

## **BIOL 4380 Evolution**

Fall 2018

Texas A&M University-Central Texas

### **INSTRUCTOR AND CONTACT INFORMATION**

**Instructor:** Angela Parsons

**Office:** 419 Warrior Hall

**Phone:** 512-695-1612

**Email:** [aparsons@tamuct.edu](mailto:aparsons@tamuct.edu)

#### **Office Hours:**

I will be here two hours before class and am available if you make an appointment.

#### **Mode of instruction and course access:**

This course meets face-to-face two times a week, and students are expected to be prepared for class by reading the chapter and doing the required homework to turn in for each chapter.

This course uses the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com>].

#### **Student-instructor interaction:**

I will check my email twice a day, but if you have an urgent question or would like to schedule a time for help, call my cell phone or text me. Make sure you identify yourself if you text me.

#### **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 911 Cellular through their myCT email account.

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:**

Three hours of lecture per week. Prerequisite: BIOL 1407, BIOL 352

Examines evolutionary theory. Includes the historical development of components of evolutionary theory, population level microevolution, the fossil record and macroevolution.

## Course Objectives/ Student Learning Outcomes

Students will:

1. Understand the centrality of evolutionary theory to all of biology.
2. Explain the impact of gene distribution in populations on evolution, adaptation, natural selection and speciation.
3. Be able to manipulate allele frequencies using Hardy-Weinberg
4. Demonstrate the importance and usefulness of evolutionary theory in practical or applied applications.

### Required Text:

Bergstrom, C.T., and Dugatkin, L.A. 2011. *Evolution*. WW Norton & Company, ISBN: 978-0393925920

### COURSE REQUIREMENTS

Four lecture exams	40%	100 points each
Final comprehensive exam	20%	
Chapter note sheets	20%	
Term paper	20%	

### Grading 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*

**Posting of Grades**

Grades will be posted in a timely manner, so check Canvas to see your grades.

**COURSE OUTLINE AND CALENDAR**

**Evolution Schedule Fall 2018**

<b>Week</b>	<b>Date</b>	<b>Topics</b>	<b>Chapters</b>
1	Aug 27	Intro to course, Overview of Evolutionary Biology, Darwin's Ideas	1, 2
2	Sept 3	<b>Labor Day HOLIDAY</b> , Natural Selection	3
3	Sept 10	Phylogeny and Evolutionary History, Inferring Phylogeny	4, 5
4	Sept 17	<b>No class Monday, EXAM I (Chapters 1-5) on Wednesday</b>	
5	Sept 24	Transmissions Genetics, Genetics of Populations	6, 7
6	Oct 1	Finish 7 and start 8, Evolution in Finite Populations	8
7	Oct 8	Evolution at Multiple Loci, Genome Evolution	9, 10
8	Oct 15	Finish up 10, <b>EXAM II (Chapters 6-10)</b>	10
9	Oct 22	Origin and Evolution of Early Life, Major Transitions	11, 12
10	Oct 29	Evolution and Development, Species and Speciation	13, 14
11	Nov 5	Extinction and Early Trends, <b>EXAM III (Chapters 11-15)</b>	15
12	Nov 12	<b>Veteran's Day HOLIDAY</b> , Sex and Sexual Selection	16
13	Nov 19	Evolution of Sociality, Coevolution (both due on the 19 <sup>th</sup> !), <b>No class Wednesday November 21</b>	17, 18
14	Nov 26	Human Evolution, Evolution and Medicine, <b>TERM PAPER due Monday Nov 26!</b>	19, 20
15	Dec 3	Finish up unit, <b>EXAM IV (Chapters 16-20)</b>	
16	Dec 10	<b>COMPREHENSIVE FINAL EXAM is Monday if no conflicts</b>	

**Important University Dates:**

August 27, 2018	Add, Drop, and Late Registration Begins for 16- and First 8-Week Classes. \$25 fee assessed for late registrants.
August 27, 2018	Classes Begin for Fall Semester
August 29, 2018	Deadline for Add, Drop, and Late Registration for 16- and First 8-Week Classes
September 3, 2018	Labor Day
September 4, 2018	Deadline to Drop First 8-Week Classes with No Record
September 12, 2018	Deadline to drop 16-Week Classes with No Record
October 1, 2018	Deadline for Teacher Education and Professional Certification Applications (i.e. Principal, Reading Specialist, etc.)
October 5, 2018	Deadline to Drop First 8-Week Classes with a Quit (Q) or Withdraw (W)
October 5, 2018	Deadline for Graduation Application for Ceremony Participation
October 5, 2018	Student End of Course Survey Opens (First 8-Week Classes)
October 12, 2018	Deadline for Fall Admissions Applications
October 15, 2018	Deadline for Clinical Teaching Applications
October 19, 2018	Classes End for First 8-Week Session
October 19, 2018	Deadline for Tuition and Fee Payments (Second 8-Week Classes)
October 19, 2018	Deadline to Withdraw from University for First 8-Week Classes (WF)
October 22, 2018	Add, Drop, and Late Registration Begins for Second 8-Week Classes. \$25 fee assessed for late registrants
October 22, 2018	Classes Begin for Second 8-Week Session
October 22, 2018	Student End of Course Survey Closes (First 8-Week Classes)
October 23, 2018	Deadline for Faculty Submission of First 8-Week Class Final Grades (due by 3pm)
October 24, 2018	Deadline for Add, Drop, and Late Registration for Second 8-Week Classes
October 29, 2018	Deadline to Drop Second 8-Week Classes with No Record
November 1, 2018	Deadline for GRE/GMAT Scores to Office of Graduate Studies
November 9, 2018	Deadline to Drop 16-Week Classes with a Quit (Q) or Withdraw (W)
November 12, 2018	Veterans Day (Observed) - No Class
November 16, 2018	Deadline for Final Committee-Edited Theses with Committee Approval Signatures to Office of Graduate Studies for Fall Semester
November 22, 2018	Thanksgiving
November 23, 2018	Thanksgiving
November 30, 2018	Deadline to Drop Second 8-Week Classes with a Quit (Q) or Withdraw (W)
December 1, 2018	Student End of Course Survey Opens (16- and Second 8-Week Classes)
December 14, 2018	Commencement Ceremony Bell County Expo Center 7:00 p.m.
December 14, 2018	Deadline for Applications for \$1,000 Tuition Rebate for Fall Graduation (5pm)
December 14, 2018	Deadline for Fall Degree Conferral Applications to the Registrar's Office. \$20 Late Application Fee.
December 14, 2018	Deadline to Withdraw from University for 16- and Second 8-Week Classes
December 14, 2018	Fall Semester Ends

December 17, 2018 Student End of Course Survey Closes (16- and Second 8-Week Classes)  
December 18, 2018 Deadline for Faculty Submission of 16-Week and Second 8-Week Final Class Grades (due by 3pm)  
December 18, 2018 Deadline for Theses to Clear Thesis Office for Fall Sem

## **TECHNOLOGY REQUIREMENTS AND SUPPORT**

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>].

Username: Your MyCT username (xx123 or everything before the "@" in your MyCT e-mail address)  
Password: Your MyCT password

### **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>]

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

For issues with **Canvas**, select "chat with Canvas support," submit a support request to Canvas Tier 1, or call the Canvas support line: 1-844-757-0953, links to all are found inside of Canvas using the "Help" link.

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

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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](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 University 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.

### **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 Department 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 Department of Access and Inclusion at (254) 501-5831. 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/departments/access-inclusion) webpage [https://www.tamuct.edu/departments/access-inclusion].

### **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. On-campus subjects tutored 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 any other question, contact Academic Support Programs at 254-519-5796, or by emailing Larry Davis at [ldavis@tamuct.edu](mailto:ldavis@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 A&M-Central Texas students to log-in and receive FREE online tutoring and writing support. This tool provides tutoring in over forty subject areas. Access Tutor.com through Canvas.

### **The 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 10am-5pm Monday-Thursday with satellite hours in the University Library on Mondays from 6:00-9:00pm. 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 WOnline [<https://tamuct.mywconline.com/>]. In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu) to schedule an online tutoring session. 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 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 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 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](https://tamuct.libguides.com/) [https://tamuct.libguides.com/].

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### **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 A&M-Central Texas, 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 Counseling Services (254-501-5956) located on the second floor of Warrior Hall.

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**

**Grading Policy and Point Breakdown.** Grades in this course will be criteria-based on a number of activities including exams, homework and a term paper. 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 consist of the answers to all of the questions from each chapter. All assignments are to be turned in at the start of class listed on the calendar in this syllabus, and handed directly to the instructor. They should be done completely and in your own words. I will not accept e-mailed assignments of any kind. Be prepared to lead the discussion of each question when asked.

**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 10% reduction in grade for each day it is late. No assignments will be accepted after it has been graded and returned, or after the exam has been given over the material.



**Exams.** The exams will be a mixture of multiple choice and short and long answer, designed to provoke reflection, critical thought, and application of knowledge. You will receive a review guide before every exam. 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. I do not want to see **any** cell phones out unless you are taping the lecture.

**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. The power points are from the text, and I will rely heavily on the study notes on the textbook website as they provide a good summary of the important points you need to know.

**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. Your participation, your engagement in the class and your contributions to the discussion and review of the topic for that class period will all enable you to get the most out of the course.

**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.

**Term Paper.** This is worth 20% of your grade and is due the Monday after Thanksgiving. I will go over this and give you a rubric very soon so you can do this well before the holiday weekend.

**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.