

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: MLT 2500C

COURSE TITLE: Clinical Immunology

PREREQUISITE(S): None

COREQUISITE(S): None

CREDIT HOURS: 4

CONTACT HOURS/WEEK: 6

CONTACT HOUR BREAKDOWN:

Lecture/Discussion:

Laboratory:

Other _____: 6 (Lecture/laboratory combination)

FACULTY WORKLOAD POINTS: 6

STANDARDIZED CLASS SIZE ALLOCATION: 20

CATALOG COURSE DESCRIPTION:

This course relates the biology of the immune response to the clinical manifestations of selected diseases. Course content includes antigen-antibody reactions, immuno-globulin structures and functions, and lymphocyte interactions. As well, the clinical significance and laboratory procedures related to inflammatory conditions, bacterial and viral pathogens, autoimmune disorders, immunogenetics, and chromosomal disorders are included.

SUGGESTED TEXT(S): Stanley, Essentials of Immunology and Serology, Thompson Learning, Current 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. Immune Response	10
A. Cells of the Immune Response	
B. T & B Lymphocytes	
C. Antibody Production	
D. Humoral and Cellular Response	
E. Types of Immunity	
II. Immunoglobulins	5
A. Types	
B. Functions	
C. Structure	
III. Immune Deficiency Syndromes	10
A. T & B cell Ratios	
B. T cell Ratios	
C. HTLV Clinical Significance	
D. HIV Infections	
IV. Autoimmune Disorders	10
A. Pathology	
B. Classification	
C. Systemic Lupus Erythematosus	
D. Autoimmune Hemolytic Anemias	
E. Rheumatoid Arthritis	
V. Syphilis Pathology & Serology	10
A. Stages of the Disease	
B. Etiology and Epidemiology	
C. Principles of Syphilis Serology	
D. Treponema Testing	
VI. Hepatitis	10
A. Clinical Symptoms	
B. HAV	
C. HBV	
D. Hepatitis Non-A Non-B	
E. Delta Virus	
F. Laboratory Diagnosis of Hepatitis	
VII. Inflammatory States	5
A. Common Etiologies	
B. Pathology	
C. Erythrocyte Sedimentation	
D. C-Reactive Protein	

COURSE TOPICS (CONTINUED)	CONTACT HOURS <u>PER TOPIC</u>
VIII. Streptococcal Infections	5
A. Clinical Significance	
B. Antigenic Substances	
C. Anti-Streptolysin O Titer	
D. Serial Dilutions	
E. Laboratory Procedures	
IX. Cold Agglutinins	5
A. Pathology	
B. Etiology	
C. Laboratory Detection	
X. Infectious Mononucleosis	5
A. Pathology	
B. Etiology	
C. Hematological Abnormalities	
D. Laboratory Detection	
XI. Febrile Series	5
A. Clinical Significance	
B. Laboratory Detection of Febrile Agglutinins	
XII. Immunogenetics	10
A. Structure of DNA	
B. Mitosis and Meiosis	
C. Patterns of Inheritance	
D. Expression of Gene Products	
E. Karyotyping	
F. Clinical Significance of Chromosomal Disorders	
G. Immune Response Genes/Major Histocompatibility Complex	

PROGRAM TITLE: Medical Laboratory Technology

COURSE TITLE: Clinical Immunology

CIP NUMBER: 0317.030900

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

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 of equipment.

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.

34.0 DEMONSTRATE KNOWLEDGE OF IMMUNOLOGICAL/SEROLOGICAL PRINCIPLES AND PROCEDURES -- The student will be able to:

34.01 Discuss the immune system and the normal immune response.

34.02 Discuss physical and chemical properties of immunoglobulins and complement and their reactions in vitro.

34.03 Discuss the principle of and perform the basic agglutination, flocculation and precipitation procedures in serology.

34.04 Discuss principles of complement fixation, immunoelectrophoresis and enzyme immunoassay.

34.05 Discuss the clinical significance of the commonly performed serological tests.



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

Section 1	
COURSE PREFIX AND NUMBER: <u>MLT 2500C</u>	SEMESTER CREDIT HOURS (CC): <u>4</u> CONTACT HOURS (NCC): _____
COURSE TITLE: <u>Immunology</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 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 type="checkbox"/> Listening	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively	

Section 5	
LEARNING OUTCOMES	METHOD OF ASSESSMENT
• Demonstrate knowledge of serological methods	Instructor observation of lab, lab notebook, exams
• Explain and apply concepts of clinical immunology	Written Exams, Laboratory Practical Exams
• Communicate ideas through written assignments	Research paper, Lab notebook
• Demonstrate literacy skills (reading & writing) and organizational skills outside of classroom	Written laboratory journals
• Demonstrate knowledge of Center for Disease Control Universal/Standard Precautions and safety precautions during laboratory procedures	Instructor observation in lab, exams
• Apply critical thinking and analytical reasoning skills to solve problems in lab and on written exams	Lab notebook, exams
• Demonstrate the ability to work as part of a team	Instructor observation of lab procedures
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Section 6	
Name of Person Completing This Form: <u>Rhoda Jost</u>	Date: <u>November 16, 2007</u>