

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: CLLS-218 Department: Clinical Laboratory Science
 Course Title: Lab Skills for Med. Asst. Semester: Spring Year: 2013

Course Objective	Competencies
<ol style="list-style-type: none"> 1. Define the term education objective. 2. Define and use correct clinical laboratory terminology. 3. Describe and differentiate the POL (Physician office Laboratory) from the independent laboratory. 4. Explain the concepts of quality assurance/control as used in the clinical laboratory. 5. Correctly complete a laboratory requisition using patient information and laboratory test results. 6. Discuss patient preparation/education prior to laboratory testing. 7. Explain the need for the correct specimen collection/handling to enable accurate and precise 	<ul style="list-style-type: none"> • List the eight departments and state their function within the clinical laboratory. • Explain eight purposes of laboratory testing. • Differentiate the levels of laboratory personnel in relation to their education, skills, and duties. • Identify nine of the most common laboratory profiles and relate it to the body systems/function being evaluated. • • Name six general rules for safety within the medical laboratory. • Define universal standard precautions. • Describe three methods of quality control in the clinical laboratory. • List ten pieces of information required on a laboratory requisition. • Explain the importance of proper specimen collection, processing, and transport to obtain accurate and reliable patient education.

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<p>laboratory test results.</p> <p>8. Define normal values/reference intervals and their application to the interpretation of test results.</p> <p>9. Summarize the key features in the proper use of the compound microscope.</p> <p>10. Explain the importance of correct patient identification, complete specimen labeling and proper storage and delivery.</p> <p>11. Define the terms correctly used in renal physiology and urinalysis.</p> <p>12. Describe the urinary tract physiology and urine composition.</p>	<ul style="list-style-type: none"> • Given a diagram, label and give the function of microscopic parts. • In the student laboratory, student will demonstrate the proper use of a compound microscope. • List six rules used to ensure the proper care/use of the microscope. • Demonstrate proper pipetting technique using manual, semi-automated technique • Identify those factors affecting laboratory tests values. • List those conditions, which may lead to the rejection of a specimen for lab testing. • Explain the importance of proper collection, processing and transport of specimens: Random, midstream, clean-catch, and 24 hours. • Identify those quality control checks used in the urine waiver testing procedures. • List the three parts of the R&M (routine & Microscope). • Perform the physical and chemical urine properties test.

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<p>13. Name the safety/quality control protocols necessary when performing urine testing.</p> <p>14. List the normal values for urine testing used in diagnostic testing.</p> <p>15. Name the waived tests performed to include principle, N.V., and diagnostic significance.</p> <p>16. Use proper terminology in the hematology laboratory and testing procedures.</p> <p>17. Explain the CBC (complete blood count) and how the test results are used in the diagnosis and treatment of disease.</p>	<ul style="list-style-type: none"> • Interpret test results of the R&M as used in diagnostic urine testing. • Explain the use of confirmatory tablet tests: buminitest, acetest, clinitest, and ictotest. • Describe/differentiate the hemocult and gastrocult test. • Prepare the urine microscopic sediment smear. • Identify the correct additive used in the collection/processing of a specimen for hematology • Prepare and Wright stain a blood smear. • List the normal values for the CBC and ESR (Erythrocyte Sedimentation Rate) tests • Perform correctly the hemoglobin, hematocrit, and ESR test in the student laboratory. • Discuss the diagnostic value of the H/H (hemoglobin, hematocrit) in anemia identification. • Recognize the physiological reasons why the sedimentation rate varies with different states of health and disease. • Discuss the diagnostic value of the ESR/BSR. • Apply quality control checks in the performance of waiver tests. • Explain the application/use of glucose testing and its diagnostic significance (fasting, two-hour, GFT). • Perform correctly the electromis check, quality controls

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<p>18. Discuss the waiver test's principles, normal values and diagnostic significance to include: H/H and ESR/BSR.</p> <p>19. Define correctly the medical terminology used in specialty lab testing.</p> <p>20. Discuss quality control procedures used in specialty lab testing.</p> <p>21. List normal values used in specialty laboratory testing.</p> <p>22. Describe glucose methods used in the diagnosis, treatment, and management of diabetes.</p> <p>23. Explain the lipid profile to include: total cholesterol, triglycerides, and low/high density lipoproteins:</p> <p>24. Identify those tests of the renal profile and their diagnostic significance.</p> <p>25. Discuss the transmission, incubation period, and symptoms of EBV infections. (Infectious mononucleosis)</p>	<p>and patient blood sampling using the glucometer.</p> <ul style="list-style-type: none"> • Apply quality control values to Levy-Jennings charts. • Properly interpret quality control values (normal, abnormal, high/low) • Interpret patient glucose results when using either a glucometer or hemocue analyzer. • Explain the GTT (glucose tolerance procedure) using both blood and urine specimens. • Discuss glycosolated hemoglobin (HbA1C) or fructosamine test results used in the management of diabetes. • Describe the lipid profile and the significance of blood cholesterol testing. • Observe cholesterol testing using a semi-automated device. • Identify abnormal lipid profile results, which may identify patients at risk for coronary heart disease. • Give the normal values for renal profile (adults, children, infants) and discuss the significance of elevated levels. • Perform the IM test and using quality control checks correctly interpret test results.

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<p>26. Differentiate blood group antigens/antibodies as seen in the four major ABO and Rh types.</p> <p>27. Explain the cause of PKU and the consequences of untreated PKU to the infant.</p> <p>28. Discuss the cause of TB and identify staining procedure used to demonstrate the organism's presence.</p> <p>29. Use the proper terminology in the performance of microbiological procedures.</p> <p>30. Utilize proper blood/blood borne pathogen standards in the processing of all patient samples.</p> <p>31. Observe quality control checks and/or maintenance protocols required in the clinical laboratory.</p> <p>32. Differentiate normal from abnormal flora given representative organ/tissue systems.</p>	<ul style="list-style-type: none"> • Perform the IM tests and using quality control checks correctly interpret test results. • List the blood group (antigens/antibodies) for the ABO/Rh groups. • Describe the Guthrie PKU test procedure and correctly interpret the test results. • Describe the AFB (Acid-Fast Bacteria Stain) and its diagnostic significance. • Describe the proper patient education and/or the collection, processing, transport and handling of microbial specimens. • Perform CLIA-approved tests correctly and interpret test results. • Observe colonial morphology, gram stain reactions, biochemical tests, and Kirby-Bauer Sensitivity plates. • Observe throat cultures collection and perform/interpret the (GAS) Group-A strip immunoassay. Interpret correctly test result. • Describe the Gram Stain procedure and identify preparations under the microscope. • Differentiate transport and/or media used to culture

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	various patient specimens and list each use.