



Syllabus

BIO 230 - Microbiology

General Information

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Department Science and Technology

Course Prefix BIO

Course Number 230

Course Title Microbiology

Course Information

Catalog Description The course is designed to give the student a broad understanding of microbiology covering areas of microbial structure and function, growth, metabolism, genetics, control of microorganisms, principles of immunology, diseases of man and selected aspects of applied microbiology. The laboratory will give the student an appreciation of the problems and methods involved with culturing and identification of microorganisms.

Credit Hours 4

Lecture Contact Hours 3

Lab Contact Hours 3

Other Contact Hours 0

Grading Scheme Letter

Prerequisites

BIO 121 and BIO 122 or BIO 171 and BIO 172

Co-requisites

None

First Year Experience/Capstone Designation

This course **DOES NOT** satisfy the outcomes applicable for status as a FYE or Capstone.

SUNY General Education

This course is designated as satisfying a requirement in the following SUNY Gen Ed category

None

FLCC Values

Institutional Learning Outcomes Addressed by the Course

Vitality and Perseverance

Course Learning Outcomes

Course Learning Outcomes

1. Analyze the fundamental requirements of microbial life
2. Relate the concepts of growth and metabolism to microbial control and pathogenesis.
3. Implement the use of microbiological lab techniques for identification and study of microbes.
4. Evaluate microbiological concepts using current literature and experimental design.

Outline of Topics Covered

History of Microbiology
Tools of the Microbiology Laboratory
Basic Anatomy of Microbes
Microbial Growth and Nutrition
Microbial Metabolism
Controlling Microbial Growth
Microbial Genetics and DNA technology
Normal Microbial Flora
Microbial Pathogenesis and Virulence Factors
Immune System- Nonspecific and Specific Defenses
Vaccines
Antimicrobial Drugs & Antibiotic Resistance
Cocci of Importance
Gram negative bacilli of Importance
Water and Food Microbiology
Gram Positive Bacilli of Medical Importance
HIV and Viral Diseases of Importance