

## FLORIDA STATE COLLEGE AT JACKSONVILLE

## COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER:	MLT 2230C
COURSE TITLE:	Clinical Microscopy
PREREQUISITE(S):	None
COREQUISITE(S):	None
CREDIT HOURS:	2
CONTACT HOURS/WEEK:	3
CONTACT HOUR BREAKDOWN:	
Lecture/Discussion:	
Laboratory:	
Other _____:	3 (Lecture/laboratory combination)
FACULTY WORKLOAD POINTS:	3
STANDARDIZED CLASS SIZE ALLOCATION:	20
CATALOG COURSE DESCRIPTION:	
<p>This course instructs students in the evaluation and clinical correlations of urinalysis and selected other body fluids. Included in this course is the study of renal function, renal diseases, cerebrospinal fluid, transudates, exudates, seminal fluid, amniotic fluid and gastric analysis.</p>	
SUGGESTED TEXT(S):	Strasinger, S.K. <u>Urinalysis and Body Fluids</u> , Current Edition, F.A. Davis
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	CONTACT HOURS <u>PER TOPIC</u>
I. Introduction	3
A. History	
B. Formation of Urine	
C. Specimen Collection and Handling	
II. Function and Diseases of the Kidney	3
A. Physiology	
B. Pathology	
C. Renal Function Tests	
III. Physical Examination of Urine	3
A. Color	
B. Appearance	
C. Specific Gravity	
IV. Chemical Examination of Urine	6
A. Dipsticks	
B. Back-Up Procedures	
V. Microscopic Examination of Urine	12
A. Methodology	
B. Normal Sediment	
C. Abnormal Sediment	
VI. Urine Screening Tests	3
A. Amino Acid Disorders	
B. Porphyrinurias	
C. Mucopolysaccharide Disorders	
VII. Cerebrospinal Fluid	8
A. Formation and Function	
B. Cell Counts	
C. CSF Chemistry Tests	
D. CSF Microbiology Tests	
E. CSF Serology Tests	
F. Clinical Correlations	

## COURSE TOPICS (CONTINUED)

CONTACT HOURS  
PER TOPIC

## VIII. Body Fluids

6

- A. Seminal Fluid
- B. Synovial Fluid
- C. Serous Fluid
- D. Peritoneal Fluid
- E. Pericardial Fluid
- F. Amniotic Fluid
- G. Sweat

## IX. Gastric Analysis

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- A. Collection
- B. Fluid Analysis
- C. Clinical Correlations

PROGRAM TITLE: Medical Laboratory Technology

COURSE TITLE: Clinical Microscopy

CIP NUMBER: 0317.030900

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

21.0 DEMONSTRATE BASIC KNOWLEDGE OF URINALYSIS, PERFORM CLINICAL LABORATORY "WAIVED TESTS" -- The student will be able to:

- 21.01 Discuss urinalysis techniques related to normal and abnormal components of the urine.
- 21.02 Perform urinalysis techniques related to collection and preservation of specimens.
- 21.03 Discuss urinalysis techniques related to physical properties of urine and related odors, color.
- 21.04 Perform urinalysis techniques related to dipstick urine pH and describe clinical significance.
- 21.05 Discuss urinalysis techniques related to urine specific gravity techniques; calibration and use of urinometer and refractometer.
- 21.06 Perform dipstick or tablet (nonautomated) urinalysis techniques related to performance of chemical tests.
- 21.07 Discuss urinalysis techniques related to microscopic identification of significant elements.
- 21.08 Perform urinalysis techniques related to principles and use of centrifuge.

25.0 DISCUSS ANATOMY AND PHYSIOLOGY OF THE HUMAN BODY AS IT RELATES TO THE FIELD OF MEDICAL LABORATORY TECHNOLOGY -- The student will be able to:

- 25.01 Identify the major body systems and their anatomical features.
- 25.02 Explain the physiology processes in the human system necessary to influence and maintain homeostasis.

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.

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.

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S):            TITLES(S):

- 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.

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.
- 28.06 Describe collection procedures for random and timed urine specimens.

35.0 DEMONSTRATE KNOWLEDGE OF PRINCIPLES AND PROCEDURES OF BODY FLUID ANALYSIS -- The student will be able to:

- 35.01 Define and discuss the differences between transudate and exudates.
- 35.02 Discuss miscellaneous body fluids to include cerebral spinal, seminal and joint fluids.
- 35.03 Demonstrate physical, chemical and microscopic evaluations of common body fluids.

