

LABETTE COMMUNITY COLLEGE BRIEF SYLLABUS

SPECIAL NOTE:

This brief syllabus is not intended to be a legal contract. A full syllabus will be distributed to students at the first class session.

TEXT AND SUPPLEMENTARY MATERIALS USED IN THE COURSE (if any):

Please check with the LCC bookstore, <http://www.labette.edu/bookstore>, for the required texts for this class.

<u>COURSE NUMBER:</u>	BIOL 122
<u>COURSE TITLE:</u>	ENVIRONMENTAL LIFE SCIENCE
<u>SEMESTER CREDIT HOUR:</u>	5
<u>DEPARTMENT:</u>	Biological Science
<u>DIVISION:</u>	General Education
<u>PLACEMENT TEST LEVEL:</u>	General Education Course Placement
<u>PREREQUISITE:</u>	None
<u>REVISION DATE:</u>	August 18, 2016

COURSE DESCRIPTION: This general education course provides an overview of life science which includes general biology and general ecology topics. This class is directed toward elementary education majors and to provide these majors with a comprehensive exposure to biology, as well as experiments and investigations that can be safely carried out in the elementary classroom. This course will not fulfill any requirements for biology majors; it will fulfill life science requirement for non-biology majors only. This 5 hour course includes 2 hours of lab and requires students to document their lab work and experiences through the use of a paper file system or the computer.

COURSE OUTCOMES AND COMPETENCIES:

Students who successfully complete this course will be able to:

1. **Illustrate the use of the scientific method of inquiry and analysis to better understand nature, our impact on it and how applied science, technology and public policies may foster sustainable global development**

- Demonstrate the ability to utilize technology to investigate science problems.
- Demonstrate the use of tools to make observations and conduct scientific investigations.
- Generate alternative methods of investigation and/or further questions for inquiry.
- Describe characteristics of environmental problems and their relationships to the sustainability of life.
- Evaluate the work of others to determine if evidence scientifically supports or contradicts the results, identifying faulty reasoning or conclusions that go beyond evidence and/or are not supported by data.

2. Discuss basic organization of life, structure and function as it relates to living systems, reproduction and heredity, regulation and behavior, populations and ecosystems, and diversity and adaptations of organisms.

- Discuss basic organization of life.
- Understand the chemistry involved with living organisms and their environment.
- Describe the relationship between all living organisms, and their place in the ecosystem.
- Demonstrate applications of biotechnology to the sustainability to the global community.

3. Identify the major concepts that define biology and develop an understanding of biological concepts through direct experience with living things, their life cycles, and their habitats.

- Explain the different cycles involved in maintaining the environment.
- Analyze migration patterns and the causes of change to these patterns.
- Discuss the relationships among resources, technology, and the environment.

4. Apply principles of genetics, evolution, biodiversity and ecology to developing and developed nations.

- Relate DNA, genetics, and cell division to diverse biological organisms.
- Discuss biodiversity among organisms and how changes occur.
- Demonstrate an understanding of health and the responsibility for health.
- Explain evolution as it pertains to diversity of life, natural selection, and the beginning of life.

5. List and describe the means by which we understand human population dynamics including growth curves, growth rates, fertility rates, age composition, and doubling time.

- Understand population ecology from natality through mortality.

Student Learning Outcomes and Competencies for this course align with course outcomes developed through the Kansas Core Outcomes Project.