Bemidji State University

BIOL 3580: Immunology

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: *.*
Lab Hours/Week: *.*
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

The study of disease fighting mechanisms of the innate and adaptive immune systems. Prerequisites: BIOL 2360 and one year of chemistry.

B. COURSE EFFECTIVE DATES: 08/27/2018 - Present
C. OUTLINE OF MAJOR CONTENT AREAS
   1. AIDA
   2. Activation & Migration
   3. Antigen/Antibody Applications
   4. Antigens & Antibodies
   5. B-Cell Development
   6. Blood Smears, WBC Identification
   7. Cancer & Immunology
   9. Complement Activation
  10. Conjugates
  11. Cytokines
  12. Cytotoxicity
  13. ELISA Plates
  14. Hypersensitivity
  15. IL-2 Expression
  16. Immunity & Infections
  17. Immunoelectrophoresis
  18. Immunoglobulin Genes
  19. Innate Immunity
  20. MHC
  21. Neutrophil Activation
  22. T-Cell Development
  23. T-Cell Receptors
  24. T-Cell Rosettes
  25. Transplant Immunology
  26. Vaccines
  27. Western Blotting

D. LEARNING OUTCOMES (General)
   1. understand tissues/organs involved with the immune response.
   2. identify points of intersection between the innate and adaptive immune systems.
   3. gain an overall understanding of the cells of the innate and adaptive immune systems and their
      functions in the immune response.
   4. learn mechanisms of diversity generation in B and T cells.
   5. understand molecules and cellular signaling events that contribute to the immune response.
   6. learn disorders of the immune system, pathogen evasion mechanisms, and techniques used to
      manipulate immune responses.
   7. be exposed to several important lab techniques important for immunology research and clinical lab.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus
G. SPECIAL INFORMATION

None noted