Course Overview

BIOL 201: Ecology and Evolution (4 credit hours)

Course Description: With worldwide concerns like global warming, food and water security, and emerging diseases, it is particularly important for you to understand how your decisions affect the ecosystems around you. This course aims to help you make informed decisions with regard to these concerns by providing a basic understanding of the principles of evolution and ecology.

Prerequisites: BIOL 101 and CHEM 101, with grades of C or better. We assume that each of you has had the equivalent of a semester course in biology wherein you learned Mendelian genetics and enough basic biology to know the major groups of organisms and the terms used for describing them. We also assume a solid background in high school algebra.

Course Website: https://sakai.unc.edu
This syllabus, the lecture outlines, guided reading questions, and other useful materials will be posted on the course website throughout the semester. *It is your responsibility to check the website and your UNC email account regularly.*

Class Time and Place*:
201.006 MWF 10:10-11:00am, Genome Science Building Rm G200
201.007 MWF 1:25-2:15pm, Genome Science Building Rm G200
**You are required to attend the lecture and recitation section in which you are enrolled.*

Office Hours: Use one of these links https://maraevans.youcanbook.me (Dr. Evans) or https://christinaburch.youcanbook.me (Dr. Burch) to find an available time.

Course Format: Three weekly lectures in class, supplemented with in-class exercises, and a once/week recitation.

Instructional Team & Office Hours

Instructors

Dr. Christina Burch
Office: 3163 Genome Science Bldg
Phone: 919-962-4445
Email : cburch@bio.unc.edu
Office Hours: by appointment at christinaburch.youcanbook.me

Dr. Mara Evans
Office: 104A Wilson (next to Coker Hall)
Phone: 919-843-7107
Email: mara1@email.unc.edu
Office Hours: by appointment at maraevans.youcanbook.me

Teaching Assistants

Jenna DeCurzio
Office:
Email: jdecurzi@live.unc.edu
Office Hours: email for appointment
Sections: 701, 706, 707, 708

Jeeyun Lee
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Office Hours: email for appointment
Sections: 601, 602, 603, 607

Brian Reatini
Office:
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Office Hours: email for appointment
Sections: 604, 605, 606, 608

Kuangyi Xu
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Office Hours: email for appointment
Sections: 702, 703, 704, 705

Peer Instructors

Peer Instructors are former BIOL 201 students who are volunteering their time to assist you both in and out of the classroom. Peer Instructors serve in two different roles.

Supplemental Instructors will hold 1-2 hours of supplemental instructions outside of class each week (time and locations will be posted to Sakai, and Course.Care). These sessions will host 20-40 people.

Peer Mentors will host one-on-one or tutoring sessions often in Wilson G11, but check Piazza or the website Course.Care for more details about time and location. Please make use of these wonderful people. You will see them in class each week as they will be circulating and helping you address problems in class.

Communicating with your Instructors

Non-emergency, non-confidential communications should occur in class and on Piazza, our online class discussion forum. Find our class page at https://piazza.com/unc/fall2019/biol201. We are BIOL 201: Ecology & Evolution (all sections!).

The quicker you begin asking questions on Piazza, the quicker you will benefit from the collective knowledge of your classmates and instructors. We encourage you to ask questions when you are struggling to understand a concept—you can even do so anonymously. We, your instructors, view Piazza largely as a forum where students help each other. The teaching staff will weigh in occasionally, but only after we see solid effort to tackle a question. Rather than ask, "What is the answer to question 2?" please tell us what you think the answer is, and why you think it's correct (or not), or tell your colleagues where you are stuck! This approach sparks conversation, which leads to learning. Also, please make sure to re-read the syllabus and lecture schedule before asking a logistics question! If you have any problems or feedback for the developers, email team@piazza.com.

Do not hesitate to contact us by email if you need to, but please reserve email for emergency and confidential communications.

Course Goals and Learning Objectives

With worldwide concerns like global warming, population growth, food and water security, and emerging diseases, it is particularly important for you to understand how your decisions affect the ecosystems around you. In order to make informed decisions you will need a basic understanding of the principles of evolution and ecology. Evolution is the most fundamental concept in biology; it provides the basis for understanding the origin of *all* biological phenomena. Ecology can be viewed as the theater within which the evolutionary play takes

place. Evolution cannot be understood in the absence of ecology and ecology cannot be understood without evolution. Both are essential for a complete understanding of virtually all facets of biology, including how the incredible diversity of life around us originated and is maintained.

This course will enable students to:

1. **Explain** the origin of species in the context of natural selection;
2. **Explain** how natural selection is one mechanism of evolution, and contrast it with other mechanisms of evolution;
3. **Explain** how the interactions between organisms and their physical environments result in changes over evolutionary time (by natural selection), leading to the organismal diversity we see today.
4. **Explain** how the interactions between organisms and their environment are related to tradeoffs, feedback, networks at a variety of different scales

Textbooks, Required Reading, and Guided Reading Questions

Required Textbooks

1. Bergstrom C.T. and Dugatkin, L.A. 2016. Evolution, 2st Edition. WW Norton and Company (Editors). Available anywhere textbooks are sold (including UNC Student Stores).
2. SimUText Ecology electronic textbook. Available for purchase from UNC Student Stores and from the SimUText website. Registration instructions below:

It is important that you review the information below *before* you subscribe to the SimUText for **Ecology and Evolution** at **University of North Carolina at Chapel Hill**. **To avoid possible problems, do not wait until the last minute.**

1. **CHECK YOUR TECH!**
   Visit https://simutext.zendesk.com/hc/en-us/categories/200170134-Check-Your-Tech- to confirm that the SimUText application will work on your computer, and/or to explore your options if there is a problem.
2. **SimUText Voucher Code (optional)**
   If you purchased a SimUText Voucher from your bookstore, be sure to have it with you when subscribing, as you will need to enter your voucher code.
3. **Registration Link**
   When you are ready to subscribe and download installers, follow the one of the registration links below to get started:

Be careful to use the correct link!

201.006 MWF 10:10-11:00am students use this link:
https://www.simutext.com/student/register.html#/key/UdDc-RBJB-C73Q-czZj-YLWU

201.007 MWF 1:25-2:15pm students use this link:
https://www.simutext.com/student/register.html#/key/Us2U-Tfea-NjWW-q7FX-dSaA

4. **SimUText Application Installers**
   After you have completed the subscription process, if you need to download the SimUText application installers again, you will be able to access them by logging into the SimUText Student Portal (https://www.simutext.com/student/).

   If you encounter problems, you may need your course-specific Access Key.
   For students in section 201.006 MWF 10:10-11:00am, the Access Key is: **UdDc-RBJB-C73Q-czZj-YLWU**.
   For students in section 201.007 MWF 1:25-2:15pm, the Access Key is: **Us2U-Tfea-NjWW-q7FX-dSaA.**

Problems or questions? Visit SimUText Support (http://simbio.com/support/simutext)

Reading

Reading assignments are listed on the lecture schedule, and will be drawn either from the course textbooks or they will be posted on the course Sakai site. Readings should be completed ***prior*** to the lecture for which the reading is assigned.

Guided Reading Questions (GRQs)

Guided reading questions are provided for readings from the Bergstrom and Dugatkin textbook. GRQs are meant to help you read more efficiently by focusing your attention on the material that is most relevant for our class. GRQs are not graded. You will find the GRQs in the Resource folder on the Sakai site. (Note that SimUText provides GRQs embedded inside the readings.) Separate GRQs are *not* provided for the Ecology half of the course because the embedded questions in the assigned sections of SimUText allow you to stay on track and gauge your understanding as you read along.

Assignments and Grading Policies

Reading Assignments & Quizzes (10% of your grade)

Accompanying every reading assignment will be either a Sakai Reading Quiz (for textbook readings) or SimUText Graded Questions (for Simutext readings) that test your comprehension of the reading. These reading quizzes are required, must be completed by 10:10 am the day of class, and will be graded for correct answers. Please see the lecture schedule for more details. The purpose of these activities is to help you practice using your knowledge and ensure that you come to class prepared to engage more actively with the material you have read. No late assignments or quizzes will be accepted.

Class Participation (8% of your grade)

We will be using Learning Catalytics (LC) as our classroom response system. There is a small fee to use this service, unless you already have an active LC account within the last 6-12 months.

Please be sure you are registered with LC before the first class: www.learningcatalytics.com. You must register using your official UNC email address as your login name and your UNC PID as your student ID. No exceptions! Complete instructions for LC registration can be found on our Sakai website in the Resources folder. The file is called “Instructions to Register for Learning Catalytics.” If you already have an LC account from a previous class you **do not** need to create a new account, just make sure you can log in successfully.

You can access LC on any mobile device that has wifi access. We recommend a phone or a tablet, but you may bring your laptop to class if you wish (but see the Digital Etiquette section below). Remember that when using a web browser to respond to poll questions, you need to log into your LC account first.

There will be many opportunities for participation throughout the semester. You will receive one point for each LC question that you answer in class and one additional point for each LC question that you answer

correctly (some questions do not have correct answers and some questions have multiple correct answers). You will be allowed to drop 6 LC questions from your final grade, to account for technical difficulties and any kind of absences. We will not make any other accommodation for missed questions and will not provide opportunities to make up missed poll questions. Each point earned for participation is 50% participation and 50% correct answer (some questions may have multiple correct answers). There will be opportunities during the semester when you can earn double participation points for a question (aka "Double Days"). These "Double Day" questions will not be asked via LC, but as written activities. Double days might not be announced prior to class. Note: if we determine that you are not physically present in class while answering poll questions, you will automatically forfeit all participation points for the semester (8% of your grade) and your case will be reported to the UNC Honor Court (see Upholding the Honor Code below).

Exams (72% of your grade)

There will be 3 midterms (16% each) and a final exam (24%). The midterm exams are not cumulative, except that the advanced material at the end of the course builds on the basic material taught in the beginning. The final exam is cumulative (details below). Exam questions will be taken from lectures, recitation material, and assigned readings. Exams will consist of a variety of question types including: true-false, multiple choice, fill in the blanks, and short answer. Exam style questions will be given for practice during many lectures. Your final exam will be cover 50% material from the last portion of the class, and 50% material you had been previously tested on.

Permission to miss a midterm examination will be granted only in extreme circumstances (e.g. severe illness), must be certified as University excused by the UNC Dean of Student's office, and permission to miss an exam must be obtained in advance (at least two hours before the exam starts, but the sooner you let us know, the better!). Please note that unless you are an athlete or affiliated with UNC athletics, missing an exam to spectate at a sporting event does not constitute an extreme circumstance. In the event that you obtain permission to miss one midterm examination, you will be offered the option of 1) taking a makeup exam, or 2) of not taking the exam, in which case your overall exam grade will be based on the remaining three exams (midterms 21% each and the final will be 30%). Midterm exams that are missed without advance permission will be given a score of zero points. Students who miss two exams or fail to take the final exam, will fail the course.

RECITATION (10% of your grade)

Ten percent of your grade will come from work done in and for your weekly recitation section. Refer to the separate recitation syllabus for details.

Grade Calculation

Your letter grade will be based on the sum of your performances on quizzes, in-class participation, exams, and recitation according to the following scale:

A:	93-100%	C+:	76-79.9%
A-:	90-92.9%	C:	73-75.9%
B+:	86-89.9%	C-:	70-72.9%
B:	83-85.9%	D:	65-69.9%
B-:	80-82.9%	F:	<65%

In order to achieve a fair grade distribution, at the end of the semester, the instructors may adjust grade thresholds class-wide to improve your letter grades; the thresholds will under no circumstances be adjusted to lower your grades. There will be absolutely NO appeals regarding the final grading scale (e.g. We will not round a score of 89.9 to a 90.0).

Grading Disputes

Scores and final course grades will be changed ONLY in the event that an exam question was mis-graded or if exam points were totaled incorrectly. If your exam points were added incorrectly, please see your TA

and we will be happy to make a correction. All other requests for exam re-grading must be in the form of a WRITTEN appeal to the professor teaching that material justifying why your answer should be accepted. This appeal should be submitted via Gradescope (the online exam grading platform we use). For every regrade request we reserve the right to re-grade your entire exam, therefore a regrade request could lead to an increase, decrease, or no change in your exam score. All appeals for changes must be made within **3 calendar days** after the exam is returned. We will not re-grade any question or exam after the 3 days have elapsed, but will still work to correct exam point totals if you find an error.

In-Class Groups

Students learn more when they work in small groups of peers to discuss issues and solve problems. By Friday August 30th you will be assigned to a group of 2-3 students. If you have a seating request a Sakai announcement will be posted with instructions for how to file that request before Wednesday, August 28 (at this link: https://forms.gle/QQPQLximAr8SLPFw5). In every class meeting, you will sit with your group in a designated area. We encourage you to get to know your group members because you will work with them throughout the semester. Collaborating with others is an important skill in all professions, and we are available to help you to solve interpersonal problems that may arise within your group.

If you are experiencing conflict with your group members, you may decide to invoke the "Terminator Clause." When you work in a group, it is possible that some team members will contribute more than will others. Over time, this can be a critical problem if one person demonstrates a lack of commitment to the team (e.g., failing to contribute to group assignments). In such an instance, we reserve the right to "fire" that member. Firing involves a two-step process: First, the team (in consultation with us) gives the wayward member a warning that includes the wayward teammate negotiating with the entire team about how he or she is going to be a better teammate. Second, if the member continues to behave inappropriately, they will be terminated from the group. Assignments from the point of termination to the end of the semester will be completed as an individual. Bad teammates usually show their tendencies early, so let a problematic group member know his or her behavior is not acceptable early.

Lecture Schedule Part 1 - Evolution

Instructor for Evolution Lectures: Dr. Christina Burch

Given the interactive nature of this course, this schedule may change if some topics take a longer or shorter amount of time than originally planned. Changes will be noted in lecture and on Sakai.

Required guided reading assignments and quizzes are indicated for each lecture. Reading quizzes will be administered through the Tests and Quizzes tool on the Sakai website. **Sakai Reading Quizzes are due at 10:10am on the same day as the associated lecture and will be graded for correctness unless otherwise noted.** Quiz feedback will be released by 5pm.

Updates made after the 1st day of class will be marked with green highlighting.

Date	Topic	Readings, Assignments & Quizzes *to be completed by 10:10AM the day of class*
Weds 8/21	Introduction	Reading: Syllabus, Lecture Schedule, and Recitation Schedule

Fri 8/23	Evidence for evolution	Guided Reading: B&D Ch 1.1 & Ch 2 *Find Guided Reading Questions for all textbook readings on the Sakai website.* Submit Sakai Quiz #1 (not graded)
Mon 8/26	Natural Selection and Evolution	Guided Reading: B&D Ch 3.1 - 3.3 Assignment: Complete Simutext Assignment 1 - Darwinian Snails and Submit Sakai Reading Quiz #2
Wed 8/28	Phylogenetics: Descent with Modification	Guided Reading: B&D Ch 4.1-4.4, Ch 5.1-5.2, and 5.4 Assignment: Complete Simutext Assignment 3 -Flowers & Trees and Submit Sakai Reading Quiz #3
Fri 8/30	The Hardy Weinberg Model	Guided Reading: B&D Ch 6.1-6.2 and 7.1-7.2 Assignment: Complete Simutext Assignment 4 – Mendelian Pigs and Submit Sakai Reading Quiz #4
Mon 9/2	HOLIDAY	NO CLASS
Weds 9/4	Natural Selection I	Assignment: Complete Simutext Assignment 5 - Sickle Cell Alleles Sections 1-3 and Submit Sakai Reading Quiz #5
Fri 9/6	Natural Selection II	Guided Reading: B&D Ch 7.3 Assignment: Submit Sakai Reading Quiz #6
Mon 9/9	Sexual Selection	Guided Reading: Simutext Assignment 6 - Behavioral Ecology; Section 4 Assignment: Submit Sakai Reading Quiz #7 Recommendation: Begin reviewing for Exam 1. Start organizing the Learning Objectives from each lecture into a study guide and identify the objectives that you have not met. Which of the many questions we have asked you do you still struggle to answer?
Weds 9/11	Cooperation	Guided Reading: Simutext Assignment 7 - Behavioral Ecology; Section 5 Assignment: Submit Sakai Reading Quiz #8 Recommendation: Continue review for Exam 1. Ask and answer questions on Piazza, form a study group, and/or attend a peer mentoring or supplemental instruction session.
Fri 9/13	Mutation	Guided Reading: B&D Ch 6.3-6.4 and Ch 7.4, Assignment: Submit Sakai Quiz #9
Mon 9/16	Evolution and Medicine	Guided Reading: B&D Ch 20.1, pages 9-12 and 309-311 (antibiotic resistance), and pages 735-736 (measles, flu, and HIV evolution) Assignment: Submit Sakai Quiz #10 (past multiple choice exam questions; not graded)
Weds 9/18	Conservation Genetics of the	Guided Reading: B&D Ch 8.1 & 8.3

	Florida Panther I: Genetic Drift	Assignment: Study for Exam 1 - No Quiz.
Fri 9/20	Exam 1	Covering material from 8/23 – 9/16
Mon 9/23	Conservation Genetics of the Florida Panther II: Inbreeding	Guided Reading: B&D Ch 7.5 Assignment: Complete Simutext Assignment 8 - Genetic Drift and Bottlenecked Ferrets Sections 1-3and Submit Sakai Reading Quiz #11
Weds 9/25	Conservation Genetics of the Florida Panther III: Migration	Guided Reading: B&D Ch 7.6 Assignment: Submit Sakai Reading Quiz #12
Fri 9/27	Molecular Evolution I	Guided Reading: B&D Ch 8.5 Assignment: Submit Sakai Reading Quiz #13
Mon 9/30	Allopatric Speciation	Guided Reading: B&D Ch 14.1 – 14.3 Assignment: Submit Sakai Quiz #14
Weds 10/2	Sympatric Speciation	Assignment: Watch the video AT THIS LINK from 0:00 – 13:16 and Submit Sakai Quiz #15 Recommendation: Begin reviewing for Exam 2. Start organizing the Learning Objectives from each lecture into a study guide and identify the objectives that you have not met. Which of the many questions we have asked you do you still struggle to answer?
Fri 10/4	History of Life on Earth	Guided Reading: B&D Ch 15.3 – 15.5 Assignment: Submit Sakai Quiz #16
Mon 10/7	Adaptive Radiation	Guided Reading: Grant, P. R. (2013). Adaptive Radiation. Available AT THIS LINK and on Sakai[BCL1] . Assignment: Watch the video AT THIS LINK from 12:47 – 17:15 and Submit Sakai Quiz #17
Weds 10/9	Human Evolution	Guided Reading: B&D Ch 19.1 – 19.4 Assignment: Submit Sakai Quiz #18 (past multiple choice exam questions; not graded)
Fri 10/11	Exam 2	

Lecture Schedule Part 2 - Ecology

Instructor for Ecology Lectures: Dr. Mara Evans

**Note that an updated Ecology lecture schedule may be posted before 10/11/2019 and additional changes may be announced and posted after that date.*

Text: SimUText Ecology. Assigned readings are the section names (and numbers), and the page numbers within each section. SimUText will ask you to answer embedded questions as you read – these are the Guided Reading Questions for the ecology part of the class. At the end of every section you read, there is a section summary; this is a good (additional) study guide. With each assigned SimUText reading there is an**accompanying Sakai Reading Quiz due at 10:10 AM the day of class.**

Note: If you are interested in supplementing your SimUText ecology reading, use any general ecology text (most are available for free in the library). Texts by Cain and Bowman (any edition, but the newer the better) are particularly recommended.

Date	Topic	Readings, Assignments & Quizzes *to be completed by 10:10AM the day of class*
Mon 10/14	Intro to Ecology	Do SimUText Assignment 10: Ecosystem Ecol. sec. 5, pgs 1-12. Submit Sakai Quiz #19
Weds 10/16	Global Natural History and Ecosystem Ecology	Read SimUText Assignment 11, only sections and pages listed below. Biogeography (Sec 4: 1-12); Ecosystem Ecology (Sec 1: 8-11, Sec 2: 1-11, 16-21) Submit Sakai Quiz #20
Fri 10/18	**NO CLASS**	Fall Break
Mon 10/21	Ecosystem Ecology	Read SimUText Assignment 12 Ecosystem Ecology (Sec 4: 1-13) Submit Sakai Quiz #21
Weds 10/23	Nutrient cycling	Read SimUText Assignment 13, only pages listed below. Nutrient Cycling (Sec 1: 11-18, Sec 2: 1-6, 8-21; Sec 3: optional; Sec 4: all) →Watch the video the Resources Folder called “The Nitrogen Cycle” Submit Sakai Quiz #22
Fri 10/25	Physiological Ecology: Photosynthesis	Read SimUText Assignment 14, only pages listed below. Physiological Ecology (Sec 4: 1-7, 15-25) –skim the part about water potential →Watch the video in the Resources Folder called “Photosynthesis” Submit Sakai Quiz #23

Mon 10/28	Adaptation and Acclimation Part I	Read SimUText Assignment 15 only pages listed here: Physiological Ecology #2 (Sec 2: 1-17) Submit Sakai Quiz #24
Weds 10/30	Adaptation and Acclimation Part II	No quiz today!! Recommendation: Begin reviewing for Exam 3. Start organizing the Learning Objectives from each lecture into a study guide and identify the objectives that you have not met. Which of the many questions we have asked you do you still struggle to answer? Visit with a peer instructor or meet with your TA for extra assistance
Fri 11/1	Life History	Read SimUText Assignment 16: Life History (Sec 1: optional; Sec 2: 1-16; Sec 3: 1-25) Submit Sakai Quiz #25
Mon 11/4	Life History and Geometric Population Growth	Read SimUText Assignment 17: Population Growth (Sec 1: 1-14, Sec 2: 1-13; Sec 3: 1-16) Submit Sakai Quiz #26
Weds 11/6	Exponential and Logistic Population Growth	Study for Exam 3 No quiz today
Fri 11/8	Population Growth	Study for Exam 3 Submit Sakai Quiz #27 (+ multiple choice practice exam questions not graded!)
Mon 11/11	Exam 3	
Weds 11/13	Competition	Read SimUText Assignment 18: Competition (Sec 1: 1-5, 11-12; Sec 2: optional; Sec 3: 1-26; Sec 4: optional); • Watch video: “Competition” Submit Sakai Quiz #28
Fri 11/15	Predation	Read SimUText Assignment 19: Predation (Sec 1: 1-2; Sec 2: 1-14; Sec 3: 1-23; Sec 5: optional) • Watch video: “Predation” Submit Sakai Quiz #29
Mon 11/18	Food webs	• Watch https://www.youtube.com/watch?v=SAGEXDlUHDE Read SimUText Assignment 20, only pages listed below.

		Community Dynamics (Sec 1:1-3; Sec 3: 1-20; Sec 4: 1-9) Submit Sakai Quiz #30
Weds 11/20	Community Dynamics	Read SimUText Assignment 21: only pages listed below. Community Dynamics (Sec 2: 1-23, Sec 5: 1-21) Submit Saka Quiz #31
Fri 11/22	Biological Diversity	Read SimUText Assignment 23: only pages listed below. Biogeography #2 (Sec 3: 15-24) Submit Sakai Quiz #32
Mon 11/25	Global Change	Read SimUText Assignment 24: Climate Change (Sec: 1, 2, 3 all pages) Submit Sakai Quiz #33
Weds 11/27	No Class	Thanksgiving break
Fri 11/29	No Class	Thanksgiving break
Mon 12/2	Global Change	Read SimUText Assignment 25: Climate Change (Sec: 4 and 5, all pages) Submit Sakai Quiz #34
Weds 12/4	Global Change	Be prepared to synthesize ideas from evolution and ecology portions of the class.
Fri 12/13 @ 8AM	**Final Exam BIOL 201.006** GSB 200 Cumulative: 50% new material; 50% material from all previous exams. Worth 24% of total grade.	
Mon 12/9 @ 12PM	**Final Exam BIOL 201.007** GSB 200 Cumulative: 50% new material; 50% material from all previous exams. Worth 24% of total grade.	

Recitation Overview

Recitation Meeting Times & Locations

**Attend the recitation section in which you are enrolled! See the attendance policy below.*

601	Tuesday	9:30-10:20am	GSB 1377
602	Tuesday	12:30-1:20pm	GSB 1377
603	Wednesday	9:05-9:55am	GSB 1377
604	Wednesday	2:30-3:20pm	GSB 1377
605	Wednesday	3:35-4:25pm	GSB 1377
606	Wednesday	4:40-5:30pm	GSB 1377
607	Wednesday	5:45-6:35pm	GSB 1377
608	Thursday	9:30-10:20am	GSB 1377
701	Tuesday	5:00-5:50pm	GSB 1377
702	Wednesday	9:05-9:55am	GSB 1378
703	Wednesday	12:30-1:20pm	GSB 1378
704	Wednesday	2:30-3:20pm	GSB 1378
705	Wednesday	3:35-4:25pm	GSB 1378
706	Wednesday	4:40-5:30pm	GSB 1378
707	Thursday	12:30-1:20pm	GSB 1377
708	Thursday	5:00-5:50pm	GSB 1377

Objectives

- Learn how to quantify observations and test hypotheses;
- Provide a forum for discussing material presented in lecture;
- Provide practice with the more difficult (especially quantitative) portions of the lectures;
- Evaluate the validity of experimental and observational studies.

Attendance

Students are required to attend recitation sessions; these meet once a week. Recitations start the week of August 26, 2019. If you know you will be absent from a recitation, please email your TA immediately with the day you will miss and the reason you are missing the recitation. We abide by the University Excused Absence policy. Confer with your TA about your personal situation and when/how to turn in your work on time if you miss class. If you find you are unable to attend your recitation section during a particular week, you may attend a different section if you first obtain permission from your TA and the TA of the recitation you will attend. Requests should be submitted to both TAs at least 24 hours in advance of the recitation you wish to attend. Unless otherwise given permission, only attend the recitation section in which you are enrolled. Failure to attend a recitation without an excused absence will result in a score of zero for the day.

Grades

Recitation grades will be based on assignments and participation in discussions. There will be short exercises, problem sets, paper discussions. Participation is worth one (1) point for each recitation meeting. Written assignments or online activities are worth 5 points each. You may be asked to come to class with work completed, or you may work on an assignment in class. In general, assignments for a day's recitation will be due at the end of class. Exceptions will be indicated by your TA.

Recitation Schedule

Week of	Exercise
Aug 19	**NO RECITATION**
Aug 26	**SimUText Assignment 2: Understanding Experimental Design**. Bring your computers to your recitation section! *Some parts of this assignment must be completed before the start of recitation* – see Sakai for details.
Sep 2	**Simutext Assignment 3: Flowers and Trees.** Bring your computers with you to recitation. In this recitation, we will review the Flowers and Trees assignment (due before lecture on 8/28) and we will practice constructing phylogenetic trees. You will work though a worksheet and submit it at the end of the class period.
Sep 9	**TBA. Paper Discussion or Short Answer Practice.**
Sep 16	**Exam 1 Practice.** Show up to recitation having attempted each of the practice questions (posted on Sakai). We will go over the answers in recitation.
Sep 23	**Simutext Assignment 9: Bottlenecked Ferrets Part 2, Exercises 4 & 5.**Bring your computers to your recitation section! *You do not need to begin the assignment before class*.
Sep 30	**TBA**. Paper Discussion or Short Answer Practice.
Oct 7	**Exam 2 Practice.** Show up to recitation having attempted each of the practice questions (posted on Sakai). We will go over the answers as a group in recitation.
Oct 14	**Fall Break -- NO RECITATION**
Oct 21	**Ecosystem response to nitrogen addition.** Read posted article on Sakai and complete the guided reading questions before coming to recitation
Oct 28	**Acclimation and Adaptation.** Complete the pre-recitation activity on Sakai before coming to class
Nov 4	**Geometric, Exponential and Logistic Population Growth.** You will explore the demographic processes that affect population size and the derivation of population growth models. Bring your computer to class.
Nov 11	**Lotka-Volterra Competition.** Problem set and discussion of competition models presented in lecture. You will work through a series of problems and turn in your worksheet at the end of class. Bring your computer to class.
Nov 18	**Predation.** SimUText Isle Royale lab (Called "Recitation 12 Assignment" in SimUText), will help explore aspects of predator-prey dynamics using the moose and wolves of Isle Royale as a case study. Bring your computer to class.
Nov 25	**NO RECITATION –Thanksgiving Break**
Dec 3	**NO RECITATION – Last week of class**

How to be Successful in Biology 201

Attendance in lectures is essential for success in this course. If you must miss a lecture, obtain a set of notes from a friend (we will also post some lecture slides on the course website). Do the reading and assignments carefully before the lecture because it will be much easier for you to understand the lectures and to participate in the discussions. After class, go back to the book and study the points we have stressed. There is more in the books than we can cover in class. You are not responsible for the subjects we do not cover. However, reading the entire chapter (indeed the entire book) will improve your understanding of the subject. While we will only test the learning objectives that we have covered in class or recitation, additional examples from the texts may prove very helpful on the exams!

Exhibit digital etiquette. This course will require you to use your laptop and/or cell phone during class time. Please be respectful of your classmates and restrict your use of digital devices to course content. Despite what you may know about yourself, multi-tasking is actually a myth and the brain cannot perform two or more tasks simultaneously. Please be respectful of your own learning and those around you who will be distracted as you scroll through Instagram, or catch up on basketball highlights.

If we see that you or your peers are distracted, we will ask you to put your devices away and you may forfeit your ability to earn participation points that day. There will be times when you have completed your work or answered a poll question, but your peers have not. We ask that you assist your peers when appropriate or use the time to review your notes while you wait. We understand that your devices connect you to your friends and family, but the classroom should be a place apart, however briefly, from the outside world and distractions. You will learn more if you concentrate on the course while you are here, and your classmates will thank you for not impeding their ability to learn. If you have to answer a text or a phone call, please step out of the room and return once you have completed your conversation.
Students needing accommodations: Please contact an instructor within the first two weeks of class if you will need special accommodations.

Take hand written notes using the lecture outlines. Research shows that students who take handwritten notes learn more (research paper posted to our Sakai site). Print out the lecture outlines before coming to class. The slides will be posted after class, and comparing your handwritten notes to the slides will be a great way to study. Use a non-laptop devise to answer your Learning Catalytics questions.

Ask for help early and often. Attend Supplemental Instructions sessions or visit with a Peer Mentor regularly. Visit your TA or your professor during office hours. Office hours are a great opportunity to discuss matters unrelated to class (e.g. your research and career interests).

Uphold the Honor Code. Academic honesty means that we respect each other and the work that we do; this means we behave with integrity in and out of the classroom, and do not lie, cheat or steal (e.g. plagiarism is a form of stealing). The University of North Carolina at Chapel Hill has had a student-led honor system for over 100 years. It is our responsibility to report any instances of academic dishonesty and violations of the Honor Code. The student-led Honor System is responsible for adjudicating any suspected violations of the Honor Code. All suspected instances of academic dishonesty will be reported to the Honor System and students will receive a zero on the assignment or exam in question. Your full participation and observance of the Honor Code is expected. Please report any violations that you observe. Information, including your responsibilities as a student is outlined in the Instrument of Student Judicial Governance (here: https://studentconduct.unc.edu/sites/studentconduct.unc.edu/files/documents/Instrument.pdf).

Academic Honesty and Learning Catalytics: In order to earn your participations points you must be physically in the classroom and answer questions during class time. If it is determined that you are not physically present while answering poll questions you will automatically forfeit all participation points for the semester (8% of your grade) and your case will be reported to the UNC Honor Court (see Upholding the Honor Code above). We believe that honesty is important, and we know that you will learn more by being physically in class and problem solving with your classmates. If you have to miss class, remember that we give you some “freebie points” to accommodate rare unavoidable absences.

Campus Resources

College can be challenging in unexpected ways. It is possible that at some point this semester your multiple competing personal responsibilities and interests may get in the way of your academic success. It is also possible that you may get sick or have other personal emergencies. The bottom line is this: asking for help is a sign of strength and self-care! Please ask for help early and often! Small problems are easier to cope with than escalated issues, or waiting until the end of the semester. While we sincerely hope that you will let us know when things are not going well, here are other campus resources you can turn to, as well:

- **Dean of Students:** If at any time during the semester you experience a personal or family illness, loss, financial stress, academic access, living issues, interpersonal violence response, alcohol or similar substance related issues, and other forces that may interfere with your well-being and success and/or academic retention please contact the Dean of Students immediately (or contact your professor and we will do so for you). Website: deanofstudents.unc.edu
- **Academic Advising:** Your academic advisers are familiar with all of the campus policies, procedures and requirements. Website: advising.unc.edu
- **Counseling and Psychological Services (CAPS):** If you are experiencing any distress please speak with a medical professional in a confidential setting. The CAPS office has daily drop in hours or you may call them for an appointment (919-966-2281) or schedule online (healthyheels.unc.edu). Website: campushealth.unc.edu/services/counseling-and-psychological-services.
- **LGBT Center:** Provides educational services, resources and advocacy. Website: lgbtq.unc.edu
- **Carolina Women's Center:** Aims to provide an equitable working and educational environment regardless of gender. Provides assistance to all individuals regardless of gender orientation. Website: womenscenter.unc.edu
- **International Student and Scholar Services:** offers services to help international students adjust to life in North Carolina and UNC. Website: isss.unc.edu