

JAMESTOWN COMMUNITY COLLEGE
State University of New York

MASTER COURSE SYLLABUS

Course Title: Microbiology

Course Abbreviation and Number: BIO 2531

Credit Hours: 3

Course Type: Lecture

Course Description: Students will identify the microorganisms of importance to medicine, industry, and the natural world. Topics include microbial taxonomy; cultivation; metabolism; genetics; physical, chemical, and chemotherapeutic agents of microbial control; host defense mechanisms and immunology; biology; epidemiology; and selected bacterial, fungal, protozoan, and viral pathogens of medical significance.

Prerequisite: ENG 1510 and BIO 1550 or BIO 1570 or BIO 1575 or BIO 2510.

General Education Requirements Met

SUNY

Natural Sciences

JCC

Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Demonstrate an understanding of the application of scientific data, concepts, and models in one of the natural sciences as it applies to microbiology lecture. [SUNY Gen Ed – Natural Sciences]
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Topics Covered:

- Introduction: The World of Microbiology
 - Prokaryotic Profiles: Bacteria & Archaea
 - Eukaryotic Cells & Microbes
 - An Introduction to the Viruses
 - Microbial Nutrition, Growth & Ecology
 - Microbial Metabolism
 - Microbial Genetics
 - Physical & Chemical Control of Microbes
 - Drugs, Microbes, & Host – The Elements of Chemotherapy
 - Microbe – Human Interactions: Infections & Disease
 - The Nature of Host Defenses
 - Acquisition of Specific Immunity & Its Applications
 - Disorders in Immunity
 - The Cocci of Medical Importance
 - The Bacilli of Medical Importance
 - Other Bacterial Agents of Disease
 - Fungal & Other Parasitic Diseases of Humans (selected)
 - Conclusions
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Information for Students

- Expectations of Students
 - Civility Statement (<http://www.sunyjcc.edu/current-students/classroom-civility>)
 - Student Responsibility Statement (<http://www.sunyjcc.edu/academics/student-responsibility>)
 - Academic Integrity (<http://www.sunyjcc.edu/faculty-staff/academic-integrity>)
- Accessibility/Special Services
 - Any student who requires accommodations to complete the requirements and expectations of this course because of a disability should make their needs known to the Coordinator of Accessibility Services, 716.338.1251.
- Emergency Closing Procedures (<http://www.sunyjcc.edu/student-life/campus-safety/jcc-alert>)
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.
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Effective Date: Fall 2019