

# Texas A&M University Central Texas

## BIOL 4346 Animal Behavior

### INSTRUCTOR AND CONTACT INFORMATION

**Instructor:** Dr. Weiser Erlandson

**Office:** 404 Warrior Hall

**Phone:** 254-519-5723

**Email:** laura.erlandson@tamuct.edu

**Online:** CANVAS enhanced

**Office Hours:** I am also available by appointment or you can just stop by my office; if I'm there, I'd be glad to chat. I encourage you to either call or e-mail me so we can find a time that is mutually convenient.

### Course Calendar

**Time/Day:** Lecture: TR 8:00 – 10:45

**Where:** Lecture: 313 Warrior Hall

### UNILERT

Emergency Warning System for Texas A&M University – Central Texas

UNILERT is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in UNILERT through their myCT email account. Connect to [UNILERT](#) to change where you receive your alerts or to opt out. By staying enrolled in UNILERT, university officials can quickly pass on safety-related information, regardless of your location.

### COURSE INFORMATION

#### Course Overview and description:

Study vertebrate and invertebrate animal behavior. Basic topics include animal learning, mechanisms of behavior, foraging, competition, defense, aggression, sensory systems, communication, mating systems and parental care behavior. Six hours of lecture per week for 8 weeks. Prerequisite: BIOL 1407.

#### Course Objective:

#### *Student Learning Outcomes*

*Students will:*

- a. identify and discuss general principles of behavior (e.g. mating, communication, and feeding) across taxa
- b. apply understanding of these principles through a research project on an aspect of animal behavior
- c. critically evaluate and discuss theories of animal behavior

- d. observe and differentiate behaviors in nature

### **Required Reading and Textbook(s):**

- a. Alcock, J. 2012. Animal behavior, 10<sup>th</sup> edition. Sinauer Associates. ISBN: 9780878939664.

*I expect you to read the corresponding chapters in your textbook before coming to class.*

*Other Readings: I feel that it is important for you to explore cutting edge research in Biology; therefore, I may assign additional papers from primary literature from time to time.*

### **WEEKLY COURSE OUTLINE AND CALENDAR (subject to change)**

1. June 5
  - a. Lecture Topic: Introduction & Behavioral Ecology and Evolution of Altruism
    - i. Chapters 1 and 2 Alcock
2. June 7
  - a. Lecture Topic: Evolution of Social Behavior
    - i. Chapter 3 Alcock
    - ii. Prisoner's Dilemma
3. June 12
  - a. Lecture Topic: Evolution of Communication
    - i. Chapter 4 Alcock
4. June 14
  - a. Lecture Topic: Exam I (Ch 1-4; 75 min) and Avoiding predators and finding food
    - i. Chapter 5 Alcock
5. June 19
  - a. Lecture Topic: Avoiding predators and finding food & Evolution of habitat selection
    - i. Chapters 5 and 6 Alcock
6. June 21
  - a. Lecture Topic: Evolution of habitat selection & Evolution of reproductive behavior
    - i. Chapters 6 and 7 Alcock
7. June 26
  - a. Lecture Topic: TBA
8. June 28
  - a. Lecture Topic: Evolution of reproductive behavior & Evolution of mating systems
    - i. Chapters 7 and 8 Alcock
9. July 3
  - a. Lecture Topic: Evolution of mating systems & Evolution of parental care
    - i. Chapters 8 and 9 Alcock
10. July 5
  - a. Lecture Topic: Exam II (Ch 5-8; 75min) and Proximate and ultimate causes of behavior
    - i. Chapter 10 Alcock
11. July 10

- a. Lecture Topic: Development of behavior
  - i. Chapter 11 Alcock
- 12. July 12
  - a. Lecture Topic: Evolution, nervous systems and behavior
    - i. Chapter 12 Alcock
- 13. July 17
  - a. Lecture Topic: Exam III (Ch 9-12; 75min) and Neurons and hormones
    - i. Chapter 13 Alcock
- 14. July 19
  - a. Lecture Topic: Evolution of human behavior and Student Presentations
    - i. Chapter 14 Alcock
- 15. July 24
  - a. Lecture Topic: Student Presentations
- 16. July 26
  - a. Comprehensive Final Exam

## **COURSE REQUIREMENTS**

### **Course Assessments:**

- 35% Three lecture exams
- 25% Final Comprehensive Exam
- 20% Term Paper
- 10% Oral Paper Presentation
- 5% Assignments
- 5% Participation

### **Weekly Assignments:**

There will be selected questions for each chapter that will be collected weekly.

### **Term Paper and Presentation:**

Write an 8-10 page paper on an aspect of animal behavior (details are found further in this syllabus).

Each student will present the findings of their research in a 15 minute oral presentation to the class at the end of the semester.

### **Criteria Rubric and Conversion**

#### ***Grading scheme***

**A 4.00 (90 +)** Achievement that is outstanding relative to the level necessary to meet course requirements.

**B 3.00 (80-89%)** Achievement that is significantly above the level necessary to meet course requirements.

**C 2.00 (70-79%)** Achievement that meets the course requirements in every respect.

**D 1.00 (60–69%)** Achievement that is worthy of credit even though it fails to meet fully course requirements.

**F 0.00 (<60%)** Represents failure and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an “I” (incomplete).

**I (Incomplete)** The “I” shall be assigned at the discretion of the instructor when, due to extraordinary circumstances, the student was prevented from completing the work of the course on time. The assignment of an “I” requires a written agreement between the instructor and student specifying the time and manner in which the student will complete the course requirements. In no event may any such written agreement allow a period of longer than one year to complete the course requirements. For graduate and professional students, an “I” is to remain on the transcript until changed by the instructor or department. For all other students, work to make up an I must be submitted within one year of the last day of final examinations of the term in which the “I” was given; if not submitted by that time, then the “I” will automatically change to an F. *To obtain an incomplete you must have been doing passing work in the course*

## **COURSE AND UNIVERSITY PROCEDURES AND POLICIES**

Read these carefully as I am strict with my policies.

**Grading Policy and Point Breakdown.** Grades in this course will be criteria-based on a number of activities including exams, discussion, and projects. This means that grades will not be curved and anyone achieving a 90% or above will receive an A in this course.

**Grade Dispute Policy.** Grading disputes must be put in writing (with justification such as supporting statements from the text or another credible source) and given to me no earlier than 24 hours after the assignment has been returned. I will consider your request carefully, but reserve the right to adjust your grade up or down.

**Assignments.** These will be varied in nature, but will consist of activities that cause the students to reflect upon the state of knowledge of the topic of the week, how that topic is perceived in the media, and/or analysis of specific research projects relevant to the subject. All assignments are to be turned in, on time (i.e. at class time on due date), to the Blackboard website. I will distribute instructions on how to do this. I will not accept e-mailed assignments of any kind.

**Late Assignments.** I expect all assignments to be turned in on time. Late assignments interfere with my ability to provide timely, detailed feedback, as well as with your ability to learn and process new material. Accordingly, any unauthorized late assignment will receive a 5% reduction in grade for each day it is late. No assignments will be accepted after it has been graded and returned.

**Exams.** The exams will be a mixture of matching, multiple choice and short answer, designed to provoke reflection, critical thought, and application of knowledge. You will receive a list of several sample or real exam questions ahead of time. You are encouraged to prepare for the exam by reviewing

reading materials, outlining a draft of a response, and discussing these thoughts with your peers. You will then demonstrate your individual, integrated thoughts on the topic in a closed-book exam during the class period.

**Missed exams.** If you know you will miss an exam, please contact me BEFORE the exam. I will gladly give make-up exams if the student has an unavoidable reason for missing the exam (i.e. death in the family, severe illness). Keep in mind that I will expect documentation of your reason for missing the exam (e.g. doctor's note, obituary notice). Exams must be made up within a week of the original scheduled date, no exceptions regardless of excuse.

**What I expect of you.** To get the most out of this class, you are expected to conduct yourself in a professional manner, which includes contributing to class discussions, being punctual, and notifying me of absences in advance.

**Class Attendance.** I expect that you attend each class session and arrive on time. If an unavoidable situation arises that prevents you from attending class, I expect that you also promptly contact me to discuss the missed material and get the notes from a classmate. I will not distribute my notes to students as they are often abbreviated and do not contain the detail needed to sufficiently understand the material.

**What you can expect of me.** You can expect me to start and end class on time, be available through office hours, e-mail, and by appointment, be responsive to student suggestions for course improvement, answer questions to the fullest extent possible and/or direct you to appropriate resources, return graded assignments and exams within a reasonable time frame, and treat you with respect as future colleagues.

**Discussion.** The topics in this class encompass a diversity of issues that merit in-depth thought and discussion. Since individuals will be expressing their opinions, I expect that you will respect others' contributions, as you would want them to do for you.

**Credits and Workload expectations.** For undergraduate courses, one credit is defined as equivalent to an average of two hours of learning effort per week (over a full semester) necessary for an average student to receive an average grade for the course. A student taking a four-credit class that meets for four hours a week should expect to spend an additional eight hours a week outside the classroom in order to earn an average grade.

**Class Structure.** Classes will involve a balance of active lecture and engaging learning activities. I believe that students learn the theories and concepts much better when they have an active role. I know that this may be new to some of you, but please keep an open mind and I know that you will get more out of this class because of it.

**Drop Policy.** If you discover that you need to drop this class, you must go to the Records Office and ask for the necessary paperwork. Professors cannot drop students; this is always the responsibility of the student. The record's office will provide a deadline for which the form must be returned, completed and signed. Once you return the signed form to the records office and wait 24 hours, you must go into

Warrior Web and confirm that you are no longer enrolled. Should you still be enrolled, FOLLOW-UP with the records office immediately? You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the deadline or fail to follow the procedure, you will receive an F in the course.

**Academic Integrity.** Texas A&M University -Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student's academic performance and includes, but is not limited to, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student's work, collusion, and the abuse of resource materials. All academic misconduct concerns will be reported to the university's Office of Student Conduct. Ignorance of the university's standards and expectations is never an excuse to act with a lack of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

**Access & Inclusion.** At Texas A&M University – Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to an education that is barrier-free. The Office of Access & Inclusion is responsible for ensuring that students with a disability enjoy equal access to the University's programs, services and activities. Some aspects of this course or the way the course is taught may present barriers to learning due to a disability. If you feel this is the case, please contact Access & Inclusion at (254) 501-5831 in Warrior Hall, Ste. 212. Please visit their website at <https://www.tamuct.edu/departments/access-inclusion/> for more information. Any information you provide is private and confidential and will be treated as such.

**Tutoring.** Tutoring is available to all TAMUCT students, both on-campus and online. Subjects tutored include Accounting, Finance, Statistics, Mathematics, and Study skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111. For tutor schedules and contact information, please visit the [Office of Academic Support](#). If you have a question regarding tutor schedules, contact information, need to schedule a tutoring session, are interested in becoming a tutor, or any other question, contact Academic Support Programs at 254-519-5796, or by emailing Kim Wood at [k.wood@tamuct.edu](mailto:k.wood@tamuct.edu)

Chat live with a tutor 24/7 for almost any subject on your computer! Tutor.com is an online tutoring platform that enables TAMUCT students to log-in and receive FREE online tutoring and writing support. This tool provides tutoring in Mathematics, Writing, Career Writing, Chemistry, Physics, Biology, Spanish, Calculus, and Statistics. To access Tutor.com, log into your Blackboard account and click "Online Tutoring."

**University Writing Center.** Located in 416 Warrior Hall, the University Writing Center (UWC) at Texas A&M University-Central Texas is a free workspace open to all TAMUCT students from 11am-6pm Monday-Thursday. Students may arrange a one-on-one session with a trained and experienced writing tutor by visiting the UWC during normal operating hours (both half-hour and hour sessions are available). Tutors are prepared to help writers of all levels and abilities at any stage of the writing process.

While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the University Writing Center is here to help!

If you have any questions about the University Writing Center, please do not hesitate to contact Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu).

**University Library.** The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 72,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at TAMUCT are available through our website to help students navigate these resources. On-campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available twenty-four hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the TAMUCT main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our homepage: <https://tamuct.libguides.com/>

## **TECHNOLOGY REQUIREMENTS AND SUPPORT**

**Technology Requirements:** This course will use the TAMUCT CANVAS learning management system.

- Logon to CANVAS to access the course.
- Username: Your MyCT username (xx123 or everything before the "@" in your MyCT e-mail address)
- Initial password: Your MyCT password
- Check browser and computer compatibility by using the "Test Your Browser" button, found in the "Check Your Browser" module on your Blackboard dashboard, once you have logged in.

**Technology Support.** For technology issues, students should contact Help Desk Central. 24 hours a day, 7 days a week:

- **Email:** [helpdesk@tamu.edu](mailto:helpdesk@tamu.edu)
- **Phone:** (254) 519-5466
- **Web Chat:** <http://hdc.tamu.edu>

*When calling for support please let your support technician know you are a TAMUCT student.*

For issues related to course content and requirements, contact your instructor.

Technology issues are not an excuse for missing a course requirement – make sure your computer is configured correctly and address issues well in advance of deadlines.



## Bio 4346 Animal Behavior Term Paper

**Assignment:** Write an 8-10 page paper on one of the topics listed below (topics may not be duplicated – to be determined on a first come, first served basis).

**General:** Remember that the audience for this paper is a college educated biologist, so very simple terms need not be defined. However, proper use of citations is expected, please see below for instructions. I expect you to **proof read** your papers for any of spelling and grammar mistakes as I will take off points for this. If you feel that you need help writing, feel free to take advantage of the wonderful people at the TAMUCT writing center, be sure to make an appointment first and do not wait until the last minute!

*\*\*Be assured that the university has a strict policy on plagiarism and cheating. I will uphold that policy and anyone caught conducting academic dishonesty will receive a **zero** – consider yourself warned!\*\**

**Research:** I expect that you will research your topic using the library, the internet, your textbook and, especially, professional journals. Use a variety of sources, not just the internet (I will take off points if more than 40% of your sources are from the internet). **Be very careful** when reading information that is not from a peer-reviewed source (i.e. not professional journals) because many groups/people tend to post information that serves their particular agenda and is not necessarily scientifically correct (I have seen several of these). I expect that if you use one of these sources, you will check the validity of their facts.

Be sure to introduce and define your topic broadly first, then give more detail and examples to demonstrate your points. You should also end with a summary section that neatly ties the paper together. Tables, figures and pictures are to be on separate pages at the end of the paper (after references); they are **not to be inserted in the pages of text**.

### **Text Format guidelines (I will be strict about this):**

1. Double spaced lines (except for literature cited, which should be single spaced)
2. 1 inch margins (check this, most defaults are 1.5; you can change it in page setup)
3. Times New Roman font, size 12
4. No space between paragraphs
5. No page breaks between sections
6. No cover pages or binders!

### **Citations:**

#### **Citing within the text of your paper:**

1. One author: *Smith (1999) reported ....*
2. Two authors: *Smith and Jones (2003) observed ....*

3. More than 2 authors: *Smith et al. (1990) examined...*
4. Stating a fact: *Trees have leaves (Jones 1997).*

**Example of citing within text:**

Induction of the lens was first studied in detail by Spemann (1938). Recent studies have revealed the interactions among eye cells after the initial determination of the eye (Chang and Harris, 1998), as well as some of the molecules involved in eye cell determination (Chow et al., 1999). The data have revealed similarities between the genes used in the development of the eyes in both fruit flies and vertebrates (Perron and Harris, 1999).

**Literature Cited guidelines:**

**1. Book example:** Author. Year. Title. Publisher.

Townsend, C. R., M. Begon, and J. L. Harper. 2003. *Essentials of Ecology*, 2<sup>nd</sup> Ed. Blackwell Publishing, Oxford.

**2. Journal article:** Author. Year. Title. Journal title. Volume. Pages.

O'Neil, R. J. and R. N. Wiedenmann. 1987. Adaptations of arthropod predators to agricultural systems. *Florida Entomologist* 70: 40–48.

**3. Internet example:** Author. Year. Title. HTTP address.

Maddison, D. 2001. The Tree of life web project page. <http://tolweb.org/tree/>

**Other miscellaneous:**

The following **hints** will improve your writing:

1. Avoid long run-on sentences. We are trying to write concisely and clearly. Don't use twelve letter words when simpler ones will do just fine.
2. Genus and species names in Latin are always italicized or underlined. Only the first letter of the genus is capitalized. Ex. *Homo sapiens*, *Danaus plexippus*, etc...
3. Write numbers as numerals when they are associated with measurement units (2 km), spell them out only for numbers < 10 (e.g. five hamsters; 20 geese). Always spell out a number if it is the first word of a sentence.
4. DON'T use quotes. Follow the advice of Ralph Waldo Emerson, who said, "I hate quotations. Tell me what you know." Instead, paraphrase the author and cite him/her. Quotes interrupt the flow of your text.
5. Don't use contractions in formal writing.
6. Scientific writing is formal communication. Don't use conversational language, colloquialisms or slang.
7. Proofread, proofread, proofread!
8. Some frequently misused/misspelled words (spell check will not catch most of these):
  - a. **affect/effect** "Effect" is a noun (usually). "Affect" is always a verb. "The effect of their misuse will be that your grade will be affected by subtracting five points".
  - b. **it's/its** "It's" is the conjunction "it is". "Its" is the possessive form
  - c. **their/there/they're** I assume this is just carelessness, proofread your paper.

- d. **between/among** Between refers to two things, while among refers to more than two.
- e. **fewer/less** Use "fewer" if you can count the items, "less" if you can't. (less water, but fewer boats)
- f. **amount/number** Use "amount" if you can't count them, "number" if you can. (The amount of sand and the number of rocks)
- g. **oftentimes** Drop the "times"; it's redundant.
- h. **different from / different than** Different from is correct; different than is not.
- i. **than/then** "than" refers to a comparison – proofread your paper for mix-ups
- j. **The word data is plural and the word datum singular**

**Suggested Research Topics:** \*Any topic not on this list must be cleared with Dr. Erlandson first!\*

- Learning, memory, and foraging
- Inclusive fitness and Hamilton's rule
- Mechanisms of global orientation in migratory animals
- Overt vs. covert sexual selection
- When animals choose mates for "good genes", what do they really get?
- What do females gain by extra-pair copulations? A review of theory & data
- Slave-making in ants
- Reversed sex roles – when males are choosy
- "Mr. Mom" – male parental care
- Reproductive competition among females
- How mammals recognize their relatives
- Limits on evolutionary arms races between predators and prey
- Learning and development of simple behaviors
- Why and how females choose the sex of their offspring
- The dilemma of infanticide in animals
- Territoriality in bird species
- Parent-offspring conflict
- Parental care patterns in r-selected species
- Sexual conflict: causes and evolutionary consequences

## Term Paper Grading

<b>Topic Approval (5%)</b>	_____	<b>Due June 7, 2018</b>
<b>First Paper Outline (5%)</b>	_____	<b>Due June 19, 2018</b>
<b>Annotated outline (15%)</b> (includes citations)	_____	<b>Due June 28, 2018</b>
<b>First Submission (25%)</b> (Note: this is not a “rough” draft! You are expected to have a full paper submitted)	_____	<b>Due July 10, 2018</b>
<b>Final Submission (50%)</b>	_____	<b>Due July 24, 2018</b>

*See next page for Term Paper Rubric*

Category	Exceeds expectations	Meets expectations	Below expectations	Does not meet expectations	Score
<b>Introduction</b>	Thoroughly addresses the topic. Engages reader. Logical progression from broad to narrow topic. Clearly states main topic and previews structure of paper.	The introduction states the main topic and previews the structure of the paper.	The introduction states the main topic but does not adequately preview the structure of the paper.	There is no clear introduction or main topic and the structure of the paper is missing.	10.0%
<b>Thesis Statement</b>	Clearly and concisely states the paper's purpose in single sentence. Engaging and thought provoking.	Clearly and concisely states the paper's purpose in single sentence.	States the paper's purpose in a single sentence.	Incomplete statement or confusing.	5.0%
<b>Body</b>	Each paragraph has thoughtful supporting detail sentences that develop the main idea.	Each paragraph has sufficient supporting detail sentences that develop the main idea.	Each paragraph lacks supporting detail sentences.	Each paragraph fails to develop the main idea.	35.0%
<b>Organization/Structural Development of Topic</b>	Writer demonstrates logical and subtle sequencing of ideas through well-developed paragraphs; transitions are used to enhance organization.	Paragraph development present but not perfected.	Logical organization; organization of ideas not fully developed.	No evidence of structure or organization.	5.0%
<b>Depth of discussion</b>	In-depth discussion & elaboration in all sections of the paper.	In-depth discussion & elaboration in most sections of the paper.	Omission of pertinent content or content runs-on excessively. Quotations from others outweigh the writer's own ideas.	Cursory discussion in all the sections of the paper or brief discussion in only a few sections.	10.0%
<b>Conclusion</b>	The conclusion is engaging and restates the thesis. Relates topic back to 'real world' applications.	The conclusion restates the thesis.	The conclusion does not adequately restate the thesis.	Incomplete statement or confusing.	10.0%
<b>Spelling/Punctuation</b>	No errors in punctuation, capitalization and spelling.	Almost no errors in punctuation, capitalization and spelling.	Many errors in punctuation, capitalization and spelling.	Numerous and distracting errors in punctuation, capitalization and spelling.	2.5%
<b>Grammar</b>	No errors sentence structure and word usage.	Almost no errors in sentence structure and word usage.	Many errors in sentence structure and word usage.	Numerous and distracting errors in sentence structure and word usage.	2.5%
<b>In-text citations</b>	All facts are cited using primary literature or peer sources. Correct format with no errors	Some facts are cited. Correct format, very few errors.	Few facts are cited. Correct format, few errors	No in-text citations.	5.0%
<b>Literature cited</b>	Done in the correct format with no errors. Includes more than 10 major references (e.g. peer reviewed science journal articles, books, and no more than professional two internet sites. No encyclopedic type references).	Done in the correct format with few errors. Includes more than 5 major references (e.g. peer reviewed science journal articles, books, and no more than professional two internet sites. No encyclopedic type references).	Done in the correct format with some errors. Includes more than 3 major references (e.g. peer reviewed science journal articles, books, and no more than professional two internet sites. No encyclopedic type references).	Done in the correct format with many errors. Includes more than 0-3 major references (e.g. peer reviewed science journal articles, books, and no more than professional two internet sites. No encyclopedic type references).	5.0%
<b>Figures and tables</b>	Tables/figures numbered consecutively in separate series. Title is complete enough to be understood without referring to text. Legend, headings, and units of measure are included. Footnotes used as necessary to provide clarity with respect to:Units of measure that do not fit in the heading, explanations of abbreviations and symbols, statistical significance of entries.	Tables/figures numbered consecutively in separate series Title is complete. Legend, headings, and units of measure are included. Footnotes used to provide clarity.	Tables/figures numbered, but not sequentially. Title is incomplete. Legend, headings, and units of measure are not fully included. Footnotes used but do not provide enough clarity	Tables/figures not numbered. No title. Legend, headings, and units of measure are not included. Footnotes are not used but are needed.	10.0%
<b>Total</b>					100.0%

## BIO 4346 - Animal Behavior

### Syllabus Contract

#### Directions:

- First, read the syllabus.
- Second, read the statement below to confirm your personal reading and understanding of the contents of the syllabus.
- Third, provide confirmation by printing the document and providing your signature and date of completion in the space provided below.
- Last, submit this contract to me. Note that your grade for the first assignment will not be calculated until this contract is received.

I have received a copy of the syllabus. I have read and understand the policies of this course as stated in the syllabus.

**Print Name** \_\_\_\_\_

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_