

# **HSTO 250**

## **Histology Practicum II**

4 Credits

Community College of Baltimore County  
Common Course Outline

### **Description**

**HSTO 250 – Histology Practicum II:** provides the student with clinical experiences in the histopathology laboratory applying and integrating theory, skills, and concepts regarding special stains that will include carbohydrates, amyloid, connective tissue, muscle, lipids, microorganisms, pigments and minerals, and neural tissue. The student builds upon the techniques learned in previous practicum/courses. Throughout the practicum, the students continue sectioning specimens, paraffin embedding of tissue, routine staining, mounting techniques and troubleshooting. After demonstrating proficiency, students may be permitted to perform procedures under qualified supervision. Students participate in the supportive functions of instrument operation, quality control, troubleshooting and problem solving.

**Pre-requisites:** HSTO 155

### **Overall Course Objectives**

Upon completion of this course, students will be able to:

1. demonstrate the theory and application of special staining techniques;
2. perform special stains both manually and on an automated stainer;
3. demonstrate stains independently with supervision;
4. operate laboratory equipment related to staining;
5. perform quality control and follow all student lab procedures and practices;
6. evaluate specimen quality with a certified tech;
7. identify tissue specimens, grossly and microscopically;
8. review troubleshooting problems;
9. recognize factors that affect procedures and results and take appropriate preventative/corrective action;
10. follow safety procedures for storage and disposal of chemicals; and
11. demonstrate laboratory safety for universal precautions.

### **Major Topics**

- I. Carbohydrates
  - a. Periodic acid-Schiff (PAS)
  - b. PAS with diastase
  - c. Mayer mucicarmine
  - d. Alcian blue 2.5
- II. Amyloid
  - a. Congo red
  - b. Crystal violet

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For more information, see your professor's syllabus.

- III. Connective tissue
  - a. Masson trichrome
  - b. Verhoeff-Van Gieson
  - c. Movat pentachrome
  - d. Gomori reticular
- IV. Muscle-Phosphotungstic acid-haematoxylin (PTAH)
- V. Lipids
  - a. Oil red O
  - b. Sudan black B
- VI. Microorganisms
  - a. Kinyoun acid-fast (AFB)
  - b. Giemsa
  - c. Brown-Hopps
  - d. Grocott Methenamine-Silver Nitrate (GMS)
- VII. Minerals
  - a. Prussian blue-iron
  - b. Fontana-Masson-melanin
  - c. Hall's Bile-bilirubin
  - d. Von Kossa-calcium
  - e. Rhodanine-copper
  - f. Alizarin red S-calcium
- VIII. Nerve tissue
  - a. Luxol fast blue
  - b. Cresyl echt violet

### **Course Requirements**

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- A technical evaluation/checklist
- A laboratory practical
- A professional evaluation
- A written objective assignment
- A post-internship exam

### **Other Course Information**

This course is part of a program sequence, which requires admission to the program.

This course is offered in the spring semester only.

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