

# Bemidji State University

## BIOL 3755: Medical Microbiology

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Introduction to pathogenic microorganisms, the interaction of pathogens and the immune system, transmission of infections, and methods of controlling infections. The laboratory portion of the class covers aseptic technique, pure culture techniques, microscopy, and diagnostic microbiology. This course is intended primarily for Nursing and Clinical Laboratory Science majors. Prerequisites: [BIOL 1211 or BIOL 1110] and [CHEM 1110 or CHEM 1111 or CHEM 2211].

**B. COURSE EFFECTIVE DATES:** 05/18/2001 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. The Microbial World
2. The Beneficial Aspects of Microbes: The Other Side of the Coin
3. Bacteria
4. Bacterial Genetics
5. Viruses
6. Concepts of Microbial Disease
7. Epidemiology and Cycle of Microbial Disease
8. Bacterial Diseases
9. Viral Diseases
10. Protozoan Diseases/Fungal Diseases
11. The Immune Response
12. Control of Microbial Diseases
13. Partnerships in the Control of Microbial Diseases
14. Current Challenges: Biological Weapons, Current Plagues

### D. LEARNING OUTCOMES (General)

1. identify and explain the major cellular, metabolic, and genetic characteristics of microscopic organisms
2. compare and contrast the major microbial pathogens in humans
3. examine microbial mechanisms, cycles, stages, and transmission of disease
4. evaluate methods of disease prevention, including the immune system, antimicrobial chemotherapy, vaccination, and sanitation
5. develop basic clinical lab skills, including basic microscopy, staining and identification of microbial cells, and sterile technique.
6. practice clinical standard operating procedures, including lab safety, preparation and handling of specimens and the importance of standards and controls.

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

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted