

**ST. PETERSBURG COLLEGE
MEDICAL LABORATORY TECHNOLOGY ONLINE PROGRAM**

ESSENTIAL INSTRUCTION CHECKLIST

Clinical affiliates must be able to provide students with sufficient instruction, supervision, and practice in the following procedures so that they can achieve competencies expected of entry-level technicians. Please check all that your facility can provide.

MICROBIOLOGY

(Please note: Clinical affiliates must be able to provide stock cultures and testing reagents for the organisms listed below. One-on-one instruction at the microscope is required for gram stains. A two-headed microscope is preferred.)

- Gram stain (preparation and interpretation)
- Culture setup and interpretation
 - Blood
 - Urine
 - Stool
 - Throat
 - Sputum
 - Genital
 - CSF and other body fluids
 - Wound
 - Anaerobes
- Identification of:
 - S. aureus
 - Coagulase-negative staphylococcus
 - S. pyogenes
 - S. agalactiae
 - E. faecalis
 - S. pneumoniae
 - Viridans streptococcus
 - E. coli
 - Klebsiella pneumoniae
 - Proteus mirabilis
 - Enterobacter cloacae
 - Salmonella spp.
 - Shigella sonnei
 - Bacillus not anthracis
 - Corynebacterium spp.
 - Listeria monocytogenes
 - Pseudomonas aeruginosa
 - H. influenzae
 - H. parainfluenzae
 - Campylobacter jejuni
 - N. gonorrhoeae
 - N. meningitis
 - Bacterioids fragilis
 - Clostridium perfringens
 - Candida albicans
- Antibiotic susceptibility testing
 - Automated panels
 - Beta-lactamase
 - Kirby-Bauer
 - E-test
 - MRSA
 - VRE screening
- Routine quality control of media, reagents, and equipment

HEMATOLOGY

(Please note: Clinical affiliates are asked to maintain a box of peripheral smear study slides illustrating as many of the abnormalities listed below as possible. One-on-one instruction at the microscope is required for differentials and urine sediments. A two-headed microscope is preferred.)

- Peripheral smears
- Wright stain
- Manual WBC count
- Manual platelet count
- Reticulocyte count
- Erythrocyte sedimentation rate
- Automated CBC
- Differentials (Students should be able to perform normal differentials, recognize abnormalities and refer for review.)
- Study slides exhibiting:
 - Normal RBCs and WBCs
 - Abnormal red cell morphology (anisocytosis, poikilocytosis, polychromasia, hypochromia, target cells, spherocytes, sickle cells, basophilic stippling, Howell Jolly bodies, nucleated RBCs, rouleaux, etc.)
 - Abnormal white cell morphology (variant lymphocytes, hypersegmentation, toxic granulation, Auer rods, etc.)
 - Immature granulocytes (bands, metamyelocytes, myelocytes, promyelocytes, blasts)
 - Abnormal platelets (giant platelets, platelet satellitosis, etc.)
 - Various types of anemia (iron deficiency, pernicious, sickle cell, etc.)
 - Various types of leukemia (acute and chronic lymphocytic, acute and chronic myelogenous)
- Platelet and WBC estimates from blood smear
- Interpretation of histograms and scatterplots
- Bleeding time or other platelet function test
- PT
- APTT
- Fibrinogen
- FDP or D-dimer
- Urinalysis, including microscopics (Students should be shown a wide variety of normal and abnormal urine sediments.)
- Routine quality control of reagents and equipment

BLOOD BANK

(Please note: Students are to be instructed using the tube method in the Immunohematology Lab Course. The gel method may be introduced after the student understands the principles and techniques of tube testing.)

- ABO and Rh, including weak D
- Resolution of common ABO discrepancies
- Antibody screens
- Antibody panels (identification of common single antibodies)
- Antigen typing
- Crossmatches (immediate spin and complete)
- Direct antiglobulin test
- Routine quality control of reagents and equipment

CHEMISTRY

- Operation, quality control, routine trouble shooting, and maintenance of chemistry / immunochemistry analyzers
- Preparation of calibrators, controls, and reagents
- Interpretation of quality control data and charts (Westgard rules)

PHLEBOTOMY

- Venipuncture
- Fingerstick

Signature of Lab Director

Name of Clinical Laboratory

Date