# 1/5/2023

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 2 February 2023

Term and Year of Implementation: Spring 2023

**Course Title:** General Microbiology Lab

**BRCC Course Rubric:** BIOL 2101

**Previous Course Rubric**:

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 0-3-1

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 0-45-45

**Louisiana Common Course Number:** CBIO 2101

**CIP Code:** 26.0502

**Course Description:** Develops basic laboratory skills needed to study microorganisms and is designed to supplement General Microbiology (BIOL 2103) content for non-science majors. Credit is not given for both BIOL 2101 and BIOL 2121. This course requires a lab fee.

**Prerequisites:** BIOL 1033 (or BIOL 120) with grade of “C” or better or ACT composite score of 22

**Co-requisites:** None

**Suggested Enrollment Cap:** 24

**Learning Outcomes.** *Upon successful completion of this course, the students will be able to:*

1. Demonstrate basic concepts of aseptic technique, lab safety, and microscopy required to study microorganisms.

2. Identify microorganisms using basic microbiology skills.

3. Construct comprehensive lab reports from data obtained through lab experiments.

**Assessment Measures.** Assessment of all learning outcomes will be measured using the following methods:

1. Administration of exams throughout the semester.

2. Instructor-designed assignments including, but not limited to, lab reports on experiments performed, identification of unknown organisms project, written and oral assignments, projects, homework, and quizzes. All assignments will be graded using an instructor-designed rubric.

**Information to be included on the Instructor’s Course Syllabi:**

* ***Disability Statement*:** Baton Rouge Community College seeks to meet the needs of its students in many ways. See the Office of Disability Services to receive suggestions for disability statements that should be included in each syllabus.
* ***Grading:*** The College grading policy should be included in the course syllabus. Any special practices should also go here. This should include the instructor’s and/or the department’s policy for make-up work. For example in a speech course, “Speeches not given on due date will receive no grade higher than a sixty” or “Make-up work will not be accepted after the last day of class”.
* ***Attendance Policy*:** Include the overall attendance policy of the college. Instructors may want to add additional information in individual syllabi to meet the needs of their courses.
* ***General Policies*:** Instructors’ policy on the use of things such as beepers and cell phones and/or hand held programmable calculators should be covered in this section.
* ***Cheating and Plagiarism*:** This must be included in all syllabi and should include the penalties for incidents in a given class. Students should have a clear idea of what constitutes cheating in a given course.
* ***Safety Concerns:*** In some courses, this may be a major issue. For example, “No student will be allowed in the lab without safety glasses”. General statements such as, “Items that may be harmful to one’s self or others should not be brought to class”.
* ***Library/ Learning Resources:*** Since the development of the total person is part of our mission, assignments in the library and/or the Learning Resources Center should be included to assist students in enhancing skills and in using resources. Students should be encouraged to use the library for reading enjoyment as part of lifelong learning.

**Expanded Course Outline:**

I. Essential Microbiology Laboratory Skills

A. Laboratory Safety

B. Microorganisms, Aseptic Technique & Cultures

C. Microscopy: Care, Parts & Focusing

D. Identification of Protozoa, Algae, Fungi & Helminths

E. Pure culture, Bacteria Morphology & Staining Techniques

F. Environmental Influences on Microbial Growth

G. Microbial Metabolism: Biochemical Tests

H. Enumeration, Dilution, & Plate Counts

II. Control of Microbial Growth

A. Antibiotic Sensitivity Testing: Kirby-Bauer Disc Diffusion Test

B. Evaluation of Disinfectants

III. Interactions Between the Microbe and the Host

A. Handwashing and Normal Flora

IV. Microorganisms and Human Disease

A. Unknown Identification

V. Applied Microbiology

A. Microbial count of food: Food Safety