# 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

**BRCC Course Rubric:** BIOL 2103

**Previous Course Rubric**:

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

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

**Louisiana Common Course Number:** CBIO 2103

**CIP Code:** 26.0502

**Course Description:** Introduces microorganisms, fungi, algae, protozoans and multicellular parasites; their form and function and their role in health and disease, ecology and industry. Not intended for science majors. Note that credit is not awarded for both BIOL 2103 and BIOL 2123.

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

**Co-requisites:** None

**Suggested Enrollment Cap:** 35

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

1. Demonstrate knowledge of general microbiology concepts including classification, form and function, growth and reproduction and genetics

2. Evaluate the importance of microbes to health and disease, ecology and industry.

3. Interpret biological images, scientific graphs and models used to illustrate general microbiology concepts.

**General Education Learning Outcome(s):** This course supports the development of competency in the following area(s). Students will:

Engage the scientific method of inquiry, analysis, and problem solving. (General Education Competency in Scientific Reasoning)

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

1. Administration of unit exams during the semester and a comprehensive final exam at the end of the semester.

2. Instructor-designed assignments including, but not limited to, special 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. Fundamentals of Microbiology

A. The Microbial World

B. Chemical Principles

C. Microscopy

D. Functional Anatomy of Prokaryotic and Eukaryotic cells

E. Microbial Metabolism

F. Microbial Growth

G. Control of Microbial Growth

H. Microbial Genetics and Biotechnology

II. Survey of the Microbial World

A. Classification of Microorganisms

B. Bacteria

C. Fungi, Algae, Protozoa and Multicellular parasites

D. Viruses

III. Interactions Between the Microbe and the Host

A. Principles of Disease and Epidemiology

B. Microbial Mechanisms of Pathogenicity

C. Nonspecific Defense of the Host

D. Specific Defense of the Host

IV. Microorganisms and Human Disease

A. Microbial Diseases of the Skin and Eye

B. Microbial Diseases of the Nervous system

C. Microbial Diseases of the Cardiovascular and Lymphatic Systems

D. Microbial Diseases of the Respiratory System

E. Microbial Diseases of the Digestive System

F. Microbial Diseases of the Urinary and Reproductive Systems