

**University Hospital/UT Health  
Histotechnology Training Program  
2021-2022 Handbook**

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**Program Mission Statement**

To provide trainees with the knowledge and skills necessary for careers in Histotechnology. To provide an educational and clinical atmosphere for trainees to gain new knowledge in human health and to become a provider of patient care activities that will improve the health of patients.

### **Essential Functions**

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Histotechnology is the preparation of tissue specimens for microscopic diagnosis. This one-year course is designed to educate technicians for careers in Histotechnology with a basic knowledge and its technique. Applicants to the program must be able to perform the following essential functions:

1. Work with their hands with attention to minute detail.
2. Distinguish color differentiation using the microscope.
3. Transfer identification numbers without transformation of digits.
4. Work in a stressful, task-oriented environment (performing frozen sections).
5. Work in an environment containing biohazard materials.
6. Work in an environment containing hazardous chemicals.
7. Move from one workstation to another; performing multiple tasks.
8. Sit for long periods of time at one task (embedding, cutting).
9. Stand for long periods of time at one task (aliquoting, staining)

### **Requirements & Courses**

Maximum requirements are an associate degree or at least 60 semester hours of academic credit from a regionally accredited college/university including 6 semester hours of chemistry and 6 hours of biology. Minimum requirements are a High School Diploma with successfully completed courses in Algebra, Chemistry, and Biology.

Subjects offered are: Basic Chemistry, Gross Anatomy, Fixation, Embedding Techniques, Paraffin and Frozen Sectioning, Staining and Special Stains, Light Microscopy, Electron Microscopy and Microscopic Anatomy.

The course includes lectures, exams, and practical application of methods at two of the major health facilities in the medical center. These courses are taught during an 8 am to 5:00pm workday, four days a week. The academic calendar year is from August through June.

The training program is administered by the Department of Pathology at UT Health San Antonio and through the University Health System, University Hospital in San Antonio.

The University Health System can provide care in the Emergency Department in the case of on-the-training injury, provides bench space in the anatomic laboratories for practicum, and provides clinical supervision of at least one qualified supervisor for each trainee during the practicum.

The Department of Pathology of the UT Health San Antonio determines the qualifications necessary for acceptance into the program, develops the curriculum of the program, determines the clinical rotation sites and schedules, provides qualified instructors, grades and evaluates the trainee's progress, provides counseling and advisement of trainees, issues certificate and keeps appropriate records on each individual trainee.

There is no tuition charged for the program, but students are required to purchase textbooks, scrubs, parking permit, and student professional liability insurance. The cost is approximately \$1000.

### **Emergency Care**

The University Health System can provide care in the Emergency Department in the case of on-the-training injury, provides bench space in the anatomic laboratories for practicum, and provides clinical supervision of at least one qualified supervisor for each trainee during the practicum. During the interviewing process, applicants are asked about health insurance and a pamphlet describing a membership program for Bexar County residents who do not have health insurance and are not eligible for other programs is given to them. Care Link offers families a monthly payment plan that is based on their income and family size. It also helps families get quality health care at University Health System. The phone number to call is 210-358-3350 or 1-200-844-6202.

### **Program Goals & Competencies**

#### **Program Goal**

The training program for Histotechnicians is designed to provide didactic and practical experience to prepare the trainees to enter the profession of Histotechnology. During the year of training, the trainees will demonstrate their ability to perform routine histologic procedures. The overall goal of the program is for the trainee to achieve these entry-level competencies upon graduation from the program.

#### **Upon completion of the technical training the trainee will:**

A. Demonstrate accuracy in receiving and accessioning tissue specimens for microscopic evaluation.

B. Demonstrate technical skills and abilities in the preparation of gross tissue specimens for microscopic evaluation.

1. Perform embedding techniques according to laboratory procedures by correctly orienting tissue specimens.
2. Perform Microtomy techniques to provide thin, artifact free sections of diagnostic quality.

3. Assist in the preparation of frozen section procedures in a timely & accurate manner.

C. Demonstrate technical skills and abilities in the preparation of special staining procedures for microscopic examination.

1. Prepare solutions and stains according to procedural specifications.

2. Perform quality assurance procedures, checking for proper tissue structures and their staining characteristic on control slides.

D. Demonstrate technical skills and abilities in the routine maintenance of equipment.

1. Maintains equipment and supplies ensuring proper operation and good condition.

2. Maintains records required for laboratory accreditation inspections.

3. Reports any malfunctions or discrepancies to the supervisor.

E. Acknowledge errors promptly.

1. Notifies supervisors and

2. Takes corrective action if necessary.

3. Accepts and assumes responsibility for job functions performed and is accountable for results.

F. Communicate effectively, demonstrating professional conduct with all levels of personnel.

1. Communicates status of workflow and projects.

2. Interfaces with other staff, patients, other healthcare professionals, and with the public.

3. Seeks guidance as needed and uses supervisory guidance to improve work methods.

G. Recognize the responsibilities of other staff members, faculty, and instructors and treating them with respect for their jobs and patient care.

1. Communicates professionally using phone etiquette with staff, faculty, patients, and public.

2. Shows respect of instructors, staff, and faculty in daily interactions involving questions and answers.

3. Seeks instruction from program director/instructor concerning any questions relating to communication.

H. Maintains knowledge of current technology through active participation in continuing education.

1. Attend TSH meeting in April and present a mini- presentation with other histology trainees in symposium format.

I. Demonstrate knowledge of safety, management, and supervision.

1. Uses laboratory safety guidelines for performing technical applications and tests.

2. Able to locate and use the MSDS Sheets.

3. Use Universal Safety Precautions.

4. Able to identify different fire extinguishers and use.

5. Knowledge of supervisors in clinical & didactic experiences.

6. Ability to follow instructions from supervisors and effectively perform duties requested.

## **I. Description of Histotechnology Course**

The Histotechnology curriculum is taught over a twelve-month period. The trainees rotate clinical learning experiences at University Hospital Surgical Pathology Laboratory (including Cytology), UT Health (including STRL Histology & Electron Microscopy Laboratories). During the clinical rotations, the trainees are given additional technical instruction so that they continue to expand their knowledge and practical skills. In the STRL Histology laboratory, they follow a prescribed weekly schedule for completion of specific special staining procedures along with introductions to muscle enzyme histochemistry, and immunofluorescence on frozen tissue biopsies.

The didactic portion of the Histotechnology course is coordinated with the practical portion to provide the trainees a better understanding of the correlation of technical skills and diagnostic importance. Lectures begin the first week of training and proceed on a weekly basis into the third quarter. Numerous technical and professional faculty participate in the lectures and instruction of the trainees. Written examinations are scheduled weekly and evaluated by the program faculty.

## **II. Objectives**

The Histotechnology Training Program will provide the trainees with an understanding and working knowledge of histopathology, histology, and those techniques necessary to produce quality slides for diagnosis. Upon completion of the curriculum, the trainee will be able to demonstrate a working knowledge of those techniques necessary to produce quality slides. This knowledge will prepare the trainees for immediate employment in a histology laboratory.

## **HISTOLOGY COURSE OUTLINE**

- I. Introduction & Orientation
  - A. Medical Ethics
  - B. Role of each in modern medicine
    - 1. Biopsy
    - 2. Autopsy
    - 3. Research
  - C. Relation to other laboratories
  - D. Record Keeping
  - E. Medical Terminology
    - 1. Prefixes
    - 2. Suffixes
- II. Basic Principles of Laboratory Work
  - A. Laboratory Safety
    - 1. Fire and explosion
    - 2. Poisonous, corrosive, and caustic reagents
      - a. Strong mineral acids
      - b. Strong bases
      - c. Strong oxidants
      - d. Poisonous compounds
      - e. Toxic vapors
    - 3. Burns and Scalds
      - a. Electrical burn
      - b. Electrical shock
    - 4. Glass handling accidents
    - 5. Bacterial, viral, or parasitic infection
    - 6. Animal handling
    - 7. Radiation hazards
    - 8. Biological hazards
  - B. Laboratory glassware
    - 1. Use and care
    - 2. Cleaning
- III. Instrumentation
  - A. Principles
  - B. Components
  - C. Use of instruments
  - D. Preventive maintenance
  - E. Trouble shooting
  - F. Comparison of types of equipment

These topics will be covered as they relate to the following instruments.

  - 1. Automatic tissue processors
  - 2. Microtomes
    - a. Freezing
      - (1) Compressed gas
      - (2) Cryostat
    - b. Rotary
    - c. Sliding
  - 3. Microscopes
    - a. Light
    - b. Electron

- c. Fluorescent
- d. Polarizing
- 4. Knife sharpening equipment
  - a. Knives
  - b. Electrically powered instruments
  - c. Hones and strops
- 5. Paraffin related equipment
  - a. Dispensers and baths
  - b. Embedding stations and centers
  - c. Water baths
  - d. Slide drying equipment
  - e. Incubators and ovens
- 6. Automated staining equipment
- 7. Balances and pH meters

#### IV. Fixation

- A. General principles
  - 1. Purposes and function
  - 2. Actions
    - a. Chemical effects on tissue
    - b. Mordanting
    - c. Prevention of autolysis and putrefaction
  - 3. Quality Control
    - a. Selection of appropriate fixative
    - b. Size and thickness
    - c. Temperature
    - d. Time
    - e. Volume
- B. Types and composition of fixatives
  - 1. Aqueous
    - a. Bouin's
    - b. Fleming's
    - c. Formalin
    - d. Helly's
    - e. Orth's
    - f. Zenker's
    - g. Others
  - 2. Non-aqueous
    - a. Acetone
    - b. Alcohol
    - c. Alcoholic formalin
    - d. Carnoy's
    - e. Others
- C. Advantages and disadvantages
  - 1. Aqueous/non-aqueous
  - 2. Coagulant/non-coagulant
- D. Specific use
  - 1. Aqueous/non-aqueous
  - 2. Coagulant/non-coagulant
- E. Artifacts
  - 1. Causes

2. Prevention and Removal
- V. Processing
- A. Dehydration
    1. General principles
      - a. Action
      - b. Purpose and function
      - c. Problem solving
      - d. Quality control
    2. Types, advantages, and disadvantages
      - a. Acetone
      - b. Alcohol
      - c. Ethylene glycol monomethyl ether (Cellosolve)
      - d. Universal solvents
    3. Clearing
 

General principles

      - a. Action
      - b. Purpose and function
      - c. Problem solving
      - d. Quality control
        - (1) Contamination
        - (2) Time
        - (3) Volume
    4. Types, advantages, and disadvantages
      - a. Benzene
      - b. Xylene
      - c. Toluene
      - d. Cedar wood Oil
      - e. Chloroform
      - f. Universal solvents
      - g. Purified food grade oils
  - C. Paraffin infiltration and embedding - general principles
    1. Actions, including vacuum
    2. Problem solving
    3. Purpose and function
    4. Types, advantages, and disadvantages
      - a. Paraffin
        - (1) Resin (natural and commercial)
        - (2) Paraplast
        - (3) Tissue Prep
        - (4) Others
      - b. Plastics
        - (1) Methacrylate (glycol & methyl)
        - (2) Epon
        - (3) Others
      - c. Celloidin
      - d. Agar
      - e. Gelatin
    5. Quality Control
      - a. Contamination
      - b. Temperature



- c. Time
- e. Volume
- IV. Microtomy - General Principles
  - A. Paraffin
    - 1. Proper technique
      - a. Adhesives
      - b. Knife angles
      - c. Placement of sections on slides
      - d. Temperature of water bath
      - e. Quality of section
    - 2. Problem solving
  - B. Cryostat
    - 1. Proper techniques
      - a. Embedding matrix
      - b. Knife angles
      - c. Temperature of cryostat
      - d. Quality of section
    - 2. Problem solving
- VII. Staining
  - A. Classification of dyes
    - 1. Natural dyes
    - 2. Synthetic dyes
      - a. Acid dyes
      - b. Basic dyes
      - c. Leuco compounds
  - B. Theory of staining and impregnation
    - 1. Chemical
    - 2. Metallic impregnation
    - 3. Mordants, oxidizers, accentuates
    - 4. Physical
    - 5. Progressive staining
    - 6. Regressive staining
  - C. Routine nuclear and cytoplasmic staining
    - 1. Nuclear stains
      - a. Carmine
      - b. Celestin Blue
      - c. Hematoxylin
        - (1) Advantages and disadvantages
        - (2) Sources of error and corrective action
        - (3) Various formulas
      - d. Methylene Blue
    - 2. Cytoplasmic stains
      - a. Eosin
        - (1) Advantages and disadvantages
        - (2) Sources of error and corrective action
        - (3) Various formulas
      - b. Phloxine
    - 3. Routine staining methods
      - a. Celestine blue and eosin
      - b. Hematoxylin and eosin
      - c. Phloxine and methylene blue

4. Quality control
5. Trouble shooting
- VIII. Mounting
  - A. Media
    1. Aqueous
      - a. Advantages and disadvantages
      - b. Indication for use
      - c. Sealers
    2. Resins - natural - Advantages and disadvantages
    3. Resins - synthetic
      - a. Advantages and disadvantages
      - b. Refractive indices
      - c. Solvents
  - B. Techniques
    1. Quality control
    2. Slides and cover glasses
      - a. Types and thickness
      - b. Refractive indices
- IX. Decalcification
  - A. Definition
  - B. Methods including advantages and disadvantages
    1. Buffer mixtures
    2. Chelating agents
    3. Commercial preparations
    4. Electrolytic
    5. Ion exchange
    6. Simple acid solutions
- X. Basic chemistry
  - A. Fundamental concepts
    1. Definitions
      - a. Acids and bases
      - b. Compounds and mixtures
      - c. Element
      - d. Molecule
      - e. Salts
    2. pH including buffers
  - B. Metric system
    1. Conversion of metric & apothecary system
    2. Conversion of C° and F° temperature
  - C. Solution preparation
    1. Calculations
    2. Pipetting
    3. Dilution
    4. Molar
    5. Normal
    6. Percent
- XI. Microscopic Anatomy
  - A. Cell structure and function
    1. As a whole (cell)

2. Nucleus and nucleoli
3. Mitochondria
4. Endoplasmic reticulum
5. Lysosomes
6. Filaments
7. Glycogen
8. Cell membrane
9. Pinocytosis
10. Lipid

B. Classification of Tissue

1. Connective tissue - function and identification
  - a. Cells
  - b. Fibers
2. Epithelium - function and identification
3. Muscle - function and identification
4. Nerve - function and identification
  - a. Neurons
  - b. Glia
  - c. Myelin sheath

C. Gross Anatomy

1. Skin
2. Connective tissue and adipose tissue
3. Bone and joints
4. Skeletal muscle
5. Coelomic cavities
6. Arteries, veins, and peripheral nerves
7. Lungs (thoracic cage and diaphragm)
8. Heart
9. Liver
10. Spleen
11. Pancreas
12. Adrenal, thyroid, parathyroid, pituitary
13. Kidneys (ureter & bladder)
14. Esophagus & stomach
15. Duodenum, jejunum, ileum
16. Colon, rectum, and anus
17. Male and female reproductive
18. Brain and spinal cord
19. Eye

XII. Special Stains

- A. Most desirable fixative
- B. Mode of action (if known)
- C. Purpose of reagents and dyes
- D. Quality control including control material
- E. Color results
- F. Sources of error and trouble shooting
- G. Rational for use

These topics will be covered as they relate to these special stains:

- A. Connective Tissue

1. Collagen
  - a. Masson Trichrome
  - b. Van Gieson

**Special Stains**

**Connective Tissue**

2. Reticulum
    - a. Lillie
    - b. Snook
    - c. Gomori
    - d. Gordon & Sweet
  3. Elastic
    - a. Verhoeff - Van Gibson
    - b. Gomori Aldehyde fuchsin
  4. Muscle
    - a. Masson's trichrome
    - b. PTAH
    - c. Gomori trichrome
  5. Basement Membrane
    - a. Periodic acid-Methenamine silver (PAMS)
    - b. Periodic acid - Schiff (PAS)
  6. Fibrin
    - a. PTAH
    - b. Wiegerts' s stain for fibrin
  7. Bones, cartilage, and bone marrow
    - a. Giemsa
- B. Organisms, fungi, and parasites**
1. Acid fast
    - a. Kinyoun's
    - b. Ziehl-Neilson
    - c. Fite-Faraco
  2. Ordinary bacteria gram positive and negative
    - a. Brown & Brenn
    - b. Brown & Hopps
  3. Spirochetes
    - a. Warthin-Starry
    - b. Steiner & Steiner
    - c. Dieterle
  4. Fungi
    - a. Gridley's
    - b. Grocott's Methenamine silver (GMS)
    - c. Periodic-acid Schiff (PAS)
  5. Amoeba
    - a. Best's carmine
    - b. Periodic acid Schiff (PAS)
    - c. Iron Hematoxylin

**Organisms, fungi, and parasites**

6. Inclusion bodies
  - a. Lendrum's phloxine tartrazine method
7. Camphylobacter Pylori
  - a. Wright-Giemsa
  - b. Steiner Modification

- C. Fats and Lipids
  - 1. Neutral fats
    - a. Sudan IV
    - b. Oil red O
    - c. Osmium tetroxide
    - d. Sudan black B
- D. Cell products - Carbohydrate stains
  - 1. Glycogen
    - a. Best's carmine
    - b. Periodic Acid-Schiff (PAS) with and without digestion
  - 2. Neutral Mucins
    - a. Mucicarmine
    - b. Periodic acid Schiff (PAS)
  - 3. Amyloid
    - a. Benhold's Congo red
    - b. Crystal violet
    - c. Puchtler's Congo red
    - d. Thioflavin T
  - 4. Acid Mucopolysaccharide
    - a. Colloidal iron w/wo digestive enzymes (hyaluronidase)
    - b. Alcian blue w/wo digestive enzymes (hyaluronidase)
- E. Pigments and minerals (including classification)
  - 1. Iron
    - a. Prussian blue reaction
    - b. Schmorl's ferric ferricyanide technique
    - c. Turnbull's blue reaction
  - 2. Calcium
    - a. Alizarin red S
    - b. Von Kossa
  - 3. Bile pigment
    - a. Stain's bile pigment stain
    - b. Fouchet's method for bile

## **Pigments and minerals (including classification)**

4. Melanin
    - a. Fontana - Masson
    - b. Warthin-Starry Modification
    - c. Schmorl's
  5. Urate crystals
    - a. Gomori's method for urate crystals
  6. Copper
    - a. Rhodamine
- F. Cytoplasmic granules
1. Argentaffin
    - a. Schmorl's Method
    - b. Fontana – Masson
  2. Chromaffin
    - a. Periodic acid Schiff (PAS)
    - b. Mallory's aniline blue collagen stain
  3. Pituitary
    - a. Periodic acid Schiff (PAS)
    - b. Gomori's chrome alum hematoxylin phloxine
  4. Pancreas
    - a. Scott's
    - b. Gomori
  5. Mast Cells
    - a. Toluidine blue
    - b. Giemsa
  6. DNA & RNA
    - a. Methyl green pyronin
    - b. Feulgen
  7. Argyrophilic Cells
    - a. Churukian silver stain
- G. Nervous System
1. Nerve fibers, endings & axis cylinders
    - a. Bodian's
  2. Myelin
    - a. Weil's
    - b. Luxol fast blue
    - c. Phosphotungstic acid hematoxylin (PTAH)
  3. Nissl substance
    - a. Thionin
    - b. Cresyl echt violet
- H. Enzyme Stains
1. Calcium ATPase
  2. NADH
  3. Phosphorylase
  4. Esterase
- I. Immunohistochemical Techniques
1. Immunofluorescence
    - a. direct
    - b. indirect

## **Notebook Contents**

1. Glossary of medical terms continuously expanding as the trainee progresses through the Program.
2. All study guides and laboratory assignments.
3. Sections on the major topics to include definitions, components, advantages and disadvantages of the following:
  - A. Fixation
  - B. Dehydration
  - C. Clearing
  - D. Embedding and Infiltration Methods and Media
  - E. Mounting Media
  - F. Staining (as covered in lectures, etc.)
    1. Routine Staining  
Listing - nuclear stains and cytoplasmic stains
    2. Special Stains Listing:
      - a. Preferred fixative
      - b. Mode of action
      - c. Purpose of reagent and dyes
      - d. Quality control including control material
      - e. Color results
      - f. Sources of error and troubleshooting
      - g. Rationale for use

### **HISTOPATHOLOGY LABORATORY ROTATION**

Length of Rotation:                    2 weeks/ 1 month

#### **Purpose of Rotation**

1. To provide practical experience for the trainee in the logging of surgical tissue specimens, assisting of the resident pathologist in the grossing of these specimens, processing, embedding, cutting, and staining of surgical and autopsy tissue.
2. Provide practical experience for the trainee as he/she performs special histochemical stains ordered routinely by the pathologists to confirm diagnoses.
3. Provide practical experience in the preparation of frozen sections and the staining of these sections as well as touch preps.

4. The rotation will include instruction in the adjustment, calibration and maintenance of equipment, CAP recording and gross photography (when applicable).
5. The rotation will show the trainee the responsibilities for quality, efficiency, and safety in the performance of laboratory procedures.

## **HISTOPATHOLOGY LABORATORY ROTATION**

### **Instructional Objectives**

1. The trainee will identify appropriate fixatives to be used for specific procedures for histology, cytology, and electron microscopy.
2. The trainee will learn processing of tissue and apply that knowledge to the method incorporated in the rotation setting. The trainee will properly load, program, and service the processing instrument utilized at the rotation
3. The trainee will demonstrate proper orientation of tissue by embedding surgical and autopsy tissues recognizing special circumstances, e.g., skin biopsies on edge, gastric and colon biopsies embedded on mucosal surfaces, cross-sections for cylindrical tissues, and exhibit proper instrument care according to the prescribed procedures for the rotation. The trainee will be able to embed 1 block every 1 minute by the end of the training program.
4. The trainee will demonstrate expertise in Microtomy, being able to cut 15 blocks in 30 minutes by completion of the hospital rotation.
5. The trainee will prepare solutions by recognized mathematical formulas for the staining of slides and maintenance of stock solutions.
6. The trainee will perform special histochemical stains, identify pitfalls and difficulties while performing these procedures and recognize the results. The trainee will gain experience in recognizing which stains are used to demonstrate facets of histologic analogies.
7. The trainee will demonstrate proper staining of touch preps, and the cutting and staining of frozen sections where applicable after realizing the following:
  - a) Primary concern for the patient
  - b) CAP regulation: the tissue is to be frozen, cut, stained, and a diagnosis given by the Pathologist within 15 minutes of being received.
  - c) CAP regulations showing how the staff pathologist gives a verbal report directly to the surgeon by intercom and how a written report signed by the staff pathologist is placed in the patient's chart.
8. The trainee will accurately file surgical and autopsy blocks after being advised of the importance of proper numerical filing.
9. Given an understanding of the ramifications of incorrect labeling, the trainee will demonstrate proper labeling of surgical and autopsy slides.
10. The trainee will operate and maintain in accordance with operational instructions, specific instruments required to perform duties in the histology laboratory, i.e., tissue processor, balance, embedding center, microscopes, etc.



## CLINICAL EXPERIENCE

The clinical experience is an integral part of the learning of Histotechnology. It requires bench work expertise, knowledge of theory and potential future employment opportunities. Clinical experiences will be set up by the program director and placement will be guaranteed. If an unexpected event causes a clinical rotation not to be available, an alternative rotation will be set up for the trainee by the program director.

The clinical experience is a privilege extended to the trainees by the laboratories involved. We are guests in these facilities and must adhere to their policies, performance, and attendance requirements.

The clinical facility has the right to remove a trainee and thus terminate the clinical experience if they are not satisfied with the trainee's attitudes, attendance, unethical behavior, or academic performance in their facility. Therefore, the clinical experience must be approached as though the trainee is a potential employee and the clinical site a potential employer.

Great care must be taken to ensure a successful working relationship between you and the clinical facility; we are stating that you are ready to take your place in the laboratory learning/working environment. Careful consideration has been given to your clinical placement in hopes that you will benefit and be successful in this endeavor. This learning/working experience is a vital part of the HT program and the inability to complete this phase will jeopardize completion of the program.

Trainees assigned for clinical rotations are required to be in attendance Tuesday through Friday; 8:00-5:00pm. Trainees will not be required to attend any other times. There are assigned trainee instructors at each clinical rotation for the supervision and evaluation of the histology trainees.

### **Policy of Service Work:**

All jobs held by trainees are unrelated to the training program. If trainees work, it is only on their own time and not during school hours. The type of work they do and the supervision required is the responsibility of their employer.

Trainees will be assigned to clinical rotations where they will be trained by knowledgeable and skilled clinical team members but may not be used or treated as substitute for regular staff at any time during their training. Trainees are in training but are not assigned clinical work duties at any point during clinical rotations.

## CODE OF ETHICS

### Preamble

"On entering at this time into the practice of Histotechnology, I accept, with full realization of its implications, the responsibilities associated with my duties. I am aware that since the physician relies upon my work in the diagnosis and treatment of disease, even a trivial error may affect seriously the health or even the life of a patient. Every procedure, therefore, must be carried out with thoughtfulness and accuracy. Knowing these things, I recognize that my integrity and that of my profession must be pledged to the absolute reliability of my work.

"I am aware of the need for cooperation and friendly understanding between my fellow workers and myself and for the patience, humanity and tact which must be exercised toward the patient who by reason of his illness is particularly needful of my skill and kindness.

"I realize that the knowledge obtained concerning individuals in the course of my work must be treated as confidential and that since the physician has the ultimate responsibility in diagnosis and treatment, my results must be made known only to him or those designated by him.

"To these principles, I hereby subscribe, promising to conduct myself at all times in a manner appropriate to the dignity of my profession"

## **Rules & Regulations**

### **Professional Behaviors**

1. Being notified of the laboratory work hours, the trainee will comply by arriving for duty on time. (Tuesday through Friday; 8:00-5:00pm)
2. Realizing the importance of laboratory work schedules, the trainee will begin assigned activities at once.
3. The trainee will display consideration and common courtesy toward other trainees and employees.
4. When given a work assignment, the trainee will organize work and maintain a clean work area. Trainees understand that solutions that are emptied need to be made up and properly labeled.
5. When given a work assignment, the trainee will read or listen to directions carefully and respond correctly.
6. To complete assigned tasks, the trainee will concentrate on the tests to be performed until completion and disregard outside distractions.
7. Trainees will make use of available time by reading assignments or other pertinent material and by seeking answers to questions. Also, trainees will have access to the library at the UT Health and are able to read articles in any of the journals that pertain to histology.
8. When procedures are assigned, the trainee will discuss protocols necessary for proper performance.
9. When questioned about previously presented material, trainees will demonstrate understanding of the material by responding correctly to the questions.
10. Trainee/instructor relationships are important to learning. Trainees are encouraged to discuss techniques or subject matter with instructors.
11. Trainees should accept the responsibility of meeting work deadlines and priority procedures and respond accordingly.
12. Trainees are encouraged to exhibit good practical judgment.
13. Trainee should seek additional knowledge or skills when time permits.

## **Rules & Regulations**

### **Laboratory Policies**

1. **APPEARANCE, DRESS:** Hospital scrubs with closed shoes. Closed shoes and clothing must be clean, neat, and in good taste. Wear protective clothing when needed.
2. **ILLNESS OR EMERGENCIES:** Should you be absent without prior permission; you must call in by 7:30 A.M. and talk to the Program Director and Clinical Rotation Supervisor. If you become ill during the day, report to appropriate supervisors.

3. ATTENDANCE SHEETS: Records of your attendance are kept in your permanent file.
4. LUNCH TIME: Your lunchtime will be arranged to facilitate the work schedules.
5. BREAK TIME: Your break time will be arranged to facilitate the work schedules.
6. LEAVING LABORATORY AREA: If you leave the area, please inform the technologist as to your location. Return as quickly as possible.
7. EATING IN LABORATORY: There will be no eating or drinking in the laboratory.
8. SMOKING: There will be no smoking in the laboratory. This is a smoke-free campus and there are no smoking areas.
9. BORROWING LABORATORY BOOKS: Return all books daily. Sign checkout sheet in laboratory.
11. PERSONAL INJURIES: Report immediately to supervisor or technician in area.
12. INSTRUMENT NOT OPERATING PROPERLY: Report immediately to supervisor.
13. TELEPHONES: The laboratory phone is primarily for business calls. Personal calls will be limited to breaks and lunch. Answering or using your cell phone in the laboratory is prohibited. The phone number for emergencies is 210-567-4061.
14. ANSWERING TELEPHONE OR INTERCOM: Identify Department/ Name Conduct conversation professionally and courteously. You represent customer service to doctors, nurses, histologists, secretaries, patients, etc.

## **Rules & Regulations**

### **Lectures & Clinical Rotations**

Trainees must:

1. Attend all scheduled lectures and laboratory assignments.
2. Will complete all study guides prior to scheduled lectures.
3. Will be prepared for all scheduled examinations and laboratory assignments.
4. Satisfactory completion of clinical rotation experience is mandatory for all trainees. The clinical facility has the right to remove a trainee and thus terminate the clinical experience if they are not satisfied with the trainee's attitudes, attendance, unethical behavior, or academic performance in the facility. Trainees can be dismissed from the Histology Program at any time if patient care is compromised due to a trainee's negligence handling patient cases.

7. **Complete** trainee projects:
  - a. Laboratory assignments
    1. Cutting control tissues
    2. Routine staining
    3. Special stains
  - b. Research Paper/Oral Presentation
8. **Complete** in-house practical exam slides as required for completion of the program.
9. Return all teaching materials on loan from the program.
10. Return all teaching critiques upon completion of rotation.

## Rules & Regulations

### Grading

Trainees will be continuously evaluated and informed of test scores. Trainees can be dismissed according to the following guidelines:

1. Trainees must keep a **70.0+ average** on Histology Examinations. If a 70.0 average is not met; trainee will be counseled and allowed a repeat Histology Exam to bring up their Histology Exam average to 70.0. If this criterion is not met, trainees may be dismissed by the Program Director.
2. Trainees will be immediately dismissed by the Program Director at **Mid-Term** if their Histology Examination Average is not **70+**.
3. Final GPA for the trainees will be determined by the following percentages and scale.

### Weighted Percentages

Gross & Microanatomy	5%
Oral Presentation	5%
Final Examination	20%
Clinical Rotation Evaluation	20%
Histology Exam Average	50%

### Scale

90-100	A
80-89	B
70-79	C
60-69	D
-59	F

## **RULES & REGULATIONS**

### **Attendance**

1. Absences of each trainee are recorded without exception from the enrollment date. A trainee absent more than 5 days in the program may be dismissed by the Program Director from the Histology Training Program.
2. Realizing the importance of laboratory work schedules, the trainee will give sufficient notice in advance of an absence to allow for schedule changes. Verification of absences will be required; extenuating circumstances will be evaluated on an individual basis. Absences occurring without notification to the laboratory may result in dismissal of the trainee.
3. Trainees are required to be in attendance for all scheduled lectures and laboratory assignments.
4. Early departure from lectures, exams, or clinical rotations are forms of absenteeism. Tardiness is unacceptable because it is disruptive to the lectures, exams, and clinical rotations that trainees attend. Trainees will be counted late on their attendance sheet if they arrive after 8:00am and five tardies will constitute an absence.

### **Incentives for Meeting Attendance Requirements**

1. A December Break will be allotted on specified dates only if trainees have missed 2 days (16 hours) or less. Missed days will not be available for make up at any time before December Break. Travel plans will have to be arranged accordingly to the trainee's attendance record and approval of the Program Director. If attendance record does not permit a December Break, the trainee will be scheduled to attend the clinical rotation at UT Health and will observe the scheduled holidays for UT Health.
2. The Spring Break Holiday will be allotted if trainees have only missed 5 days (40 hours) or less at the scheduled time of break. At that time, the trainee will be scheduled to attend the clinical rotation at UT Health. A trainee will meet with the Departmental Administrator at this time to discuss continuation in the program.
3. Absences resulting in more than 40 hours of missed time during the year will result in mandatory Monday attendance for the rest of the training program.

### **Criteria of Passing, Failing, & Progression in the Program**

Trainees will be continuously evaluated and informed of absences, clinical rotation evaluations, and grades. Rules and regulations for professional behavior, laboratory policies, and lecture and clinical rotations will be continuously followed. Any of these policies that are not followed will be discussed with the trainee and can be documented by the Program Director. A copy of the documentation will be given to the trainee. All documentation will be kept in the trainee's permanent file kept under lock and key.

1. Trainees will be continuously informed of their grades throughout the year. Failure to keep the required GPA for progression in the program will be considered for immediate dismissal. Trainees can have access to any of their test scores and clinical rotation evaluations.

2. **Verification of absences** will be required; extenuating circumstances will be evaluated on an individual basis. Absences over 5 days (40 hours) can be considered for immediate dismissal of the trainee.
3. **Absences occurring without notification to the laboratory may result in dismissal of the trainee.** Trainees must exhibit work ethics that are acceptable to the professional laboratory setting.
4. Satisfactory completion of clinical rotation experience is mandatory for all trainees. The clinical facility has the right to remove a trainee and thus terminate the clinical experience if they are not satisfied with the trainee's attitude, attendance, unethical behavior, or academic performance in their facility. Trainees can be dismissed from the Histology Program at any time if patient care is compromised due to a trainee's negligence handling patient cases.

### **Policy Statement for Graduation**

Graduation from this program is not contingent upon the trainee passing any type of external certification or licensure examination. Upon graduation, the trainee will receive a certificate of completion of the University Hospital/UT Health Histotechnology Training Program. Upon graduation, the graduate will be eligible to sit for the HT BOC ASCP Registry.

### **Appeals Procedure**

Any student needing to register a complaint concerning an academic or personal problem may discuss it with the Program Director. If for any reason the problem cannot be resolved, it will then be taken through the following process.

1. The grievance will then be presented in writing to the Program Director within 2 weeks of the complaint.
2. The Program Director will schedule a meeting with the Executive Committee of the School to discuss the written grievance within 5 days. This committee consists of the following:
  - a) Program Director: Jennifer Hubbard
  - b) Medical Advisor: Dr. Kenneth Holder
  - c) Administrator of UT Health Pathology Department Chair: Dr. Marsha Kinney
3. The student will be scheduled to meet with the Executive Committee no later than 2 weeks from the time the written grievance is submitted to the Program Director.
4. Decisions by the Executive Committee will be final. Trainee will be provided with a written report of the final decision. A copy will be kept in the trainee's permanent file.

## **Withdrawal & Refunds**

Any trainee not meeting the above requirements or quitting the program may not re-enter. Since this is a tuition-free training program, there will be no refunds.

## **Retention of Records for Graduates & Enrolled Trainees**

Trainee files contain application forms, transcripts of grades, attendance records, tests, trainee papers, and clinical evaluations. These records are open to the trainee at any time, and they review all evaluations at the completion of each rotation.

Upon completion of the course, the records are kept intact for one year. After that time records will be converted to a digital record and only the application forms, transcripts, attendance records, grade sheets, and evaluations are maintained as a hard record in the Histology Laboratory.

Trainees sign a release of information form allowing the program to give information from their files. Discretion is always used concerning trainees' records. When potential employers request information, only information relating to pass/fail status and attendance is disclosed. Confidentiality is maintained by securing trainee records in a locked file cabinet.

## **RELEASE OF INFORMATION**

I authorize the University Health System, University Hospital/UT Health Department of Pathology, Histotechnology Training Program to release grades, transcripts, and give evaluations of my clinical and interpersonal skills to prospective schools and employers. I release the University Health System/UT Health Department of Pathology, Histotechnology Training Program, from all liability that may be incurred in furnishing such information.