

CLS 451: ADVANCED CLINICAL STUDIES IN IMMUNOLOGY AND IMMUNOHEMATOLOGY

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COURSE DESCRIPTION:

2 cr. Advanced study of immunological principles in diagnostic testing; problems and solutions to compatibility testing for blood components and tissue and organ transplants.

PREREQUISITES:

CLT(NCA) or MLT(ASCP) Certification; admission to the professional program.

LEARNING OUTCOMES

Students will be able to:

Recognizing prior educational and technical skills, the student will

1. Interpret test results as to clinical relevance, correlate to clinical diagnosis and suggest further testing
2. Analyze and maintain effective quality assurance taking proper corrective action when necessary
- 3.
4. Differentiate and resolve technical, instrument and physiologic causes of problems or unexpected test results
5. Assess the economic implications and applications of new techniques, equipment and procedures.

COURSE OBJECTIVES

Objectives are provided with each unit.

FORMAT: Hybrid

ASSIGNMENTS:

Online Quizzes: Online quizzes accompany each assigned chapter. These ***timed*** quizzes must be ***completed independently.***

Online Case Studies: May be done collaboratively (with classmates) or independently. Responses must be posted on D2L by the assigned dates. Case study grades will be based on the accuracy and completeness of responses.

Complex Case Study: Each student will develop a complex case study encompassing

multiple departments in the laboratory (i.e., serology, heme, chem, blood bank, X-ray, etc). The case study should include 4-5 questions as well as answers to the questions.

Required Professional Activities: As a professional, continuing education and membership in the professional organization are essential. It is highly recommended that you become a student member of the American Society for Clinical Laboratory Science (ASCLS).

Attendance at one professional seminar or local meeting is required.

ASCLS/WISCLS Membership:

A student membership in the national and state (and local) professional organizations will be obtained through the SHCP office. CLS students are **expected** to become members. Please see the instructor if you are not already a member.

ASCP Student Membership:

There is no charge for student membership. You will be expected to submit the application for membership. Please see the instructor if you are not already a member.

EXAMS & QUIZZES:

1. Online chapter quizzes
2. Comprehensive Final Exam
3. Case Studies

GRADING SYSTEM:

- A - 90-100%
- B - 80-89%
- C - 70-79%
- D - 60-69%
- F - Less than 60%

DERIVATION OF COURSE GRADES:

- Quizzes = 35%
- Final Exam = 35%
- Seminar Attendance and Case Studies = 30%

REQUIRED TEXTS:

Rittenhouse-Olson K, De Nardin E. *Contemporary Clinical Immunology and Serology*. New York: Pearson; 2013.

REFERENCE TEXT

1. Turgeon. *Immunology and Serology*. 4th ed.
2. Barrett. *Basic Immunology and Its Medical Application*
3. Baumgarten and Richards. CRC. *Section F: Immunology*, Parts 1 & 2.
4. Bellanti. *Immunology: Basic Processes*
5. Cronenberger and Jennette. *Immunology: Basic Concepts, Diseases, and Laboratory Methods*
6. Holboro and Reeves. *Immunology in Medicine*
7. Janeway and Traver. *Immunobiology*.

8. Roitt. *Essential Immunology*.
9. Roitt, Brostoff. & Male. *Immunology*.
10. Rose and Freedman. *Manual of Clinical Immunology*.
11. Sheenan. *Clinical Immunology: Principles and Laboratory Diagnosis*.
12. Tizard. *Immunology: An Introduction*.
13. Verilla. *Introduction to Medical Immunology*

Supplemental texts and journal articles will be used as needed.