

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

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**INSTITUTIONAL COURSE SYLLABUS**

**Course Title:** Microbiology - LAB

**Course Abbreviation and Number:** BIO 2532

**Credit Hours:** 1 credit hour.

**Course Type:** Lab

**Course Description:** Students will become skilled in appropriate techniques for handling bacterial cultures, identifying specimens and implementing and evaluating various standard diagnostic procedures.

**Prerequisite:** ENG 1510 and BIO 1570 or BIO 2510.

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**General Education Requirements Met**

**SUNY**

Natural Sciences

**JCC**

Scientific Reasoning

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**Student Learning Outcomes:**

Students who demonstrate understanding can:

1. Demonstrate an understanding of the methods scientists use to explore natural phenomena, including observation, hypotheses development, measurement and data collection, experimentation, evaluation of evidence, and employment of data analysis or mathematical modeling. [SUNY Gen Ed – Natural Sciences]
  2. Application of scientific data, concepts, and models in one of the natural sciences. [SUNY Gen Ed – Natural Sciences]
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**Topics Covered:**

- Introduction; Lab Safety; Microscopy
  - Microscopy with Oil Immersion; Means of Motility; Aseptic Techniques
  - Cultivation of Microorganisms
  - Staining Techniques (Simple and Differential)
  - Enumeration of Microorganisms
  - Bacteriological Examination of Water and Foods
  - Environmental Influences & Control of Microbial Growth
  - Parasitology
  - Environmental Effects- Oxygen and UV Light
  - Physical and Chemical Control (Handwashing, Disinfectants, antiseptics)
  - Control of Microbial Growth (Antibiotics; Phagetyping)
  - Metabolic Activities of Microorganisms and Identification of an Unknown Microbe
  - Medical Microbiology/Serology
  - Lab Exam and Clean-up
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**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
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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 2023