

## FLORIDA STATE COLLEGE AT JACKSONVILLE

## COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: MLT 2800L

COURSE TITLE: Clinical Practicum I

PREREQUISITE(S): None

COREQUISITE(S): None

STUDENT ADVISING NOTES: Suggested Course: MLT 2150C

CREDIT HOURS: 8

CONTACT HOURS/WEEK: 27.5

CONTACT HOUR BREAKDOWN:

Lecture/Discussion:

Laboratory: 27.5

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

FACULTY WORKLOAD POINTS: Calculated on the # of students in the internship

STANDARDIZED CLASS SIZE ALLOCATION: 12:1 ratio

CATALOG COURSE DESCRIPTION:

Assigned to a clinical affiliate of the medical laboratory technology program, students will be instructed in current laboratory procedures and instrument use appropriate for developing entry-level career skills. The supervised learning experiences are under the coordination and responsibility of the program faculty.

SUGGESTED TEXT(S): Clinical Diagnosis and Management by Laboratory Methods, Henry, Saunders: Latest Edition.

Castleberry. Board of Registry Study Guide, ASCP: Latest Edition.

IMPLEMENTATION DATE: January, 1989

REVIEW OR MODIFICATION DATE: Fall Term, 1996 (971)  
Fall Term, 2002 (20031)  
Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
I. The Hospital Laboratory	28.5
A. General Hospital Orientation	
B. Professional Communication, Laboratory Rules and Safety	
C. Specimen Collection and Processing, Including Phlebotomy (Reinforcement Throughout Practicum)	
II. Urinalysis and Body Fluids	64
A. Urinalysis: Collection, Quality Control, Physical, Chemical and Microscopic Examinations	(45)
B. Cerebrospinal Fluids: Collection, Processing and Testing	(13)
C. Miscellaneous Body Fluids	(6)
III. Hematology	175
A. Routine Hematology/Quality Control	(120)
1. Staining Methods	(3)
2. Manual and Automated Cell Counting	(30)
3. Manual and Automated Differential Cell Counts	(30)
4. Miscellaneous Peripheral Blood Cell Tests	(20)
5. Clinical Correlations of Abnormal Results	(12)
6. Principles of Hematology Instrumentation	(10)
7. Platelet Counting and Evaluation	(15)
B. Hemostasis/Quality Control	(55)
1. Routine Coagulation Screening Tests	(35)
2. Special Coagulation Procedures	(10)
3. Clinical Correlations of Abnormal Results	(10)
IV. Immunohematology	145
A. Routine Procedures in Blood Banking	(60)
B. Donor Selection, Collection and Testing	(10)
C. Compatibility Testing and Blood	(30)
D. Antibody Identification	(30)
E. Use and Administration of Blood/Blood Components	(10)
F. Quality Control Parameters	(5)

PROGRAM TITLE: Medical Laboratory Technology

COURSE TITLE: Clinical Practicum I

CIP NUMBER: 0317.030900

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

03.0 DEMONSTRATE LEGAL AND ETHICAL RESPONSIBILITIES - The student will be able to:

- 03.08 Recognize and report abuse and neglect
- 03.09 Recognize sexual harassment and domestic violence.

24.0 SUCCESSFULLY COMPLETE LEARNING EXPERIENCES IN THE CLINICAL SETTING -- The student will be able to:

- 24.02 Complete clinical rotations, performing the following waived tests: dipstick or tablet urinalysis (nonautomated); fecal occult blood; ovulation tests; urine pregnancy tests; sedimentation rate (nonautomated); hemoglobin by copper sulfate method and by single analyte instrument (Hemocue); blood glucose performed on an FDA approved device; and spun hematocrit.

26.0 DISCUSS THE GENERAL RESPONSIBILITIES AND FUNCTIONS ENCOUNTERED BY A MEDICAL TECHNICIAN -- The student will be able to:

- 26.01 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solutions of such questions.
- 26.02 Organize and communicate the results obtained by observation and experimentation.
- 26.03 Demonstrate ability to evaluate and draw conclusions.
- 26.04 Demonstrate knowledge of anatomy and physiology of body systems.
- 26.05 Demonstrate ability to report observations in written or oral form.
- 26.06 Discuss the licensers and certification requirements of the major classifications of clinical laboratory personnel.

27.0 APPLY QUALITY ASSURANCE PRINCIPLES AND SAFETY PROTOCOLS-- The student will be able to:

- 27.01 Recognize specimen suitability and determine need for rejection/recollection using factors described in clinical protocol.
- 27.02 Describe special procedures for transporting and processing specimens.
- 27.03 Describe clinical laboratory role in providing quality assurance in laboratory testing, reporting, and use and maintenance.
- 27.04 Demonstrate all required calibration procedures.
- 27.05 Demonstrate and record all quality control procedures unacceptable results.
- 27.06 Identify and report problems encountered in daily quality control according to standard operating procedures.
- 27.07 Adhere to current OSHA regulations regarding laboratory hazards.

## LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S):            TITLES(S):

- 28.0 DEMONSTRATE KNOWLEDGE OF URINALYSIS PRINCIPLES AND PROCEDURES -- The student will be able to:
- 28.01 Discuss the renal system as it related to urinalysis.
  - 28.02 Describe renal function tests.
  - 28.03 Describe principles of and perform routine physical and clinical analyses and urine.
  - 28.04 Prepare identify and quantitate urine microscopies.
  - 28.05 Correlate abnormal physical, chemical and microscopic urine results with associated pathological conditions.
- 29.0 DEMONSTRATE KNOWLEDGE OF HEMATOLOGICAL PRINCIPLES AND PROCEDURES -- The student will be able to:
- 29.02 Discuss the principles of and perform routine hematology procedures.
  - 29.03 Differentiate normal from abnormal blood cell morphology and relate the abnormal findings to the commonly referenced hematological disorders.
- 30.0 DEMONSTRATE KNOWLEDGE OF HEMOSTASIS AND RELATED DIAGNOSTIC PRINCIPLES AND PROCEDURES -- The student will be able to:
- 30.02 Describe the principles of and perform routine testing used in the evaluation of the vascular, platelet, coagulation factor and fibrinolytic systems.
- 31.0 DEMONSTRATE KNOWLEDGE OF MICROBIOLOGICAL PRINCIPLES AND PROCEDURES -- The student will be able to:
- 31.06 Demonstrate bacteriologic culture techniques necessary for isolation and identification of organisms.
  - 31.07 Demonstrate and interpret antibiotic susceptibility tests.
  - 31.09 Identify commonly encountered aerobic bacteria through morphological, physical and biochemical properties.
  - 31.10 Discuss the principles of, prepare, and interpret Gram stains.
- 32.0 DEMONSTRATE KNOWLEDGE OF CLINICAL CHEMISTRY PRINCIPLES AND PROCEDURES -- The student will be able to:
- 32.04 Discuss principles of and perform commonly ordered tests related to carbohydrate, protein and lipid metabolism.
  - 32.06 Discuss principles of and perform commonly ordered liver functions tests.
  - 32.08 Discuss principles of and perform commonly ordered enzyme procedures.
  - 32.10 Discuss principles of and perform electrolyte analyses.
  - 32.13 Discuss and perform general electrophoresis techniques.
  - 32.14 Demonstrate knowledge of principles of instrumentation as

## LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

- | NUMBER(S): | TITLES(S):  |
|------------|---|
| 33.0       | <u>DEMONSTRATE KNOWLEDGE OF IMMUNOHEMATOLOGICAL PRINCIPLES AND PROCEDURES</u> -- The student will be able to:<br><br>33.03 Perform antigen and antibody testing to establish ABO group and Rh.<br>33.04 Discuss and perform routine compatibility testing.<br>33.05 Discuss and perform antibody screening and identification of common single antibodies.  |
| 34.0       | <u>DEMONSTRATE KNOWLEDGE OF IMMUNOLOGICAL/SEROLOGICAL PRINCIPLES AND PROCEDURES</u> -<br>The student will be able to:<br><br>34.03 Discuss the principle of and perform the basic agglutination, flocculation and precipitation procedures in serology.   |
| 36.0       | <u>DEMONSTRATE KNOWLEDGE OF THE OPERATION OF COMPUTER SYSTEMS</u> -- The student will be able to:<br><br>36.01 Discuss the role of the computer systems in laboratory data management.<br>36.02 Demonstrate knowledge of common computer terminology.<br>36.03 Demonstrate entry level computer operations for specimen accessioning, data reporting, and quality control recording.<br>36.04 Demonstrate entry level operational skills in the use of computer interfaced analytical instrumentation.  |
| 37.0       | <u>DEMONSTRATE KNOWLEDGE OF SELECTED LABORATORY OPERATIONS</u> -- The student will be able to:<br><br>37.01 Apply principles of quality assurance to correct problems encountered in monitoring daily quality control.<br>37.02 Evaluate laboratory findings and take necessary action to confirm or clarify results according to standard operation procedures.<br>37.03 Demonstrate knowledge of operation and principles of laboratory instruments.  |
| 40.0       | <u>DEMONSTRATE KNOWLEDGE OF ADVANCED MICROBIOLOGICAL PRINCIPLES AND PROCEDURES</u> -<br>The student will be able to:<br><br>40.03 Perform general techniques used in identifying fungi.   |
| 41.0       | <u>DEMONSTRATE KNOWLEDGE OF ADVANCED CLINICAL CHEMISTRY PRINCIPLES AND PROCEDURES</u> -<br>The student will be able to:<br><br>41.02 Perform and calculate results of immunoassay procedures.<br>41.03 Perform, calculate, and recognize associated disease states for selected isoenzyme assays.<br>41.04 Perform, calculate, and recognize associated disease states for blood lipid profiles.<br>41.05 Perform and calculate selected procedures related to endocrine function.<br>41.06 Perform selected assays for therapeutic and toxic substances. |

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S):            TITLES(S):

41.07    Discuss the principles and procedures of blood gas analysis, including arterial specimen collection and clinical significance.

42.0    DEMONSTRATE KNOWLEDGE OF ADVANCED IMMUNOLOGICAL PROCEDURES -- The student will be able to:

42.02    Discuss and interpret antinuclear antibody patterns and their relationship to disease states.

