

Biology 3307 (ALP/MC) / 5307 – Animal Behavior – Spring 2019
Lecture T-R 9:30-10:45 WSB 101 (AMS 02)
Syllabus

Instructor: Dr. Christopher M. Ritzi
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Office hours: MW 9-10, TR 2-4 or appt.

Class Website: <http://sulross.blackboard.com> and <http://faculty.sulross.edu/critzi/>

Text: Animal Behavior. 11th Edition or earlier. Dustin Rubenstein & John Alcock.

Course Description: Animal Behavior is a course that ties together many different aspects of science, including genetics, neurology, communication, and reproductive biology. The goal of this course is to develop an understanding of animal behavior from an evolutionary approach, in such a way that we better understand why one behaves in one way and not another.

Student Learning Outcomes for Undergraduates in the Program

The graduating biology student graduating with a BS in Biology should be able to:

- 1) The student will be able to demonstrate an understanding of basic biological concepts, including but not limited to evolution via natural selection, cell theory, and the role and function of DNA.
- 2) The student will be able to demonstrate utilization of various field techniques toward addressing scientific questions in the specific discipline. These field techniques can include, but are not limited to, plant collection and processing, various animal collection techniques, ecological surveying and sampling, and biodiversity indexing.
- 3) The student will be able to use biological instrumentation to solve biological problems using standard observational strategies.
- 4) The student will develop writing skills by summarizing and critiquing recent relevant biological literature.

Student Learning Outcomes for Graduates in the Program

The biology student graduating with a MS in Biology should be able to:

- 1) Understanding and implementation of scientific methodology.
- 2) Utilization of field techniques toward addressing scientific questions.
- 3) Be able to utilize statistics toward the analysis of data within the discipline.
- 4) Be able to effectively disseminate scientific findings using both written and oral communication.

Student Learning Objectives for this Course:

- 1) Students will define the genetic and environmental basis of animal behavior.
- 2) Students will illustrate knowledge of the interaction between genetic and environmental components.
- 3) Students will demonstrate an understanding of the utilization of various forms of communication.
- 4) Students will demonstrate an understanding of the mechanics of reproductive behavior.
- 5) Students will apply gaming theory to social behavior.

Tests: There will be four exams over the course of the term, including a non-comprehensive final exam. Each exam will cover approximately one quarter of the course material as outlined below. The exact timing of these exams will be flexible in keeping with the progress of the lectures. However, in the spirit of fairness, students will be given at least 1 week notice prior to the date of each exam. Exams shall consist of multiple choice/short answer/short essay during class. In addition, graduate students will be required to complete a set of several take-home questions as secondary exams for each in-class exam.

Grading: Your grade will be assigned based on the percentage of points you get out of total possible. Each exam will account for between 200 and 250 points.

Attendance: Students missing 20% of lectures (6 lectures) may be dropped from the class per the SRSU catalog. Any student dropped for excessive absences will receive an F for the course grade. Please notify your instructor BEFORE missing class for authorized activities, death in the family, or illness. Exams missed for any reason must be made up within one week of the originally scheduled date. **REGARDLESS OF WHY AN ABSENCE OCCURS, YOU MAY BE GIVEN AN F FOR THE COURSE GRADE IF YOU ACCUMULATE SIX ABSENCES.**

Lecture courtesy: The general rules of classroom etiquette are below.

- 1) Please do not talk to others in class while the instructor is lecturing. If you have a question, ASK THE INSTRUCTOR! That's what I'm here for.
- 2) No eating, chewing, dipping, etc.
- 3) Please turn cell phones and pagers to silent while in class. They are disruptive to the entire class, and detract from learning.

Students with disabilities will be provided reasonable accommodations. If you would like to request such accommodations because of physical, mental, or learning disability, please contact the ADA Coordinator for Program Accessibility at at 837-8203, FH 112.

| SUBJECTS TO BE COVERED | | |
|-------------------------------|----------------------------------------------|----------------|
| DATE | LECTURE TOPIC | CHAPTER |
| Jan 22 | Introduction and Background | 1 |
| Jan 24 | Proximate and Ultimate Causes of Behavior | 2 |
| Jan 29 | Proximate and Ultimate Causes of Behavior | 2 |
| Jan 31 | Development of Behavior: A Focus on Heredity | 3 |
| Feb 5 | Development of Behavior: A Focus on Heredity | 3 |
| Feb 7 | Exam I – Chapters 1-3 | |
| Feb 12 | Development of Behavior: Environmental Focus | 3 |
| Feb 14 | Development of Behavior: Environmental Focus | 3 |
| Feb 19 | Control of Behavior: Neural Mechanisms | 4 |
| Feb 21 | Control of Behavior: Neural Mechanisms | 4 |
| Feb 26 | Control of Behavior: Organizing Mechanisms | 5 |
| Feb 28 | Exam II – Chapters 3-5 | |
| Mar 5 | Adaptation and Anti-predator Behavior | 6 |
| Mar 7 | Adaptation and Anti-predator Behavior | 6 |
| Mar 12 | Evolution of Feeding Behavior | 6 |
| Mar 14 | Evolution of Feeding Behavior | 6 |
| Mar 19 | Spring Break – No Class | |
| Mar 21 | Spring Break – No Class | |
| Mar 26 | Choosing Where to Live | 7 |
| Mar 28 | Choosing Where to Live | 7 |
| Apr 2 | Evolution of Communication | 8 |
| Apr 4 | Exam III – Chapters 6-8 | |
| Apr 9 | Evolution of Reproductive Behavior | 9 |
| Apr 11 | Evolution of Reproductive Behavior | 9 |
| Apr 16 | Evolution of Mating Systems | 10 |
| Apr 18 | Evolution of Mating Systems | 10 |

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|-----------------------|----------------------------------------------------|--------|
| Apr 23 | Evolution of Parental Care | 11 |
| Apr 25 | Evolution of Social Behavior | 12 |
| Apr 30 | Evolution of Social Behavior | 12, 13 |
| May 2 | Evolution of Social / Human Behavior | 13, 14 |
| May 7 | Evolution of Social / Human Behavior | 13, 14 |
| May 9 | Dead Day | |
| <u>May 13 8:00 am</u> | <u>Final exam on Monday – Chapters 9-14</u> | |

Note – This outline is subject to change for reasons of course interest, time constraint, or instructor whim. The exams will be administered on the dates given, unless material relevant for a given exam has not been covered. Under such cases, an exam may be moved a class period or two to aid in the clarity and understanding of the material.