Sinclair Community College
444 E. Third St.
Dayton, OH 45402

Master Syllabus

BIO 2205 - Microbiology

Division: Science, Mathematics and Engineering

Department: Biology

Credit Hour Total: 4.0 **Lecture Hrs:** 3.0 **Lab Hrs:** 3.0

Prerequisite(s): OR BIO 1111 OR BIO 1141 OR BIO 1121OR BIO 1171 BIO 1107

Other Prerequisite(s): OR Other LPN Diploma

Date Revised: October 2013

Course Description:

Morphology and physiology of microorganisms and selected human parasites, mechanisms of disease production, host responses, spread of infectious diseases. Three classroom, three lab hours per week.

General Education Outcomes:

- Oral Communication
- Written Communication
- Critical Thinking/Problem Solving
- Values/Citizenship/Community
- Computer Literacy
- Information Literacy

Course Outcomes:

Microbial Competencies
Properly use scientific names of organisms; discuss the morphological, staining, and biochemical characteristic of microbes; discuss the pathogenesis of infectious diseases; discuss host responses to infectious diseases

Assessment Method: Locally developed exams
Performance Criteria:

60% of possible points accumulated on exams.

Laboratory Competencies
Properly use microscopes; perform microbiological techniques related to isolation, cultivaton, and identification of microbes; utilize clinical laboratory methods for diagnostic purposes.

Assessment Method: Locally developed exams
Performance Criteria:

60% of possible points accumulated on exams.

Infectious Diseases
Conduct library and internet research relative to the case study on infectious disease given; write, in proper English, a case study report; present the case study orally, using appropriate oral communication skills, in the lecture portion of the course.

Assessment Method: Performance appraisals
Performance Criteria:

60% of possible points accumulated on exams.

Outline:

Introduction to the microbes, microbial classification and nomencaltureMethods of Studying Microorganisms (e.g. Tools of the Laboratory)Structure and Function of Prokaryotic and Eukaryotic CellsMicrobial Nutrition and GrowthMicrobial MetabolismMicrobial Genetics and Genetic EngineeringPhysical and Chemical Control of MicrobesInfection and DiseaseHost Defense Mechanisms