COURSE TITLE & NUMBER: Immunology: MLT 1445
CREDITS: 3 (2 Lec / 1 Lab)
PREREQUISITES: None

CATALOG DESCRIPTION: Immunology covers the basic theory of cellular and humoral immunity with emphasis on antigen – antibody reactions in specific disease. Diagnostic principles and procedures involving the various laboratory techniques with disease correlations are emphasized.

OUTLINE OF MAJOR CONTENT AREAS:
1. Fundamental Concepts
   A. Natural (Innate) Immunity
   B. Antigens
   C. Antibody Structure and Functions
   D. Humoral Immunity
   E. Cellular Immunity
   F. Complement
2. Immunologic Procedures and Techniques
   A. Precipitation
   B. Agglutination
   C. Immunodiffusion
   D. Labeled Immunoassays
   E. Instrumentation
   F. Molecular techniques
3. Immune Disorders
   A. Hypersensitivity
   B. Autoimmunity
   C. Transplantation
   D. Immunodeficiency
   E. Infectious Diseases

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will identify the components of the human immune system as it relates to innate and adaptive immunity, cellular and humoral immune responses, and active and passive immunity.
2. Students will describe T-cell functions in not only the cellular immune response, but also the roles T-cells play in overall immune response.
3. Students will outline basic B-cell functions, the roles B-cells play in the humoral immune response, and their interaction with T-cells and the cellular response.
4. Students will describe how dysfunctions in the immune response relate to autoimmunity, tumor response, self-tolerance and other disease states.
5. Students will describe the mechanisms involved in hypersensitivity reactions, how various immunodeficiencies are caused and compensation mechanisms in place by the immune system.

MNTC GOALS AND COMPETENCIES MET:
N/A

HCC COMPETENCIES MET:
Working Productively and Cooperatively
Communicating Clearly and Effectively

STUDENT CONTRIBUTIONS:
The student is expected to:
1. demonstrate and use safe laboratory techniques
2. attend lectures and labs
3. participate in class activities and discussions

STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

Curriculum Committee Approval Date: April 2, 2019

AASC APPROVAL DATE: April 24, 2019
REVIEW DATE: April 2024