CLOUD COUNTY COMMUNITY COLLEGE

Our Mission: Cloud County Community College prepares students to lead successful lives and enhances the vitality of our communities.

**GENERAL INFORMATION**

**Course Number and Title:** SC101 – General Biology

**Term and Year:**Academic Year 2022-2023

**Credit Hours**: 4

**Course Description**: Engages the non-biology major in explorations of the unity and diversity of organisms with particular attention devoted to the commonalities. Students are involved in various investigative simulations and extended laboratory activities. Study begins with the chemical foundation of life and culminates with interactions between organisms and environment. This course combines three hours’ lecture and one and one-half hours of laboratory time.

**Prerequisites**: None

****Division:**** Mathematics, Science and Technical Programs
**Department:** Science

**STUDENT LEARNING OUTCOMES AND ASSESSMENT**

**Course Learning Outcomes**

For this course, students are expected to demonstrate the skills associated with the course learning goals as described by the student learning outcomes below:

1.    Demonstrate an understanding of the nature of science

a.    Scientific processes

b.    Scientific methods

2.    Demonstrate an understanding of the levels of organization and emergent properties of life

a.    Chemical

b.    Cellular

c.     Organ/organ system

d.    Organismal

e.    Ecological

3.    Demonstrate an understanding of bioenergetics

a.    Enzyme activity

b.    Metabolism

c.     Cellular respiration/photosynthesis

4.    Demonstrate an understanding of the importance of reproduction in maintaining the continuity of life

a.    Mitosis

b.    Meiosis

c.     Differentiation/development

d.    Diversity of reproductive strategies

5.    Demonstrate an understanding of applying principles of genetics to unity and diversity of life

a.    Classical genetics

b.    Molecular genetics

6.    Demonstrate an understanding of discussing evolution as the mechanism of change in biology

a.    Natural selection

b.    Speciation

c.     Diversity of life/classification

7.    Demonstrate an understanding of the principles of ecology

a.    Ecosystem organization

b.    Ecological interactions

c.     Environmental issues

8.    Laboratory topics/skills

a.    Microscopy

b.    Quantitative measurement skills incorporating the metric system

c.     Analytical and statistical skills including presenting and/or interpreting graphs and tables

d.    Experience with living organisms in the laboratory and/or field setting

e.    Identification and proper use of laboratory equipment

The learning outcomes detailed in this syllabus meet or exceed the learning outcomes specified by the Kansas Core Outcomes Project for this course as sanctioned by the Kansas Board of Regents to ensure transfer between Kansas colleges and universities. Systemwide Transfer (SWT) Code: BIO1010

In class, students are assessed on the mastery of these outcomes using the learning management system. Student names will not be used when reporting results. Outcomes-based assessment is used to improve the instructional planning, design, and quality of student learning throughout the college

**General Education Outcomes**

For this course, students are expected to demonstrate the skills associated with the college wide learning goals as described by the general education outcomes below:

GESc1: Apply the scientific process to evaluate current issues and circumstances

GESc2: Demonstrate scientific literacy and knowledge about the study of matter, life and the universe.

GESc3: Critically analyze events through a scientific lens.

GESc4: Demonstrate quantitative reasoning and problem-solving.

Artifacts of student work are collected from general education courses and reviewed by a faculty committee to assess general education outcomes. Artifacts may also be reviewed by a professional outside the college. Student names will not be used when reviewing artifacts nor reporting results. Outcomes-based assessment is used to improve the instructional planning, design, and quality of student learning throughout the college.

**Institutional Learning Outcomes**

For this course, students are expected to demonstrate the skills associated with the college wide learning outcomes as described below.

*Sustainability*

ILO\_S1: Students will understand the importance and implementation of sustainable practices that meet the needs of today without compromising the needs of the future.

In class, students are assessed on the mastery of these outcomes. Student names will not be used when reporting results. Outcomes-based assessment of the institutional learning outcomes is used to ensure we are meeting the mission of the college, following the guiding values and enhance instructional planning, design, and quality of student learning throughout the college.