

**BIOL 4346-110, CRN 10160, Animal Behavior**  
Spring 2019 rev. 01.04.2019  
Texas A&M University-Central Texas

**INSTRUCTOR AND CONTACT INFORMATION**

**Instructor:** Dr. Weiser Erlandson  
**Office:** 302H Heritage Hall  
**Phone:** 254-519-5723  
**Email:** laura.erlandson@tamuct.edu

**Mode of instruction and course access:**

This will be a 16 week course and will be taught face to face in the classroom. This course uses the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com>].

**Time/Day:** Lecture: MW 8:30 – 9:45  
**Where:** Lecture: 417 Warrior Hall

**Office Hours:** Monday: 10:00 – 12:00, Thursday: 10:00 – 12:00

I am also available by appointment; I encourage you to either call or e-mail me so we can find a time that is mutually convenient.

**Student-instructor interaction:**

You may contact me through email, CANVAS, or stop by my office hours. Expect me to respond back to any emails within 24 hours (business days only). If I do not, please check back with me to be sure that your email was not lost in transit.

**911 Cellular: Emergency Warning System for Texas A&M University-Central Texas**

911Cellular 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 911Cellular through their myCT email account.

In an effort to enhance personal safety on the Texas A&M University – Central Texas (TAMUCT) campus, the TAMUCT Police Department has introduced Warrior Shield by 911 Cellular. [Warrior Shield](https://www.tamuct.edu/police/911cellular.html) [<https://www.tamuct.edu/police/911cellular.html>] can be downloaded and installed on your mobile device from Google Play or Apple Store.

Connect at [911Cellular](https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management) [<https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management>] to change where you receive your alerts or to opt out. By staying enrolled in 911Cellular, 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. Prerequisite(s): [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. Rubenstein, D.R. and Alcock, J. 2018. Animal behavior, 11<sup>th</sup> edition. Sinauer Associates. ISBN: 978-1605355481

\*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.

## **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:**

Weekly homework will be posted on CANVAS modules page.

### **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***

### **Posting of Grades**

- Grades will be posted on CANVAS as I am finished with my evaluation of your work.

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

1. Week of January 14
  - a. Lecture Topic: Introduction & Behavioral Ecology and Evolution of Altruism
    - i. Chapters 1 and 2 Alcock
2. Week of January 21
  - a. Lecture Topic: Evolution of Social Behavior
    - i. Chapter 3 Alcock
3. Week of January 28
  - a. Lecture Topic: Evolution of Communication
    - i. Chapter 4 Alcock
4. Week of February 4
  - a. Lecture Topic: Avoiding predators and finding food (Tuesday) and Exam I (Thursday)
    - i. Chapter 5 Alcock
5. Week of February 11
  - a. Lecture Topic: Avoiding predators and finding food & Evolution of habitat selection
    - i. Chapters 5 and 6 Alcock
6. Week of February 19
  - a. Lecture Topic: Evolution of habitat selection & Evolution of reproductive behavior
    - i. Chapters 6 and 7 Alcock
7. Week of February 25
  - a. Lecture Topic: Evolution of reproductive behavior & Evolution of mating systems
    - i. Chapters 7 and 8 Alcock
8. Week of March 4

- a. Lecture Topic: Evolution of mating systems & Evolution of parental care
    - i. Chapters 8 and 9 Alcock
- 9. Week of March 11 – **Spring Break**
- 10. Week of March 19
  - a. Lecture Topic: Exam II (Tuesday) & Evolution of parental care
    - i. Chapter 9 Alcock
- 11. Week of March 25
  - a. Lecture Topic: Proximate and ultimate causes of behavior
    - i. Chapter 10 Alcock
- 12. Week of April 1
  - a. Lecture Topic: Development of behavior
    - i. Chapter 11 Alcock
- 13. Week of April 8
  - a. Lecture Topic: Evolution, nervous systems and behavior & Exam III (Thursday)
    - i. Chapter 12 Alcock
- 14. Week of April 15
  - a. Lecture Topic: Neurons and hormones
    - i. Chapter 13 Alcock
- 15. Week of April 22
  - a. Lecture Topic: Evolution of human behavior
    - i. Chapter 14 Alcock
- 16. Week of April 29
  - a. Lecture Topic: Student Presentations
- 17. Week of May 6
  - a. Lecture Topic: Comprehensive Final Exam (Thursday)

**Important University Dates:**

January 2, 2019	Priority Deadline for Spring Admissions applications
January 10, 2019	Convocation
January 11, 2019	Deadline for Tuition and Fee Payments (16- & First 8-Week Classes)
January 14, 2019	Add, Drop, and Late Registration Begins for 16- and First 8-Week. \$25 fee assessed for late registrants.
January 14, 2019	Classes Begin for Spring Semester
January 16, 2019	Deadline for Add, Drop, and Late Registration for 16- and First 8-Week Classes
January 21, 2019	Martin L. King Jr. Day (University Closed)
January 22, 2019	Deadline to Drop First 8-Week Classes with No Record
January 30, 2019	Deadline to Drop 16-Week Classes with No Record
February 22, 2019	Student End of Course Survey Opens (First 8-Week Classes)
February 22, 2019	Deadline to Drop First 8-Week Classes with a Quit (Q) or Withdraw (W)
March 1, 2019	Deadline for Graduation Application for Spring Ceremony Participation
March 1, 2019	Deadline for Teacher Education and Professional Certification Applications

	(i.e. Principal, Reading Specialist, etc.)
March 8, 2019	Classes End for First 8-Week Session
March 8, 2019	Deadline for Spring Admissions Applications
March 10, 2019	Student End of Course Survey Closes (First 8-Week Classes)
March 11, 2019	Spring Break – No Class (University Open)
March 11, 2019	Deadline for Faculty Submission of First 8-Week Final Class Grades (due by 3pm)
March 12, 2019	Spring Break – No Class (University Open)
March 13, 2019	Spring Break – No Class (University Open)
March 14, 2019	Spring Break – No Class (University Open)
March 15, 2019	Deadline for Tuition and Fee Payments (Second 8-Week Classes)
March 15, 2019	Deadline for Clinical Teaching Applications
March 15, 2019	Spring Break – No Class (University Open)
March 18, 2019	Add, Drop, and Late Registration Begins for Second 8-Week Classes. \$25 fee assessed for late registrants.
March 18, 2019	Classes Begin for Second 8-Week Session
March 20, 2019	Deadline for Add, Drop, and Late Registration for Second 8-Week Classes
March 25, 2019	Deadline to Drop Second 8-Week Classes with No Record
April 1, 2019	Deadline for GRE/GMAT Scores to Office of Graduate Studies
April 5, 2019	Deadline to Drop 16-Week Classes with a Quit (Q) or Withdraw (W)
April 12, 2019	Deadline for Final Committee-Edited Theses with Committee Approval Signatures to Office of Graduate Studies for Spring Semester
April 26, 2019	Student End of Course Survey Opens (16- and Second 8-Week Classes)
April 26, 2019	Deadline to Drop Second 8-Week Classes with a Quit (Q) or Withdraw (W)
May 10, 2019	Deadline for Applications for \$1,000 Tuition Rebate for Spring Graduation (5pm)
May 10, 2019	Deadline for Degree Conferral Applications to the Registrar’s Office. \$20 Late Application Fee.
May 10, 2019	Deadline to Withdraw from the University for 16- and Second 8-Week Classes
May 10, 2019	Spring Semester Ends
May 11, 2019	Commencement Ceremony Bell County Expo Center 7:00 p.m.
May 12, 2019	Student End of Course Survey Closes (16- and Second 8-Week Classes)
May 14, 2019	Deadline for Faculty Submission of 16-Week and Second 8-Week Final Class Grades (due by 3pm)
May 14, 2019	Deadline for Thesis to Clear Thesis Office for Spring Semester

## **TECHNOLOGY REQUIREMENTS AND SUPPORT**

### **Technology Requirements**

This course will use the A&M-Central Texas Instructure Canvas learning management system. Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>]. You will log in through our Microsoft portal.

Username: Your MyCT email address. Password: Your MyCT password

## **Canvas Support**

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select “Chat with Canvas Support,” submit a support request through “Report a Problem,” or call the Canvas support line: 1-844-757-0953.

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

## **Other Technology Support**

For log-in problems, 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): [http://hdc.tamu.edu]

*Please let the support technician know you are an A&M-Central Texas student.*

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## **UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES**

### **Drop Policy.**

If you discover that you need to drop this class, you must complete a [Drop Request Form](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf) [https://www.tamuct.edu/registrar/docs/Drop\_Request\_Form.pdf].

Professors cannot drop students; this is always the responsibility of the student. The Registrar’s Office will provide a deadline on the Academic Calendar for which the form must be completed, signed and returned. Once you return the signed form to the Registrar’s Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar’s Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

### **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.

For more [information regarding the Student Conduct process](https://tamuct.campuslabs.com/engage/organization/tamuct-student-conduct-panel),

[https://tamuct.campuslabs.com/engage/organization/tamuct-student-conduct-panel].

If you know of potential honor violations by other students, you may [submit a report](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0), [https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout\_id=0].

### **Academic Accommodations.**

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 a barrier-free education. The Office of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university's programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Office of Access and Inclusion at (254) 519-5797. Any information you provide is private and confidential and will be treated as such.

For more information please visit our [Access & Inclusion](https://www.tamuct.edu/student-affairs/access-inclusion.html) web page [https://www.tamuct.edu/student-affairs/access-inclusion.html].

### **Important information for Pregnant and/or Parenting Students.**

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit the [Student Affairs](https://www.tamuct.edu/student-affairs/index.html) web page [https://www.tamuct.edu/student-affairs/index.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines online](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf), please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

### **Tutoring.**

Tutoring is available to all A&M-Central Texas students, both on-campus and online. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111.

If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, or have any other question, contact Academic Support Programs at (254) 519-5796, or by emailing Dr. DeEadra Albert-Green at [deeadra.albertgreen@tamuct.edu](mailto:deeadra.albertgreen@tamuct.edu).

Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive FREE online tutoring and writing support. This tool provides tutoring in over 40 subject areas. Access Tutor.com through Canvas.

### **University Writing Center.**

Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (TAMUCT) is a free workspace open to all TAMUCT students from 10:00 a.m.-5:00 p.m. Monday thru Thursday with satellite hours in the University Library Monday thru Thursday from 6:00-9:00 p.m. This semester, the UWC is also offering online only hours from 12:00-3:00 p.m. on Saturdays.

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 UWC is here to help!

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) or by making an appointment via [WCOOnline](#). In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu) if you have any questions about the UWC and/or need any assistance with scheduling.

### **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 85,000 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 A&M-Central Texas 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 24 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 A&M-Central Texas 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 [Library website](http://tamuct.libguides.com/index) [http://tamuct.libguides.com/index].

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## OPTIONAL POLICY STATEMENTS:

### **A Note about Sexual Violence at A&M-Central Texas**

Sexual violence is a serious safety, social justice, and public health issue. The university offers support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional information on campus policy and resources visit the [Title IX webpage](https://www.tamuct.edu/departments/compliance/titleix.php) [https://www.tamuct.edu/departments/compliance/titleix.php].

### **INSTRUCTOR 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.

*There will be no bathroom breaks allowed during any exam. Be sure that you address this issue before beginning an exam.*

*Any student needing to **take an exam at a different time as rest of students** due to sickness or other accommodations will receive a different version of exam. This includes sickness,*

*special accommodations, etc....*

**Accommodated exams.** All students needing special accommodations must submit an accommodation form from the Office of Access and Inclusion listing the specific accommodations needed. Students are responsible for scheduling their own exam times with the TAMUCT Testing Center.

**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. Any inappropriate or offensive behavior of any kind (in class/lab/office or on assignments/exams) will be subject to a penalty commensurate with behavior.

**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 may encompass a diversity of issues that merit in-depth thought and discussion. Since individuals will be expressing their opinions, I expect that will you 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 (either in lab or in class). 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.

### **Copyright Notice.**

Students should assume that all course material is copyrighted by the respective author(s). Reproduction of course material is prohibited without consent by the author and/or course instructor. Violation of copyright is against the law and Texas A&M University-Central Texas' Code of Academic Honesty. All alleged violations will be reported to the Office of Student Conduct.

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# BIOL 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 January 21, 2019</b>
<b>First Paper Outline (5%)</b>	_____	<b>Due February 13, 2019</b>
<b>Annotated outline (15%)</b> (includes citations)	_____	<b>Due February 27, 2019</b>
<b>First Submission (25%)</b> (Note: this is not a “rough” draft! You are expected to have a full paper submitted)	_____	<b>Due March 27, 2019</b>
<b>Final Submission (50%)</b>	_____	<b>Due April 24, 2019</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%

## BIOL 4346 Oral Presentation

**Assignment:** Deliver a 10-15 minute oral presentation of your research paper topic. You will be timed and docked points for going under or over than the prescribed time limit. You will have 2 minutes for questions.

**Demonstrate Expertise:**

Speak with authority as you have spent more time than anyone else in the room studying this topic. Immerse yourself in the subject and become the expert. Good preparation will boost your confidence. Anticipate questions from your audience and be prepared to answer them fully.

Organization/Visual aids:

**Overall:** Your presentation should be in three parts, introduction, body and conclusion. In the introduction, tell your audience what you are going to tell them. In the body, tell them. In the conclusion, tell them what you already told them.

**Slides:** Keep your slides simple, neat and uncluttered. Make sure the font is large enough to be seen from the back of the room. Use bulleted points to keep yourself on track. Use transitions to maintain a smooth flow among slides and please use animations sparingly; do not use sound or any other fancy transitions as you will only end up distracting and, possibly, annoying your audience (aka. your instructor). Add pictures, graphs, and tables to enhance understanding of the topic but be sure it is readable.

**Transitions:** Be sure that your transitions are smooth; do not abruptly jump from one topic to another. Find a nice segue between topics. Practicing your talk out loud will help you with this.

Delivery:

**Voice quality:** Speak in a clear, loud voice so everyone in the room can hear you. Do not speak in monotone, show us your enthusiasm for your chosen topic. Practice, practice, and practice some more!

**Eye Contact:** If you have practiced, you should be able to maintain eye contact with your audience most of the time; this engages the audience and gives you a sense of their level of understanding.

**Dissemination of information:** Do not read from your slides; use them as a guide and a reminder of what you want to talk about. Add context and explanation beyond what is written on the slide. Do not read from notes; you will not be allowed them. You are expected to know your subject without the use of note cards (this is why you have bulleted points on screen). Avoid using “um”, “like”, and “you know”.

**Attire:** Present yourself in a professional manner. This includes proper, professional dress (i.e. shorts and flip flops are not appropriate for delivering a presentation). No hats. NO GUM!

**Stance:** Do not stand in front of your slides, blocking view. Avoid shifting your feet or rolling on your heels. Stand up straight and avoid swinging your arms or other nervous gestures. If you have practiced, you will be confident in your delivery.



## Oral Presentation Rubric

Category	Exceeds expectations	Meets expectations	Below expectations	Does not meet expectations	Score
<b>Language Use and Delivery</b>	Effectively uses eye contact. Speaks clearly, effectively, and confidently using suitable volume and pace. Fully engages audience. Dresses appropriately. Selects rich and varied words for context and uses correct grammar.	Maintain eye contact. Speaks clearly and uses suitable volume and pace. Attempts to engage audience. Dresses appropriately. Selects words appropriate for context and uses correct grammar.	Some eye contact, but not maintained. Sometimes speaks unclearly. Occasionally engages audience. May dress inappropriately. Occasionally selects words inappropriate for context and uses incorrect grammar.	Uses eye contact ineffectively. Fails to speak clearly and audibly and uses unsuitable pace. Does not engage audience. Dresses inappropriately. Selects words inappropriate for context and uses incorrect grammar.	10%
<b>Organization and Preparation</b>	Clearly outlines structure of presentation. Maintains clear focus on topic. Effectively includes smooth transitions to connect key points. Ends with logical, effective, and relevant conclusion.	Outlines structure of presentation. Maintains focus on topic. Includes transitions to connect key points. Ends with coherent conclusion based on evidence.	Incompletely outlines structure of presentation. Somewhat maintains focus on topic. Includes some transitions to connect key points. Ends with a conclusion based on evidence.	Does not outline structure of presentation. Does not establish or maintain focus on the topic. Uses ineffective transitions that rarely connect points. Ends without a conclusion.	10%
<b>Content</b>	Clearly defines topic and significance. Supports topic and key findings with analysis of relevant and accurate evidence. Provides evidence of extensive, valid research with multiple, varied sources. Provides evidence of complex problem solving and critical thinking. Combines and evaluates existing ideas to form new insights.	Clearly defines topic. Supports topic and key findings with evidence. Presents evidence of valid research with multiple sources. Provides evidence of problem solving and critical thinking. Combines existing ideas to form new insights.	Defines topic. Supports topic with evidence. Presents evidence of research with sources. Provides some evidence of problem solving and critical thinking. Combines existing ideas.	Does not clearly define topic. Does not support topic with evidence. Presents little or no evidence of valid research. Shows little or no evidence of problem solving and critical thinking. Shows little or no evidence of the combination of ideas.	55%
<b>Quality of Graphics/Slides</b>	Consistent use of formatting: (fonts, sizes, color, punctuation...). Correct use of grammar with rich and varied sentence structures. Transition/animation/sound used effectively and smoothly.	Consistent use of formatting: (fonts, sizes, color, punctuation...). Correct use of grammar. Transition/animation/sound used effectively or smoothly.	Inconsistent use of formatting: (fonts, sizes, color, punctuation...). Some incorrect use of grammar. Transition/animation/sound not used effectively or smoothly.	Inconsistent use of formatting: (fonts, sizes, color, punctuation...). Significantly incorrect use of grammar. Transition/animation/sound not used.	10%
<b>Questions and Answers</b>	Demonstrates extensive knowledge of the topic by responding confidently, precisely, and appropriately to all audience questions and feedback.	Demonstrates knowledge of the topic by responding precisely and appropriately to questions and feedback.	Demonstrates some knowledge of the topic by responding accurately and appropriately to some questions and feedback.	Demonstrates incomplete knowledge of the topic by responding inaccurately and inappropriately to questions and feedback.	10%
<b>Timing of Presentation</b>	Keeps time within $\pm 1$ minute.	Keeps time within $\pm 2$ minutes.	Keeps time within $\pm 3-4$ minutes.	Keeps time within $\pm 5$ minutes or more.	5%
<b>Total</b>					100%

# BIOL 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** \_\_\_\_\_