

SYLLABUS

COURSE # AND TITLE: BIOL 122, Introductory Biology II **# OF CREDITS:** 4

CATALOG DESCRIPTION

This course is an introduction to the dynamic processes of living things and includes local natural history, population genetics, ecology and evolutionary processes.

Semester Offered: Fall and Spring

Prerequisites:

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will....

<i>Learn</i>	<i>Students will actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.</i>
<i>Think</i>	<i>Students will think analytically and creatively to explore ideas, make connections, draw conclusions, and solve problems.</i>
<i>Communicate</i>	<i>Students will exchange ideas and information with clarity and originality in multiple contexts.</i>
<i>Integrate</i>	<i>Students will demonstrate proficiency in the use of technologies in the broadest sense related to their field of study.</i>
<i>Act</i>	<i>Students will act purposefully, reflectively, and respectfully in diverse and complex environments.</i>

GENERAL LEARNING OBJECTIVES

Upon completion of the course, the student should understand the following content areas:

- 1.) Philosophy of Science and falsifiability.
- 2.) Identification of living things from the local area and an understanding of how they may interact with one another.
- 3.) Gene pools, variability, genetic fitness and selective processes.
- 4.) Ecological dynamics and some of the long term consequences.
- 5.) Experimental design and field work.

SPECIFIC LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to:

- 1.1 Explain why most scientists avoid using the word “proof”.
- 1.2 Discuss what sorts of evidence can make a convincing argument and the creation of testable hypotheses.

- 2.1 List some of the members of each of the main groups of animals and plants on campus.
 - 2.2 Write and use a Taxonomic Key to local species.
 - 2.3 Discuss the ecological roles of some of the local species and describe some of the consequences of interactions and diversity.
 - 2.4 Suggest factors involved in the stability of communities.
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- 3.1 Describe how diversity in the genetic system of a population might influence the success of its members.
 - 3.2 Compare the selection within variable populations to those with less genetic diversity.
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- 4.1 Describe and predict the outcomes of interactive systems such as competition, mutualism and predation.
 - 4.2 List and give examples for some of the ways that natural and man made systems have become stable or unstable because of interactive complexity.
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- 5.1 Collect and identify local organisms.
 - 5.2 Assist in the design of class measurements of natural systems.

Syllabus developed by _____ Date: _____

Syllabus reviewed by _____ Date: _____

A current syllabus must be on file in the dean's office for every course being taught during a given semester.