

## FLORIDA STATE COLLEGE AT JACKSONVILLE

## COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: MLT 2192

COURSE TITLE: Histotechniques II

PREREQUISITES: None

COREQUISITE(S): None

CREDIT HOURS: 4

CONTACT HOURS/WEEK: 4

CONTACT HOUR BREAKDOWN:

Lecture/Discussion: 4

Laboratory:

Other \_\_\_\_\_:

FACULTY WORKLOAD POINTS: 4

STANDARDIZED CLASS SIZE ALLOCATION: 20

## CATALOG COURSE DESCRIPTION:

This course is a continuation of Histotechniques I. Students will continue to develop and learn the complex laboratory procedures employed in current histotechnology settings, including special stains, immunochemistry, electron microscopy, and cryostat procedures. This course may be offered by way of Internet.

SUGGESTED TEXT(S): Sheehan, D.C. and Hrapchak, B.B., Theory and Practice of Histotechnology 2nd Ed., Battelle Press: 1987.

Carson. Histotechnology. ASCP: 1990

IMPLEMENTATION DATE: Fall Term, 1990 (911)

REVIEW OR MODIFICATION DATE: Fall Term, 1997 (981)  
 Fall Term, 2002 (20031)  
 Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Overview	4
A. Laboratory Safety	
B. Review of Universal Precautions	
C. Review of Quality Assurance Concepts	
D. Professional Conduct and Credentials	
II. Principles of Microscopy	8
A. Theory and Operation of Light Microscope, Including Polarized Light	
B. Theory of Operation of Electron Microscope	
III. Solution Chemistry	6
A. Concentrations	
B. Dilutions	
IV. Tissue Processing	6
A. Evaluation of Specimen	
B. Tissue Fixation - Special Methods	
C. Tissue Embedding - Special Methods	
V. Frozen Section Procedures	4
A. Specimen Processing	
B. Cryostat Cutting	
C. Rapid Staining Techniques	
VI. Special Stains	20
A. Nuclear and Cytoplasmic	
B. Carbohydrates	
C. Connective Tissue and Muscle Fiber	
D. Lipids	
E. Pigments and Minerals	
F. Microorganisms	
G. Nerve Tissue	
H. Eye Technics	
I. Special Cells and Tissue	
VII. Immunohistochemistry	12
A. Immunology Concepts	
B. Monoclonal/Polyclonal Antibodies	
C. Immunohistochemical Staining Methods	
D. Visualization Methods	
E. Troubleshooting	

PROGRAM TITLE: Histologic Technology

COURSE TITLE: Histotechniques II

CIP NUMBER: 0317.030800

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

12.0 IDENTIFY THE ANATOMIC STRUCTURE AND FUNCTION OF BODY SYSTEMS IN RELATION TO DISEASE STATES AND SERVICES PERFORMED BY THE HISTOTECHNICIAN -- The student will be able to:

12.03 Demonstrate knowledge of various methods of obtaining histological specimens from patients.

12.05 Demonstrate knowledge of types of histological specimens usually submitted for gross and microscopic examination.

12.06 Demonstrate knowledge of the processing of histologic specimens especially as related to disease processes.

12.07 Demonstrate knowledge of tissue processing methods, especially variety of fixatives used, as each relates to a specific entity or disease process to be diagnosed.

13.0 PRACTICE QUALITY ASSURANCE, SAFETY AND ACCEPTABLE COMMUNICATION SKILLS -- The student will be able to:

13.04 Demonstrate knowledge of diagnostic terminology.

13.07 Demonstrate knowledge of chemical hazards within the histopathology laboratory.

13.08 Demonstrate knowledge of proper disposal methods for all chemical and biological waste within the histopathology laboratory.

15.0 RECEIVE TISSUE SPECIMENS AND PERFORM PREPARATION TECHNIQUES AS INDICATED -- The student will be able to:

15.05 Distinguish between well-prepared and stained and poorly-prepared and stained histologic specimens.

15.06 Identify tissue structures and their staining characteristics.



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

<b>Section 1</b>	<b>SEMESTER CREDIT HOURS (CC):</b> <u>4</u>
<b>COURSE PREFIX AND NUMBER:</b> <u>MLT 2192</u>	<b>CONTACT HOURS (NCC):</b> <u>4</u>
<b>COURSE TITLE:</b> <u>Histotechniques II</u>	

**Section 2**

**TYPE OF COURSE: (Click on the box to check all that apply)**

<input type="checkbox"/> AA Elective	<input checked="" type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input type="checkbox"/> AS Professional Elective	<input checked="" type="checkbox"/> AAS Required Professional Course	<input type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other _____	<input type="checkbox"/> PSAV	<input type="checkbox"/> Apprenticeship
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

**Section 3 (If applicable)**

**INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:**

<input type="checkbox"/> Communications	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

**Section 4**

**INTELLECTUAL COMPETENCIES:**

<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Information Literacy	<input checked="" type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively

<b>Section 5</b>		
<b>LEARNING OUTCOMES</b>		<b>METHOD OF ASSESSMENT</b>
•	Demonstrate ability to apply mathematical formulas to problems involving the preparation of histology reagents	Online mastery learning quizzes; final exam
•	Apply knowledge of tissues (gross and microscopic features) to problems in special fixation, processing, and embedding techniques	Discussion forum; online mastery learning quizzes; final exam
•	Compare and contrast routine microtomy to frozen sectioning, to include purpose, type of specimen, handling considerations, biohazards, and staining	Online mastery learning quizzes; final exam
•	Discuss a routine histology laboratory's repertoire of special stains, with respect to purpose of the stain and principle of staining reaction	Online mastery learning quizzes; final exam
•	Apply basic concepts of immunology to the use of immunohistochemical reactions	Online mastery learning quizzes; final exam
•	Given a specific topic in histology, prepare and present online a properly documented and well-researched discussion paper, having worked collaboratively with assigned group	Communication documentation with instructor; presentation of paper online

**Section 6**

Name of Person Completing This Form: Merry A. Carter Date: 3/20/2008