4. Describe the principles of selected chemistry.
5. Analyzers designed for use in smaller laboratories.
6. Explain the principles of clinical testing for glucose, cholesterol and electrolytes.
7. Notify lab for pick ups.
8. Obtain results.

E. Unit V. Basic Clinical Immunology and Microbiology

1. Discuss the organisms included in the study of microbiology; collect specimens.
2. Discuss the types of diseases caused by different groups of microorganism.
3. Explain why organisms are classified as pathogens, opportunistic pathogens, or normal flora.
4. Discuss basic techniques and media used in bacteriology.
5. Prepare, stain, and microscopically.
6. Describe growth requirements of some common bacteria.
7. Perform a throat culture and a rapid test for a group streptococcus.
8. Perform a urine culture, colony count, and antibiotic susceptibility test.
9. Explain the importance of laboratory testing for sexually transmitted diseases.
10. Discuss laboratory test methods used to detect sexually transmitted diseases.
11. Explain the importance and use of the fecal occult blood test.
12. Discuss the functions of the parasitology section of the medical laboratory.
13. Administer and perform lab tests (pregnancy, strep-test, influenza).
14. Discuss the use of immunological tests in the medical laboratory.
15. Explain the mechanism of humoral and cell-mediated immunity
16. Explain the principles of three types of immunological tests.
17. Perform ABO grouping.
18. Perform Rh typing.
19. Perform test for influenza type "A" and for rheumatoid factors.
20. Notify lab for pick ups.

21. Transport patients to hospital, specimens to lab.
22. Obtain results.

III. THECB Learning Outcomes (WECM)

1. Demonstrate venipuncture and skin puncture technique.
2. Demonstrate compliance with Universal Standards and Precautions based on OSHA guidelines.
3. Perform CLIA waived laboratory tests.
4. Label and handle all biologic specimens.
5. Use equipment including calibration, maintenance and troubleshooting.
6. Demonstrate quality assurance and quality control procedures.

IV. Evaluation

Tools used to evaluate student's achievement of course objectives:

Unit exams and final examination will be used to assess student's competency in didactic objectives.

Grading Scale

Total score for LECTURE = 600 points; 4 Exams 100 points each, Final exam 200 points

Total score for LABORATORY = 600 points; 25 competencies, each worth 16 points = 400 points; Attendance, Participation, Professionalism, and Ethical Behavior =50 points each

The lecture and the lab final grades will be combined and averaged to determine the final grade, and you need to pass both the lecture and the lab portion to pass the course.

Key used to determine the grade:
540 – 600 points (90-100%) = A
480 – 539 points (80-89%) = B
420 – 479 points (70-79%) = C
Less than 419 points (70%) = F*

- A grade of "F" will need to be repeated for all Health Occupations Classes.
- Students must have a "C" or better from all Health Occupation Classes to go on to the next course.

V. Disability Statement (Americans 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.