Bemidji State University

BIOL 3710: Microbiology

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: *.*
Lab Hours/Week: *.*
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

Structure, classification, and physiology of bacteria and related microorganisms. Lecture and laboratory. Prerequisites or Corequisites: One year introductory biology and one year introductory chemistry or consent of instructor.

B. COURSE EFFECTIVE DATES: 08/26/1997 - Present
C. OUTLINE OF MAJOR CONTENT AREAS
   1. Antimicrobial Chemotherapy
   2. Aseptic Technique
   3. Bacterial & Viral Identification
   4. Bacteriophages
   5. Clinical Microbiology, Epidemiology
   6. Clinical Microbiology
   7. Control of Microbial Growth
   8. Food Microbiology
   9. Historical Perspectives
  10. Human Diseases Caused by Bacteria & Viruses
  11. Human Diseases Caused by Fungi & Protozoa
  12. Industrial Microbiology
  13. Laboratory Safety and Epidemiology
  14. Measuring Microbes
  15. Microbes & Human History
  16. Microbial Ecology
  17. Microbial Evolution
  18. Microbial Genetics
  19. Microbial Growth Patterns
  20. Microbial Growth: Biosyntheise
  21. Microbial Growth: Cell Division
  22. Microbial Growth: Macromolecules
  23. Microbial Growth: Making of a Cell
  24. Microbial Growth: Nutrition & Energy
  25. Microbial Infections
  26. Microbial Interactions: Symbiosis, Predation, & Antibiosis
  27. Microbial Physiology
  28. Microbial Texonomy
  29. Microscopy
  30. Prokaryotic & Eukaryotic Cell Structures & Staining Methods
  31. Viruses of Eukaryotes
  32. Viruses

D. LEARNING OUTCOMES (General)
   1. identify the major characteristics that define the different taxa of microorganisms.
   2. understand the structure and function, genetics, biochemistry of microorganisms.
   3. practice basic principles of microbiological lab methods, including sterile techniques and basic microscopy.
   4. compare and contrast diverse-causing ability of various microorganisms.
   5. analyze the metabolic diversity and how it contributes to the ecology of microbes.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted