

**JAMESTOWN COMMUNITY COLLEGE**  
**State University of New York**

---

**INSTITUTIONAL 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 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]
- 

**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
- 

**Information for Students**

- Expectations of Students
  - [Civility Statement](#)
  - [Student Responsibility Statement](#)
  - [Academic Integrity Statement](#)
- [Accessibility Services](#)  
Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)
- 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
-------	--------	-----	--------	-----	--------	-----	-----

- 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.
- 

**Effective Date:** Fall 2021