# 11/26/2022

# 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:** Ecology

**BRCC Course Rubric:** RNRE 2103

**Previous Course Rubric**: RNRE 210

**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:**

**CIP Code:** 26.1307

**Course Description:** Surveys the diversity, structure, interactions, and function of biological systems from the level of the organism to the biosphere and introduces the natural history and consequences of human activities on the major biomes. Focuses on biotic processes such as population ecology and dynamics, evolution, species interactions, and composition across landscapes.

**Prerequisites:**  None

**Co-requisites:** None

**Suggested Enrollment Cap:** 30

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

1. Discuss the ecology of natural resources including the diversity, structure, and function of biological systems from the level of the organism to the level of the biosphere.

2. Apply the general ecological concepts to his/her own life, to the natural world, and to society.

3. Interpret scientific images, graphs, and models used to illustrate concepts in ecology.

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

Apply scientific concepts to explain the natural world. (General Education Competency: 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, written and oral assignments, problem-solving 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. Natural History and Evolution

A. Introduction to Ecology

B. Terrestrial Habitats

C. Aquatic Habitats

D. Population Genetics

E. Natural Selection

II. Environmental Adaptations

A. Temperature Relations

B. Water Relations

C. Energy and Nutrient Acquisition

III. Population Ecology

A. Population Structures

B. Population Dynamics

C. Life Tables

D. Life History Strategies

IV. Ecological Interactions

A. Mutualism

B. Competition

C. Predation

D. Parasitism and Disease

V. Ecology of Communities

A. Species Abundance, Diversity, and Richness

B. Food Webs

C. Primary Productivity

D. Nutrient Cycles

E. Patterns of Plant Succession

VI. Large-Scale and Long-term Ecology

A. Landscape Ecology

B. Geographic Ecology

C. Island Biogeography

D. Global Ecology

E. Global Climate Change