



Course Description

MLT1840L | Histotechnology Practicum 1 | 5.00 credits

This is a clinical experience in which students will learn the techniques of processing human tissue for histological purposes. Prerequisite: MLT2192.

Course Competencies:

Competency 1: The student will demonstrate the ability to perform grossing and accessioning of tissue specimens by:

1. Aiding pathologist, pathologist assistant or histotechnology in the numbering and sectioning of clinical tissue specimens
2. Sectioning clinical tissue specimens using as required through instruction by the pathologist, pathologist assistant or histotechnology
3. Learning to use the hospitals' and or laboratory's computer systems to accession specimen

Competency 2: The student will demonstrate the ability to perform tissue processing by:

1. Performing routine maintenance on laboratory's tissue processing equipment
2. Recording required changes or maintenance of the laboratory's tissue processing equipment when necessary
3. Understanding and explaining the different aspects of tissue processing

Competency 3: The student will demonstrate the ability to perform embedding techniques by:

1. Demonstrating proper embedding techniques as required for different tissue specimens, including but not limited to: skin, gi, tubes and bone
2. Demonstrating re-embedding of tissue specimens when embedding has been done incorrectly

Competency 4: The student will demonstrate the ability to use a microtome to cut human and/or animal tissue by:

1. Describing the operation of microtomy equipment including the clinical cryostat
2. Performing tissue microtomy as required by type of tissue specimen
3. Performing routine maintenance on microtomy equipment
4. Performing frozen sections of clinical specimens if required

Competency 5: The student will demonstrate the ability to follow standard operating procedures with respect to hematoxylin and eosin staining, histochemical techniques, quality control, and laboratory safety by:

1. Performing Hematoxylin and eosin techniques
2. Describing parameters needed for routing Hematoxylin and Eosin techniques as well as histochemical techniques
3. Performing manual or automated progressive or regressive Hematoxylin and Eosin techniques on tissue specimen slides
4. Troubleshooting and explaining corrective actions for Hematoxylin and Eosin techniques on tissue specimen slides
5. Performing maintenance of manual or automate Hematoxylin and Eosin staining techniques as well as histochemical techniques
6. Understanding and explaining the need of quality control in routing Hematoxylin and Eosin staining techniques as well as histochemical techniques

Competency 6: The student will demonstrate the ability to communicate and use interpersonal skills effectively by:

1. Demonstrating ability to give and follow directions
2. Distinguishing between factual laboratory results and personal opinion
3. Recognizing the importance of courtesy and respect for patients and other laboratory personnel and maintains good interpersonal relationships
4. Following all federal and state regulations concerning patient information, or test results

5. Following and performing all components laboratory safety when performing, tissue processing, fixation, microtomy, embedding, histochemistry and working with volatile chemicals

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills
- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information
- Demonstrate knowledge of ethical thinking and its application to issues in society
- Demonstrate knowledge of diverse cultures, including global and historical perspectives
- Create strategies that can be used to fulfill personal, civic, and social responsibilities
- Use computer and emerging technologies effectively
- Demonstrate an appreciation for aesthetics and creative activities
- Describe how natural systems function and recognize the impact of humans on the environment