

# **BSc 532**

## **Advanced Behavioral Ecology**

### **INSTRUCTOR INFORMATION**

**Instructor:** Dr. Jeff Kopachena, Dept. of Biological Sciences

**Office Location:** Science Building, Rm. 258

**Office hours:** Online class – office hours through email

**Office Phone:** 903 886-5395

**(Don't try to call me on the phone - EVER)**

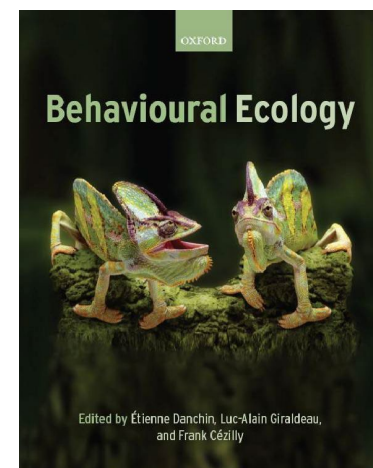
**University Email:** [Jeff.Kopachena@tamuc.edu](mailto:Jeff.Kopachena@tamuc.edu)

**Preferred Form of Communication:** Email  
**DO NOT CALL ON THE PHONE!!**



### **Textbook Required:**

Danchin et al. 2008. Behavioural Ecology.  
ISBN 978-0-19-920629



### **Course catalog description:**

Behavioral ecology is the study of the adaptive value of behavior in its ecological context. This course looks at current research in the areas of foraging ecology, mate choice, mating systems, reproductive behavior and ecology, decision making, game theory and optimality in animals.



## Course Material:

This course requires a fundamental understanding of biological processes, particularly those related to organismal genetics, evolution, and natural selection. You should have a basic understanding of cellular and population genetics. The course itself is about the evolution and adaptive value of organismal behavior.

There is a lot of material to cover in a very short time, so you are strongly advised not to let yourself get behind in assigned reading materials. You are going to be reading a lot and must read comprehensively. Tests must be taken on the assigned date and there will be no make-up tests. Tests are open book and will consist of critical thinking questions. All assignments must be turned in at the assigned time. There will be no tolerance of late assignments and there will be no extra credit assignments. **Be sure that you are familiar with the course schedule and keep on track.**

## Student Learning Outcomes

1. Students will understand what the field of behavioral ecology encompasses.
2. Students will understand what factors determine how animals find, gather, and consume prey items.
3. Students will understand what factors determine how animals select breeding habitats.
4. Students will understand the ecological and evolutionary basis of dispersal.
5. Students will understand the evolutionary process of sexual selection and its effects on sexual strategies.
6. Students will understand the evolutionary factors and relationships between parental care and mating systems.
7. Students will understand the ecological and evolutionary context of animal aggregations.



## COURSE REQUIREMENTS

### Minimal Technical Skills Needed

1. Must be able to use the learning management system (D2L)
2. Must be able to use MS-Word
3. Must be able to read the English language
4. Must be able to use a calendar and take tests on the appropriate date
5. Must be able to communicate via email and **NOT CALL ME ON THE PHONE!**

## Instructional Methods

This is an ONLINE course. All of the content is delivered online. There are no class meetings.

Students are expected to read the relevant chapters in the textbook. For each chapter there is a chapter review and a test based on the material in the textbook. Make sure you are familiar with the course schedule and make time to turn in your chapter reviews on time and take the tests when they are due. You are also required to review a scientific research article which also must be turned in on time.

## Student Responsibilities or Tips for Success in the Course

You are responsible for ensuring that you complete all of the tests and chapter reviews in a timely manner. Make sure you have the textbook prior to the start of class. When you are ready to take a test, make sure you have both the textbook and your chapter review available to refer to. Review the materials beforehand. Book-marking important sections of the textbook may also be very useful and help you look up answers more quickly. Detailed descriptions of the tests and assignments are provided below. You are responsible for being familiar with these instructions and in following them exactly as provided.

There are 20 chapters in the course textbook and, obviously, we cannot cover them all adequately. Consequently, I have selected 8 chapters that highlight some of the most important areas of behavioral ecology (as indicated in the objectives above). The course covers the following chapters in the textbook:

### Chapter

Chapter 2: Fundamental Concepts in Behavioral Ecology  
Chapter 6: Hormones and Behavior  
Chapter 7: Solitary Foraging Strategies  
Chapter 8: Social Foraging  
Chapter 9: Choosing where to reproduce: Breeding habitat  
Chapter 10: The evolution of dispersal  
Chapter 11: Sexual selection: Another evolutionary process  
Chapter 12: Mating systems and parental care

For each chapter, you will have to write a brief chapter review and there will be a chapter quiz. In addition, all students will complete an article review. A description of these assignments is provided below. The grading scheme will be as follows:

### Grading Scheme:

<b>Chapter Reviews</b>	8 @ 5% each	40 %
<b>Chapter Quizzes</b>	8 @ 3% each	24 %
<b>Article Review</b>	1 @ 11% each	11 %
<b>Final Exam</b>	1 @ 25% each	25 %
<b>Total</b>		100 %





### Important note about Due Dates and Times:

Please make sure you keep close track of all due dates (a calendar is provide below). You can turn in your reviews at any time up to and including the review due date. You cannot turn in the review after the due date. This will allow you to work ahead if you want. However, keep in mind that the whole purpose of writing the review is to help you study for the test, so if you work too far ahead you will probably defeat that purpose. Also, I will not grade any reviews until after the review due date.

All quizzes and tests are scheduled over two days. You can take the test on either of the two days that it is open. Please look at the schedule in the syllabus carefully. You will need to allow 30 minutes for the quizzes. You can only take the quiz once, so once you are done you are done.

**PLEASE NOTE:** All students are responsible for having secure and reliable internet service. Nonetheless, internet services can be unpredictable at times. For this reason, **DO NOT WAIT UNTIL THE LAST MINUTE TO TAKE QUIZZES OR TURN IN ASSIGNMENTS.** If you turn in an assignment or try to take a quiz after 11:00 PM, I will not re-open the assignment or quiz and you will lose points for that assignment or quiz.

### Chapter Reviews

For each chapter you will write, in your own words, a summary of the content of that chapter. **Do not use any quotes. You will lose points for using quotes.** Write everything out in the form of paragraphs: **Do not use point form. You will lose points for using point form.**

You must highlight the major points covered by the chapter and how these points are relevant to the topic of the chapter. Close each chapter review with a personal comment on what you thought about the material covered in the chapter. **You will lose points for failing to include a personal comment on the chapter at the end of your review.**

Your chapter reviews must be in **MS-Word format** and submitted by the due date indicated in the course D2L shell. **Reviews not in MS-Word format will receive a grade of zero.** Put your name on your review. Reviews must be written using Times New Roman, 12-point font, double spaced, no extra spaces between paragraphs, with 1" margins on all sides. Include a title page with your name and the title of the chapter you are reviewing. **You will lose points for not following this format.**



**You need to write a 5-page review if you expect full points because even with 5 pages it is hard to cover the material comprehensively.** Reviews longer than five pages will not be penalized. Having said that, excessive verbosity and padding will get you nowhere. If you wish to include figures and tables, do so by appending them to the back of the review. Figures and tables do not count toward the page limit. All chapter reviews must be submitted through D2L in **MS-Word Format**. **Do not submit pdf documents.**

**Important Note:** This course uses Turnitin plagiarism software. This software compares all course submissions (chapter reviews, article reviews, etc.) to all published and unpublished materials including the course textbook and other student papers. It calculates a percentage match to these materials. Any student whose assignment yields a 20% or higher match will get a zero for their assignment. In the case of a 20% or higher match among two or more students, all of the individuals involved will get a zero for their assignment.

Because of this:

1. Do not use direct quotes
2. Be extremely careful about sharing your assignments with **anyone** – yes, anyone. That includes friends, family members, co-workers, etc.
3. Do not use other sites that may already contain chapter reviews as a template. If you do, you will be penalized for plagiarism, because that is plagiarism.



## Chapter Quizzes

Each chapter will be followed by a chapter quiz. The chapter quiz will consist of 10 multiple choice questions. Quizzes will cover all material in the chapter, including information in figures and tables. Quizzes will be timed, and students will have 20 minutes to complete the quiz. You will be expected to have full comprehension of the material. As a result, some questions will require that you apply concepts covered in the chapter to examples that are not specifically mentioned in the textbook.

## Article Reviews

During the semester you will select a current peer-reviewed article related to the material covered in the textbook. You will write a review of this article. It is extremely important that you choose a peer-reviewed journal article. Review articles are acceptable, but again, must be professional reviews. To approach this assignment, flip through the textbook. Find a topic that interests you and look for recent articles (2015 or more recent) on that subject. Google scholar can be most useful for this purpose. Once you have found an article, please let me know so that I can evaluate its suitability. **You need to do this early just in case you have to use an inter-library loan to get the article.**





Using your own words, describe the purpose of the article, the methods (if applicable), and the major findings. Describe the significance of the work to the field of study. In doing so, you also briefly review background articles related to the one you are reviewing. Make sure you cite these articles in your review. Include your opinion on the value of the article and its level of interest to you. Your review must be in **MS-Word format** and submitted by the due date. Reviews must be in Times New Roman, 12 point font, double spaced, no extra spaces between paragraphs, with 1” margins on all sides. Include a title page with your name and the title of the paper you are reviewing. **Your review should be no less than six pages and no more than 10 pages, not including the title page.** If you include figures and tables, append them to the back of the review. Figures and tables do not count toward the page limit. Reviews must be submitted through the Dropbox in eCollege.



## Final Exam

The final exam will be comprehensive. It will consist of 50 questions and you will have 2 hours to complete it.

**Below is the course schedule in calendar format:**

### June

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4 Chapter 2 Review and Quiz	5 Chapter 2 Quiz	6	7
8 Chapter 6 Review and Quiz	9 Chapter 6 Quiz	10	11	12 Chapter 7 Review and Quiz	13 Chapter 7 Quiz	14
15 Chapter 8 Review and Quiz	16 Chapter 8 Quiz	17	18 Chapter 9 Review and Quiz	19 Chapter 9 Quiz	20	21
22 Chapter 10 Review and Quiz	23 Chapter 10 Quiz	24	25	26 Chapter 11 Review and Quiz	27 Chapter 11 Quiz	28
29 Chapter 12 Review and Quiz	30 Chapter 12 Quiz					

### July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3 Art. Rev. Final Exam	4	5

## Obligatory Statements:

**\*\*Disclaimer:** The instructor reserves the right to make changes to the schedule of the class. Any alterations will be announced in class, in D2L or via email by the instructor. Students who do not attend class, check D2L or their email assume responsibility for missing adjustments to the course.

## TECHNOLOGY REQUIREMENTS

### Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year. Note the following:

- **Ensure that your browser has JavaScript and Cookies enabled.**
- **For desktop systems, you must have Adobe Flash Player 10.1 or greater.**
- **The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.**

### Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

## Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or <b>point</b> release of that major version) and the previous major version of iOS (the latest minor or <b>point</b> release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:

- o 512 MB of RAM, 1 GB or more preferred
- o Broadband connection required courses are heavily video intensive
- o Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

You must have a:

- o Sound card, which is usually integrated into your desktop or laptop computer
- o Speakers or headphones.
- o \*For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site <http://www.java.com/en/download/manual.jsp>

Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - o Adobe Reader <https://get.adobe.com/reader/>
  - o Adobe Flash Player (*version 17 or later*) <https://get.adobe.com/flashplayer/>
  - o Adobe Shockwave Player <https://get.adobe.com/shockwave/>
  - o Apple Quick Time <http://www.apple.com/quicktime/download/>

- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the



standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

## **ACCESS AND NAVIGATION**

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

## **COMMUNICATION AND SUPPORT**

### **Brightspace Support**

#### **Need Help?**

### **Student Support**

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words “click here” to submit an issue via email.

### **System Maintenance**

Please note that on the 4th Sunday of each month there will be System Maintenance which means the system will not be available 12 pm-6 am CST.

### **Interaction with Instructor Statement**

Please communicate via email. I am in front of a computer almost all day long, so if you want to communicate with me, email is the best way. Generally, I can respond within a few hours. I am generally unavailable for quick responses after 5:00 and on weekends. **DON'T CALL ME ON THE PHONE!**

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

#### **Course Specific Procedures/Policies**

#### **Procrastination Penalty**

All students are responsible for having secure and reliable internet service. Nonetheless, internet services can be unpredictable at times. For this reason, **DO NOT WAIT UNTIL THE LAST MINUTE TO TAKE QUIZZES OR TURN IN ASSIGNMENTS.** If you turn in an assignment or try to take a quiz after 11:00 PM, I will not re-open the assignment or quiz and you will lose points for that assignment or quiz.

#### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

#### **University Specific Procedures**

## **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette <http://www.albion.com/netiquette/corerules.html>

## **TAMUC Attendance**

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

## **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduate/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

## **ADA Statement**

### **Students with Disabilities**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: Office of Student Disability Resources and Services

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin,

disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.