

**Common Course Outline**  
**HSTO 102**  
**Histology Laboratory Techniques**  
**1 Credit**

**Community College of Baltimore County**

**Description**

**HSTO 102 – Histology Laboratory Techniques** introduces the theoretical and practical aspects of histology. Laboratory procedures include paraffin embedding, sectioning, and basic staining. Students receive laboratory instructions on the use, safety, and troubleshooting of a microtome. Hematoxylin and Eosin (H&E) hand staining will be performed and evaluated. Troubleshooting basic staining will be reviewed.

**1 Credit:** 3 laboratory hours per week.

**Prerequisites:** MLTC 101; Admission to the Histotechnology Program

**Overall Course Objectives**

Upon completion of this course students will be able to:

1. state the function and parts of an embedding station;
2. demonstrate the instruments used for embedding specimens;
3. apply the principles and application of embedding techniques for the various tissue types;
4. outline the operation and components of a microtome;
5. demonstrate safe practice in using the microtome;
6. utilize the microtomy instruments;
7. apply microtomy techniques in sectioning tissue specimens;
8. analyze troubleshooting problems with microtomy;
9. prepare slides for H&E staining;
10. identify the reagent order in the H&E staining technique;
11. troubleshoot staining processes;
12. demonstrate the method of coverslipping the stained slides by hand;
13. examine the stained tissue elements under a microscope;
14. interpret quality control measures used in embedding, microtomy, and basic staining; and
15. demonstrate laboratory safety including universal standard precautions.

**Major Topics**

- I. Embedding station
- II. Specimen orientation
- III. Embedding techniques
- IV. Microtomes
- V. Microtomy techniques
- VI. Troubleshooting microtomy problems

- VII. H&E staining
- VIII. Viewing slides under a microscope
- IX. Troubleshooting H&E staining
- X. Coverslipping
- XI. Quality control
- XII. Laboratory safety

### **Course Requirements**

Grading procedures will be determined by the individual faculty member but will include the following:

### **Grading/exams**

- Weekly quizzes and assignments
- Weekly laboratory exercises
- A minimum of two (2) Laboratory proficiencies

Written Assignments: Students are required to use appropriate academic resources.

### **Other Course Information**

This course is a Histology program core course.

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

This course is offered in the Spring only.

Date Revised: 12/05/2017