

BIOL 200 Microbiology**Credit Hours:** 3**Scheduled hours per week**

Lecture: 3

Lab: 0

Other: 0

Catalog Course Description: Designed for students requiring a basic medical microbiology course to meet program requirements or as a science elective. Topics include types of microorganisms, microbial growth and metabolism, control of microbial populations, microbial resistance, and principles of infection and immunity.

Pre-requisites: BIOL 107 and 108; or BIOL 101/103 and 102/104

Co-requisites: None

Course Learning Outcomes:

- Recognize important historical events in microbiology.
- Explain the germ theory of disease.
- Compare the basic cell structure of prokaryotic and eukaryotic cells.
- Explain basic concepts of bacterial nutrition and growth.
- Explain the classification schemes applied to prokaryotic and eukaryotic organisms.
- Describe methods of control of bacterial populations and infections.
- Describe the normal microbial flora of the body.
- Apply biological relationships to specific states of health and disease.
- Describe nonspecific host defense mechanisms.
- Explain basic principles of immunology.
- Describe microbial disease processes involving the skin and eye.
- Describe microbial disease processes involving the central nervous system.
- Describe microbial disease processes involving the cardiovascular and lymphatic systems.
- Describe microbial disease processes involving the respiratory system.
- Describe microbial disease processes involving the digestive system.
- Describe microbial disease processes involving the urinary system and genital system.
- Give oral presentations to the class.

Topics to be studied:

- Cell Structure and function
- Metabolism
- Microbial growth
- Prokaryotes
- Eukaryotic Microbes
- Viruses
- Disease and immunity
- Pathogenicity
- Antimicrobial drugs

Relationship of Course to Program or Discipline Learning Outcomes:

Relationship of Course to Science Learning Outcomes:	
Students will learn the process and reasoning behind the Scientific Method and be able to conduct experiments that meet the requirements of the model.	
Students exhibit the basic safety-related rules and regulations of working in the lab.	
Students be able to recount the basic safety tenants associated with a specific scientific discipline.	
Students will become proficient at Science Writing.	
Students will recognize and identify the applications of their specific discipline in the 'real world.'	X
Students will accurately recount important milestones in the history of scientific inquiry in their discipline.	
5/3/2016	

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course:

None

Additional information:

None

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