Alexandria Technical and Community College

MELT 2607: Immunology

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 1
Lab Hours/Week: 2
OJT Hours/Week: *.*
Prerequisites:
This course requires the following prerequisite
   MELT 1602 - Basic Laboratory Techniques (Number of Years Valid: 3)
Corequisites: None
MnTC Goals: None

Basic concepts of humoral and cell mediated immunity are taught in this course. The role and pathways of complement are discussed and diagrammed. Types of antigen-antibody reactions are studied including agglutination, precipitation, and labeled immunoassays. Lab procedures include the use and interpretation of commercial serology test kits, calculation of serial dilutions and performance of molecular diagnostics. Immune disorders including hypersensitivity, autoimmunity, transplantation, and tumor immunology are studied in detail. The serological diagnosis of infectious diseases such as spirochetes, streptococcal, viral infections, and HIV are discussed. Prerequisite: MELT1602.

B. COURSE EFFECTIVE DATES: 08/26/2002 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Understand the nature of the immune response.
2. Demonstrate knowledge of basic immunologic procedures and molecular techniques.
3. Understand concepts of immune disorders.
4. Explain theories of autoimmunity.
5. Differentiate types of hypersensitivity.
6. Discuss the serological diagnosis of infectious disease.
7. Correlate serological and molecular test results with disease states.
8. Recognize the relationship of the MHC complex to transplant compatibility.

D. LEARNING OUTCOMES (General)

1. The learner will demonstrate knowledge of the nature of the immune system.
2. The learner will demonstrate knowledge of basic immunologic procedures and molecular techniques.
3. The learner will demonstrate knowledge of immune disorders.
4. The learner will demonstrate knowledge of serological diagnosis of infectious diseases.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted