

ANIMAL BEHAVIOR

Zoology 140

COURSE SYLLABUS

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Course Focus. This course will introduce students to the basic concepts of animal behavior. By the end of the semester, students will have a general understanding of invertebrate and vertebrate behavior, including learning, foraging strategies, sexual selection, mating systems, social behavior and the evolutionary mechanisms that guide it.

This is a three-unit non-major's biology course which satisfies the SBCC General Education requirement in Natural Sciences. This course is transferable to the UC & CSU as a general education life science course. Biology majors are welcome to take this course, however they will not receive credit toward their major for this course.

Supplies.

Textbook: *Animal Behavior: Concepts, Methods and Applications*, by Nordell & Valone, 2014. This text is optional.

SimUText: Darwinian Snails. Evolution and natural selection interactive tutorial. This online tutorial is required and is available to purchase at simUText. The cost is \$5. Directions for how to purchase it are posted on my website and will be emailed to you.

Course Requirements.

Attendance. You are expected to attend 2 - 1 hour 20 minute lectures each week. There is a strong positive correlation between a student's final grade and their attendance in lecture. Students that regularly attend lecture tend to get the highest grades. All exams are based on information discussed in lecture. If you are not in lecture, you will not get the information and risk doing poorly on exams. Videos and video worksheets are available only in lecture. If you miss lecture on the day of a video, you will miss those points. Quizzes are given randomly. If you miss a day a quiz is given, you miss those points. So, if you want to do well in this class, I suggest you attend regularly.

Lecture Exams will be a combination of multiple choice, short answer and essay type questions. Exam material will be based solely on information presented in lecture. There will be three (3) exams, worth 100 points each.

If, for some legitimate reason, you should miss a scheduled exam, a make-up exam **may** be arranged. However, make-up exams will be given **ONLY** if one of the following criteria is met:

- you are near death on the day of the exam and you **bring a signed note from your doctor** stating that your medical condition prohibited you from taking the exam

- you arrange ahead of time (i.e. **before** the exam is scheduled to be given) to take the exam at another time, preferably at a time before the scheduled exam date.
- unforeseen circumstances (car accident, family emergency, etc.) on the day of the exam keep you from making it to the exam. If this happens, you **MUST** call or email me **on or before the day of the exam**, informing me that you will not be able to make it and why.

If any of these criteria are not met, you will NOT be given a make-up exam. **NO EXCEPTIONS!** In addition, every effort must be made to **make up the exam within a week** after it is originally given.

Quizzes. There will be 6, 10 point quizzes given periodically throughout the semester, the dates of which will be announced in class during the lecture prior to the quiz. The dates will also be posted on my website. These quizzes will be given at the beginning of the day's lecture and will cover information addressed during previous lectures. The quizzes will consist of two parts: 5 of the 10 points are earned by working alone to answer 5 multiple choice questions (you will need a short, 15 question scantron for this) and the remaining 5 points are earned by discussing your answers with your classmates and making corrections. Lecture notes, books, etc. **cannot be used** for either part. Make-up quizzes will be given only for excused absences and only the first part of quiz can be taken (i.e. a maximum of 5 points can be earned).

Video Worksheets. We will watch several videos throughout the semester. All of them are meant to illustrate and reinforce concepts and ideas discussed in class. Each of the videos will include a worksheet for you to complete using information and examples from the video. Each worksheet is worth 20 points and is due at the end of the class period in which the video is shown. Make-ups for missed videos **MAY** be arranged, but only for cases of legitimate, excused absences. In addition, videos can only be made up within one (1) week of the date they were originally shown.

Evolution & natural selection assignment. This assignment primarily involves completing an online evolution and natural selection tutorial. You will need to purchase the module from SimBio (cost is \$5) and download it onto your computer to run the tutorial. You will be emailed the link and directions to make your purchase. You will also be given a short reading assignment (a cartoon) with a few relevant questions. This assignment is worth 50 points

Sexual selection in Humans. Humans are animals and have the same goals as all other living organisms – to survive and reproduce. Thus, over evolutionary time humans have been shaped by selection, just like other animals, to best achieve those goals. In this assignment you are going to use principles of sexual selection to examine and analyze human mate choice. This assignment is worth 20 points.

Intro Observation and Description. This assignment involves you observing animals in their natural habitat and describing what you see. You will spend a minimum of 20 minutes observing an animal (or group of animals) and then writing 2-3 paragraphs describing the animal's behavior. Your goal is to provide as complete and detailed a description as possible, while avoiding using anthropomorphic (human characteristics) descriptions of what you observed. Specific instructions and required information are posted on my website. You will submit your completed paragraphs to turnitin.com. This assignment is worth 30 points.

Final Animal Observation Paper

Your final assignment will involve making more observations of animals in their natural habitat, and then analyzing and interpreting your findings. The goal is for you to demonstrate your understanding of the adaptive value of behavior. You will be expected to use and apply correct terminology to describe what you see and explain the observed behaviors from an adaptive point of view.

Detailed instructions will be posted on the course website. This paper is worth 100 points.

Final Course Grade will be based on the following distribution of points:

3 exams @ 100 points each	300 points	43%
6 quizzes @ 10 points each	60 points	9%
7 video worksheets @ 20 points each	140 points	20%
Evolution & Natural Selection tutorial	50 points	7%
Sexual selection & humans	20 points	3%
Intro observation & description	30 points	4%
Final observation paper	100 points	14%
Total	700 points	100%

The following scale will be used for determining the final course grade:

Depending on the overall performance of this class, these percentages may be lowered, but they will not be raised. Therefore, anyone who earns 90% or above is guaranteed an A grade. Anyone who earns 80% or better is guaranteed at least a B, and so on.

GRADE	TOTAL PERCENTAGE	TOTAL POINTS ACCRUED
A+	100-97%	700-676
A	96-90%	675-627
A-	89%	626-620
B+	88-87%	619-606
B	86-80%	605-557
B-	79%	556-550
C+	78-77%	549-536
C	76-70%	535-487
D	69-60%	486-417
F	59-0%	416-0

It is important that you realize your grade is the result of your performance on the exams and other assignments. **You must take responsibility for your own grade!** As your instructor, my job is to provide you with the information you need to know and understand. I will try my hardest to do this through clear and interesting presentations of the material. Your job as a student is to learn it, use it, and understand it. If you are having difficulty doing this, **it is your responsibility to seek help.**

Extra Credit. First, I don't generally offer extra credit unless something appropriate comes up. Second, my policy on extra credit is that it is "extra" credit offered to students who have already completed all of the regular credit. This means that if an appropriate extra credit opportunity comes up, only those students who have completed ALL the regular credit (i.e. they haven't missed any assignments or have any unexcused absences) will be eligible to complete the extra credit.

Policy on Cheating. Santa Barbara City College has a strict policy on academic honesty and I maintain a **zero tolerance for any act of academic dishonesty**. **Academic dishonesty**, as defined by myself and SBCC, **includes**, but is not limited to: **cheating on an exam (e.g. looking at or copying from someone else's exam, talking to someone during an exam, using cell phones or texting, bringing prepared "cheat sheets", using translators or dictionaries) copying someone else's work or answers on worksheets or assignments, plagiarism, or submitting a paper written wholly or in part by someone else. All instances of academic dishonesty will be reported to the academic dean** for institutional action. In addition, the dishonest student will receive a zero score for the exam/assignment on which the cheating occurred.

Students with Disabilities. Disabled Student Programs and Services (DSPS) coordinates all academic accommodations for students with documented disabilities at Santa Barbara City College. If you have, or think you might have, a disability that impacts your educational experience in this class please contact DSPS to determine your eligibility for accommodations. (NOTE: This also includes students who are requesting to bring service animals into classes. The animals will be registered in DSPS. The procedure also includes requests to bring into classes personal service attendants who are not SBCC employees.) DSPS is located in the Student Services (SS) Building, Room 162. Their phone number is 805-730-4164.

If you are already registered with DSPS please submit your accommodation requests via the 'DSPS Online Services Student Portal' as soon as possible. Once submitted and confirmed please visit with me about your specific accommodations.

Please complete this process in a timely manner to allow adequate time to provide accommodation.

Student Learning Outcomes (SLOs). Upon successful completion of this course, students will be able to:

1. Describe and analyze the concept of total fitness. Be able to identify and explain the components of total fitness and demonstrate an understanding of survivorship and reproductive behaviors.
2. Describe social behaviors and demonstrate an understanding of how they evolve, including an understanding of parental investment, mating systems and parental care.
3. Integrate and apply concepts of natural selection, sexual selection and other evolutionary processes through observation, experimentation and description of adaptive behaviors.

Schedule of Topics

Week	Topic	Relevant Reading
1	Lecture 1: Introduction Lecture 2: Science, ultimate & proximate questions	Ch. 1, 3.1
2	Lecture 3: Methods, strategies, tactics, & evolution Lecture 4: Natural selection & adaptation	Ch. 3.2, 3.3 Ch. 2
3	Evolution & natural selection tutorial due; class discussion	
4	Video 1: 4 Billion Year War Lecture 5: Neurons, hormones & genes	Ch. 4.1, 4.2, 10.4, 13.3
5	Lecture 6: Innate & learned behaviors Video 2: Brain Power	Ch. 5.1, 5.3-5.6
6	Exam 1 Lecture 7: Communication: general	Ch. 6.3-6.5
7	Lecture 8: Communication: channels Video 3: Talking to Strangers	Ch. 6.1, 6.2
8	Lecture 9: Self-defense Lecture 10: Foraging & adaptive feeding	Ch. 8.1, 8.3, 8.4 Ch. 7.1-7.3, 8.2
9	Video 4: Hunting & Escaping; Animal observation & description due Lecture 11: Habitat selection & navigation	Ch. 9.1-9.5
10	Video 5: Finding the Way Exam 2	
11	Lecture 12: Sexual selection: male competition Lecture 13: Sexual selection: female choice	Ch. 11.1, 11.4, 11.5 Ch. 11.2, 11.3
12	Lecture 14: Mating systems Video 6: Continuing the Line	Ch. 12
13	Sexual selection in humans Lecture 15: Parental care	Ch. 13.1, 13.2, 13.4
14	Lecture 16: Social behavior: selfishness, cooperation, altruism Sexual selection in humans assignment due	Ch. 14
15	Lecture 17: Social behavior: altruism & eusocial behavior Video 7: Winning Teams; Final animal observation paper due	Ch. 14
16	Final Exam 2:00 – 4:00pm	