

## SYLLABUS

**COURSE # AND TITLE:** Biology 223, Vertebrate Zoology    **# OF CREDITS:** 4

### CATALOG DESCRIPTION

This course will cover the taxa of animals with backbones: fishes, amphibians, reptiles, birds and mammals. It includes relationships, structures, niches and behaviors.

Semester Offered: On Demand

Prerequisites: successful completion of BIOL 122

#### *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.) Theoretical phylogenetic relationships of vertebrates.
- 2.) The Chordate body plan and general traits.
- 3.) Special characteristics of each of the vertebrate groups.
- 4.) Diversity within fishes, amphibians, reptiles, birds and mammals.
- 5.) Constraints and niche patterns within each group.
- 6.) Behavioral diversity and ecological success of the vertebrates.

## **SPECIFIC LEARNING OUTCOMES**

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

- 1.1 Describe the similarities and differences which characterize this phylum and those which distinguish each of the classes within it.
- 1.2 Discuss how different organisms must be for taxonomists to classify them separately.
  
- 2.1 Describe general comparative anatomy of the systems of the vertebrate body.
- 2.2 For each of the anatomical systems, discuss the functions associated with the major organs.
  
- 3.1 Describe or diagram particular traits of each of the taxa and discuss how these may be benefits or constraints.
  
- 4.1 Discuss how much variability is found in each of the groups.
- 4.2 Explain some of the patterns which may be important in allowing or constraining the dispersal and success of members within each of these taxa.
- 4.3 Discuss biogeographic patterns of diversity.
  
- 5.1 Define phylogenetic inertia and explain its importance.
- 5.2 Discuss niche breadth, shifts and competition.
  
- 6.1 Describe some of the behavioral patterns for each of the vertebrate groups.
- 6.2 Clumping and flocking are more common in some taxa than in others, what are the costs and benefits of these dispersal patterns?

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.**