

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