

BIOL 251

General Microbiology

Course Description & Objectives

Course Description: (TMCC 2007-2008 Catalog)

BIOL 251 • GENERAL MICROBIOLOGY (4.0 credits)

Prerequisite: BIOL 190. A general course emphasizing distribution, morphology and physiology of microorganisms in addition to skills in aseptic procedures, isolation and identification. This course also includes sophomore level material covering immunology, virology, epidemiology and DNA technology. Recommended for all allied health students. Three hours lecture and four hours lab per week.

Course Objectives:

Upon completion of this course students should be able to:

1. Explain relationships and apply appropriate terminology relating to the structure, metabolism, genetics, and ecology of prokaryotic microorganisms, eukaryotic microorganisms, and viruses.
2. Explain interactions between opportunistic and pathogenic microorganisms and susceptible hosts in contacts that result in infection and/or disease and apply these interactions to disease symptoms.
3. Explain nonspecific body defenses and the immune responses and apply this understanding to the infectious disease process as well as the prevention and control of infectious diseases.
4. Explain principles of physical and chemical methods used in the control of microorganisms and apply this understanding to the prevention and control of infectious diseases.
5. Demonstrate appropriate laboratory skills and techniques related to the isolation, staining, identification, assessment of metabolism, and control of microorganisms.
6. Develop the ability to work both independently and with others in the laboratory and draw appropriate conclusions from laboratory results.
7. Develop an information base for making personal health decisions in regard to infectious diseases.