

BIO 208 - MICROBIOLOGY

Course Description

This course reviews the two types of cells (prokaryotic and eukaryotic). Methods of microbial pathogenicity are addressed. The field of epidemiology is briefly explored. Microbial anatomy, physiology, and diversity are introduced. The course also explores how bacteria grow and how that growth is controlled. Metabolism, diversity, and culturing of growth are also discussed. Microbiological disease pathology and the role of microbes in food production are also discussed. The course goes into bacterial genetics and the role it plays in our lives. Laboratory work culminates with using all the skills learned in the lab to identify the contents of an unknown bacterial solution. Group 1 lab course. Group 1 course.

Credit Hours

4

Contact Hours

6

Lecture Hours

3

Required Prerequisites

Completion of any 100-level BIO course.

Corequisites

BIO 208L

Recommended Prerequisites or Skills Competencies

ENG 111, MTH 111

General Education Outcomes supported by this course

Quantitative Reasoning

Course Learning Outcomes

Knowledge:

- Describe the following core concepts: Evolution in organisms, Structure and function, Information flow-exchange and storage, Pathways and transformation of energy and matter, Living systems.

Application:

- Apply the process of science in relation to the interaction of microorganisms, plants, animals and the environment.

Integration:

- Use principles of several natural science disciplines to integrate basic cell physiological processes and mathematical modeling related to growth and decay.

Human Dimension:

- Explain the importance of microorganisms in both human health and disease.
- Explain the importance of microorganisms in ecological health and disease.
- Collaborate with peers and the instructor to help each other learn.

Caring - Civic Learning:

- Develop a curiosity about the natural world and their responsibility in using sustainable resources.

Learning How to Learn:

- Research academic and popular resources to make reasoned conclusions.
- Interpret articles from relevant scientific literature.