

JAMESTOWN COMMUNITY COLLEGE
State University of New York

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.

General Education Requirements Met

SUNY

Natural Sciences

JCC

Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Develop Laboratory Techniques for Microbial Identification: gain hands-on experience with laboratory techniques such as microscopy, culturing, and biochemical tests to identify and differentiate microorganisms in clinical and environmental samples.
 2. Demonstrate proficiency in maintaining a sterile work environment, properly handling microbial cultures, and using appropriate safety protocols to prevent contamination and ensure safe laboratory practices.
 3. 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 SLO 1]
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Topics Covered:

- Overview of the Microscope
 - Microscope Techniques
 - Introduction to Aseptic Technique and Media
 - Staining
 - Enumeration
 - Environmental Effects on Microorganisms
 - Environmental Testing
 - Evaluation of Antibiotics, Antiseptics, and Disinfectants
 - PCR and Gel Electrophoresis
 - ELISA Simulation
 - Medical Microbiology
 - Microorganism Unknowns
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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: Spring 2026