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## Course Overview

*This Syllabus was last updated on January 7, 2020. We reserve to right to make changes to this syllabus, including the scheduled dates for exams or lecture topics and the assignment of additional readings. These changes will be announced as early as possible so that students can adjust their schedules. All edits made after the first day of classes will be indicated with green highlighting.*

## BIOL 201: Ecology and Evolution (4 credit hours)

**Course Description:** We will learn about the principles governing the ecology and evolution of populations, communities, and ecosystems. With worldwide concerns like global warming, food and water security, and emerging diseases, you as a biologist need to have an understanding for how human decisions affect the organisms and ecosystems that humans value and depend upon.

**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 G100

201.007 MWF 1:25-2:15pm, Genome Science Building Rm G100

*\*You are required to attend the lecture and recitation section in which you are enrolled.*

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

## Instructional Team & Office Hours

### Instructors

#### Dr. Mara Evans

Office: 104A Wilson (next to Coker Hall)

Phone: 919-843-7107

Email: [mara1@email.unc.edu](mailto:mara1@email.unc.edu)

Office Hours: Use Sakai Sign up

#### Dr. Todd Vision

Office: 3155 Genome Science Bldg (in the green pod)

Phone: 919-962-4479

Email : [tjv@unc.edu](mailto:tjv@unc.edu)

Office Hours: Use Sakai Sign-up

## Teaching Assistants

You may meet with any TA for office hours, regardless of whether you attend their recitation or not.

### Meggan Allston

Email: [meggan.alston@unc.edu](mailto:meggan.alston@unc.edu)

Office Hours: email for appointment, available weekly

Sections: with the 201.006 recitations

### Jenna DeCurzio

Email: [jdecurzi@live.unc.edu](mailto:jdecurzi@live.unc.edu)

Office Hours: email for appointment, available weekly

Sections: with the 201.007 recitations

### Brian Reatini

Email: [bsr@live.unc.edu](mailto:bsr@live.unc.edu)

Office Hours: email for appointment, available weekly

Sections: with the 201.007 recitations

### Kuangyi Xu

Email: [kyxu@live.unc.edu](mailto:kyxu@live.unc.edu)

Office Hours: email for appointment, available weekly

Sections: with the 201.006 recitations

## 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 the Forums page 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 in the Sakai Forum.**

The quicker you begin asking questions on the Forum, 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 the Forum 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!

**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

### Course Goals and Learning Objectives

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. 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 organisms and ecosystems which we value and also depend upon.

#### *This course will enable students to:*

1. **Explain** how the interactions between organisms and their environment are related to tradeoffs, feedback, networks at a variety of different scales.
2. **Explain** the process of descent with modification and how relationships among living things can be used to understand organismal diversity.
3. **Explain** the process of adaptation by natural selection and the role of interactions between organisms and their physical and biotic environments.
4. **Explain** how natural selection interacts with other evolutionary forces to shape genetic and phenotypic changes in populations over time.
5. **Apply** the principles of ecology and evolution to problems in environmental science and medicine, and at all levels of biological organization.

### Learning Objectives/Lecture Goals

At the beginning of every lesson, a list of learning objectives are posted. These provide an indication of what you should know, be able to do, and value as a result of participating in the lesson. The list of lesson learning objectives **also serve as a study guide** for each exam. We recommend compiling the learning objectives into a study guide. Turn every statement into a question and make sure that you can: clearly define scientific terms, give examples, compare and contrast key concepts, and apply your knowledge to interpret data or design experiments to test hypotheses.

## Textbooks, Required Reading, and Guided Reading Questions

### Required Text

The only text you will need to purchase is the SimUText Ecology electronic textbook. It is available either from UNC Student Stores or 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. **The bookstore is not sold out of vouchers.** If you are told the bookstore is sold out, please ask the employees to check at the counter behind the register (again, **they are not sold out**).

### 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://simutext2.com/student/register.html#/key/UAwL-Xjwc-KJpE-3Hc8-c7Ku>

201.007 MWF 1:25-2:15pm students use this link:

<https://simutext2.com/student/register.html#/key/UUfD-4rAY-RPpU-wp4L-CZ8H>

### 1. 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/) (<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: **UAwL-Xjwc-KJpE-3Hc8-c7Ku**.

For students in section 201.007 MWF 1:25-2:15pm, the Access Key is: **UUfD-4rAY-RPpU-wp4L-CZ8H**

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

## Reading

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

## Guided Reading Questions (GRQs)

Guided reading questions are provided for those readings that are *not* in SimUText Ecology. 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.

For SimUText, the GRQs are embedded inside the readings. Separate GRQs are *not* provided for SimUText because the embedded questions 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 a Sakai Reading Quiz that tests 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. (Note that the Graded Questions found at the end of some Simutext Readings will NOT be graded. The only grades associates with reading assignments are the Sakai Reading Quizzes.) 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. **\*\* We recommend submitting your reading quiz at least 15 minutes before the deadline. Sakai counts quizzes submitted between 10:09 and 10:11 as late.\*\***

### 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](http://www.learningcatalytics.com). You must register using your official UNC email address as your login name and your UNC Personal ID Number (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 additional participation points for a question (aka "Group Activity Days"). These "Group Activity Days" questions will not be asked via LC, but as written activities. The activity 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) take a makeup exam within one week of the original exam date, or 2) do not take a make-up 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.

## DRAFT - In-Class Groups

Students learn more when they work in small groups of peers to discuss issues and solve problems. By Friday, January 24 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 Friday, January 17 at 5pm (at this link: <https://forms.gle/f7amWVUirYhmNiC38>). 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 - Ecology

**Instructor for Ecology Lectures:** Dr. Mara Evans

*\*Note that an updated Ecology lecture schedule may be posted before Jan 8, 2020 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: We do NOT grade the "Graded Questions" in SimUText, but we DO grade the Sakai Reading Quizzes.**

**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
<p><i>to be completed by 10:10AM the day of class **Note: we recommend submitting your work at 10AM to account for upload time and</i></p>		

*Wifi issues\*\**

		<i>Wifi issues**</i>
Jan. 8	How to succeed in Ecology & Evolution	Reading: Syllabus, Lecture Schedule, and Recitation Schedule
Jan. 10	Intro to Ecology	Do SimUText Assignment 1: Ecosystem Ecol. sec. 5, pgs 1-12. Submit Sakai Quiz #1 (not graded), Submit Syllabus Quiz (not graded)
Jan. 13	Global Natural History and Ecosystem Ecology	Read SimUText Assignment 2, only sections and pages listed below. Biogeography (Sec 4: 1-12); Ecosystem Ecology (Sec 1: 8-11, Sec 2: 1-21) Submit Sakai Quiz #2
Jan 15	Ecosystem Ecology	Read SimUText Assignment 3 Ecosystem Ecology (Sec 4: 1-13) Submit Sakai Quiz #3
Jan 17	Nutrient Cycling	Read SimUText Assignment 4, only pages listed below. Nutrient Cycling (Sec 1: 11-18, Sec 2: 1-6, 8-21; Sec 3: optional; Sec 4: all) Submit Sakai Quiz #4
Jan 20	MLK Jr. Day - No School	No Assignment//No Class
Jan 22	Physiological Ecology: Photosynthesis	Read SimUText Assignment 5, 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 #5
Jan 24	Adaptation and Acclimation Part I	Read SimUText Assignment 6 only pages listed here: Physiological Ecology #2 (Sec 2: 1-17) Submit Sakai Quiz #6
Jan 27	Adaptation and Acclimation Part II	No Quiz Today.  <b>Recommendation:</b> 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? Visit with a peer instructor or meet with your TA for extra assistance
Jan 29	Life History	Read SimUText Assignment 7: Life History (Sec 1: optional; Sec 2: 1-16; Sec 3: 1-25) Submit Sakai Quiz #7
Jan 31	Life History and Geometric Population Growth	Read SimUText Assignment 8: Population Growth (Sec 1: 1-14, Sec 2: 1-13; Sec 3: 1-16) Submit Sakai Quiz #8
Feb 3	Exponential and Logistic Population Growth	Study for Exam 1 No quiz today
Feb 5	Population Growth	Study for Exam 1 Submit Sakai Quiz #9 and Submit Practice Exam 1 (not graded!)



Feb 7 EXAM 1

Bring: a pen or pencil; your student ID, a calculator.

## Lecture Schedule Part 2 - Evolution

**Instructor for Evolution Lectures:** Dr. Todd Vision

*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. We recommend submitting work by 10AM to account for upload and Wifi issues.** 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 <i>to be completed by 10:10AM the day of class **Note: submit by 10AM to account for upload and wifi issues**</i>
Feb 10	Evidence of Evolution	Readings and assignments for Evolution TBA.
Feb 12	Adaptation	
Feb 14	Genetic Variation	
Feb 17	Natural Selection I	
Feb 19	Natural Selection II	
Feb 21	Sexual Selection	
Feb 24	Mutation	
Feb 26	Genetic Drift	
Feb 28	Migration and inbreeding	
March 2	Conservation genetics	
March 4	Molecular Evolution	
March 6	EXAM 2	
March 9-13	Spring Break	No Class

## Lecture Schedule Part 3: Ecology

**Instructor for Ecology Lectures:** Dr. Mara Evans

*\*Note that an updated Ecology lecture schedule may be posted before Jan 8, 2020 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: We do NOT grade the "Graded Questions" in SimUText, but we DO grade the Sakai Reading Quizzes.**

**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	<p style="text-align: center;"><b>Readings, Assignments &amp; Quizzes</b></p> <p style="text-align: center;"><i>to be completed by 10:10AM the day of class **Note: we recommend submitting your work at 10AM to account for upload time and Wifi issues**</i></p>
March 16	Competition	Read SimUText Assignment XX: Competition (Sec 1: 1-5, 11-12; Sec 2: optional; Sec 3: 1-26; Sec 4: optional); Watch video: "Competition" in Sakai Resources folder Submit Sakai Quiz #Competition
March 18	Predation	Read SimUText Assignment XX: Predation (Sec 1: 1-2; Sec 2: 1-14; Sec 3: 1-23; Sec 5: optional) Watch video: "Predation" Submit Sakai Quiz #Predation
March 20	Food webs	Read SimUText Assignment XX, only pages listed below.  Community Dynamics (Sec 1:1-3; Sec 3: 1-20; Sec 4: 1-9)  Submit Sakai Quiz #Food Webs
March 23	Disturbance and Succession	Read SimUText Assignment xx: only pages listed below.  Community Dynamics (Sec 2: 1-23, Sec 5: 1-21)  Submit Saka Quiz #Community Dynamics
March 25	Community Stability	No Quiz Today.  <b>Recommendation:</b> 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

March 27	Biological Diversity	Read SimUText Assignment xx: only pages listed below. Biological Diversity (Sec 3: 15-24) Submit Sakai Quiz #Biological Diversity
March 30	Global Change Ecology	Read SimUText Assignment xx: Climate Change (Sec: 1, 2, 3 all pages) Submit Sakai Quiz #Climate Change Part I
April 1	Global Change Ecology	Read SimUText Assignment xx Climate Change (Sec: 4 and 5, all pages) Submit Sakai Quiz #Climate Change Part II
April 2	EXAM 3	None

## Lecture Schedule Part 4 - Evolution

**Instructor for Evolution Lectures:** Dr. Todd Vision

*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. We recommend submitting work by 10AM to account for upload and Wifi issues.** 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 <i>to be completed by 10:10AM the day of class **Note: submit by 10AM to account for upload and wifi issues**</i>
April 6	Phylogenetics	Readings and Assignments for Evolution TBA
April 8	History of Life	
April 10	Holiday	
April 13	Cooperation	
April 15	Evolutionary Medicine	
April 17	Speciation	
April 20	Adaptive radiations	
April 22	Human Origins	

April 24	Human Diversity	
April 27	<b>FINAL EXAM</b> 201.006 8-11AM GS 200	
April 30	<b>FINAL EXAM</b> 201.007 12-3pm GS 200	

## Recitation Overview

### Recitation Meeting Times & Locations

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

601	Tues	12:30PM - 1:20PM	GSB 1378
602	Tues	5:00PM - 5:50PM	GSB 1378
603	Tues	6:00PM - 6:50PM	GSB 1378
604	Wed	9:05AM - 9:55AM	GSB 1377
605	Wed	11:15AM - 12:05PM	GSB 1377
606	Wed	12:20PM - 1:10PM	GSB 1377
607	Wed	1:25PM - 2:15PM	GSB 1377
608	Wed	2:30PM - 3:20PM	GSB 1377
701	Tues	4:00PM - 4:50PM	GSB 1377
702	Tues	5:00PM - 5:50PM	GSB 1377
703	Tues	6:00PM - 6:50PM	GSB 1377
704	Wed	10:10AM - 11:00AM	GSB 1378
705	Wed	11:15AM - 12:05PM	GSB 1378
706	Wed	12:20PM - 1:10PM	GSB 1378
707	Wed	5:00PM - 5:50PM	GSB 1378
708	Wed	6:00PM - 6:50PM	GSB 1378

## 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 January 13, 2020. 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. Failure to make up the missed work from a recitation from which you were excused will also result in a zero.

## 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
January 6	<b>NO RECITATION</b>
January 13	<b>Ecology of Disease:</b> Read article and answer questions posted in Recitation Resource folder
January 20	<b>Ecosystem response to nitrogen addition.</b> Read posted article on Sakai and complete the guided reading questions before coming to recitation
January 27	<b>Acclimation and Adaptation.</b> Complete the pre-recitation activity on Sakai before coming to class
February 3	<b>Geometric, Exponential and Logistic Population Growth.</b> You will explore the demographic processes that affect population size and the derivation of population growth models. Bring your computer to class.
February 10	<b>Evidence for Evolution Paper Discussion</b>
February 17	<b>How the Guppy Got its Spots.</b> SimUText Assignment TBA. Bring your laptop.
February 24	<b>Bottlenecked Ferrets.</b> No assignment before recitation. Bring your laptop.
March 2	<b>Exam 2 Practice.</b> Assignment: attempt to answer each of the practice questions on Sakai. We will go over the answers in recitation.
March 9	<b>No Recitation -- Spring Break</b>
March 16	<b>Lotka-Volterra Competition.</b> 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.
March 23	<b>Predation.</b> SimUText Isle Royale lab (Called "Recitation 10 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.

**March 30**      **Exam 3 Practice.** Show up to recitation having attempted each of the practice questions (posted on Sakai). We will go over the answers in recitation.

**April 6**      **Flowers and Trees.** Bring your laptop. We will review the SimUText Flowers and Trees assignment that you did for the lecture and get more practice constructing phylogenetic trees.

**April 13**      **Evolutionary Medicine Paper Discussion**

**April 20**      **Practice for Final Exam**

## 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 lecture slides on the course website after class). 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 the power point slides 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.** Make a diligent effort to attempt every question as it's asked, even if you think you might first write down the wrong answer. **Learning occurs when you make a mistake and correct it.** Too often students wait until we go over the answer and think to themselves "oh, I knew that!". This false perception of your own knowledge is problematic. Make mistakes and corrections in your notes each class period.

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 device 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 participation 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](http://deanofstudents.unc.edu)
- **Academic Advising:** Your academic advisers are familiar with all of the campus policies, procedures and requirements. Website: [advising.unc.edu](http://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](http://healthyheels.unc.edu)). Website: [campushealth.unc.edu/services/counseling-and-psychological-services](http://campushealth.unc.edu/services/counseling-and-psychological-services).

- **LGBT Center:** Provides educational services, resources and advocacy. Website: [lgbtq.unc.edu](http://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](http://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](http://isss.unc.edu)