

# Biology 101L Syllabus: Fall 2019

Sections 401-430; Coker Hall (Rooms 207, 208, and 209)

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## Laboratory Coordinator

Barbara Stegenga

## Email

bstegenga@bio.unc.edu

## Office Location

Coker Hall, 211

## Course Overview

This lab is intended to reinforce the topics covered in the lecture course and to expose students to collaboration and writing in the sciences. The course meets a Communication Intensive (CI) requirement and builds from writing outlines to lab reports and includes an essay. The course focuses on having students interpret data and think critically.

Each lab is taught by a teaching assistant. TAs do not have office hours since they don't have offices, but will make arrangements to meet with you if needed. Bring your lab manual to the first laboratory meeting. You will do a lab activity on this day. No check-in is required.

## Regulations

**Attendance:** Instructions and demonstrations begin on time, so plan to get to lab early. It is expected that you read through the lab activities in the lab manual before coming to lab so you are better prepared to work on the assignments and take the quizzes.

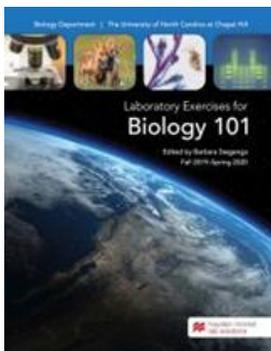
You must be excused by your lab instructor within 48 hours of any absence. Permission to make up the lab missed is granted for:

1. Your own illness, or illness or death in your family with a written note from you.
2. Official university function with written excuse from the official in charge.

If you know you have to miss a lab, you should immediately contact your TA (you should write down your TAs email as soon as you get it in lab). Do not assume an email has been received unless you receive a reply. You may only attend another lab to make up the one you missed if your TA has excused you. An **unexcused** lab deducts 10 points from your final grade and counts as a zero on any missed work.

## Required Lab Manual

Laboratory Exercises for Biology 101, *Barbara Stegenga*. Available in Student Stores



**Safety:** For safety reasons absolutely **NO FOOD or DRINK** is permitted in the laboratory rooms. Cell phones should be silenced during lab. Some lab exercises use dyes, stains and chemicals that might damage clothing. Pay attention to the lab you are doing each week so that you wear the appropriate clothing. You are encouraged to wear closed shoes. No visitors are allowed in the lab.

### Laboratory Grading



All written assignments (The Outline of Hand Washing Experiment, Procedures Outline of Photosynthesis Experiment, Draft of Introduction and Materials and Methods Section of the Photosynthesis Lab Report, Photosynthesis Lab Report, Adaptation Essay, Procedures Outline of Enzymes Experiment and Enzyme Lab Report) are turned in to and graded by the TAs. Each of these written assignments is to be your own creative work and no collaboration outside of lab in writing these is allowed. Students do a peer review of the Photosynthesis draft that the TA then collects and grades. Drafts that are revised and graded are handed back to the student for use in writing the lab reports. Lab reports are to be no more than 10 pages of text in length and no less than 5 pages of text. The outlines should be 1-2 pages in length and the draft should be 2-3 pages in length. All written assignments are typed and include the Honor Code Pledge. The lab TAs grade lab reports from other sections to rule out any biasness.

Your grade will be determined by tests, daily grades, grades on lab reports and on cleanup/group participation. All tests are cumulative. Any grading concerns (appeals) must be submitted within a week after the assignment is handed back in lab. The appeal must be typed and attached to the original assignment when turned in to the TA. Extra credit assignments are not allowed. If you are having trouble with assignments during lab, talk to your instructor first. You may also use tutoring services on campus for understanding concepts and the **Writing Center** for help with your written assignments. The Writing Center offers help with writing your lab report, however, they can get very full with appointments. They are unable to address the science but can give you feedback on the formatting and presentation of the content.

In addition to two tests, a quiz on Photosynthesis and Enzymes will be given before each of these labs begins. The quizzes are worth three points each and cover any material in the lab manual on the topic. The purpose of the

quizzes is to make sure you have read and prepared for the scheduled experiment. The oral quiz given during the Mammalian Anatomy lab is worth four points and requires students to identify internal anatomy of a dissected pig. This is an oral quiz with two minutes to identify four parts. The other assignments due during the semester are written assignments. Any assignment that is turned in late will have 10% of the value deducted for each day it is late. Grades are no longer negotiable as of the final exam day. Computer problems are not acceptable excuses for late work, therefore, you should always save your work frequently and in more than one location. Do not wait until the last minute to print your work.

Grades are determined based on the combined averages of all sections. The grade seen on Sakai is not accurate as it does not factor in the section averages. The total number of points you can earn for the course is 150.



*Lab Reports:* Lab reports are based on experiments performed in lab and should be written completely in your own words. Quotations should be cited. Reports should be comprehensive descriptions of the hypotheses of interest, experimental methods designed to test those hypotheses, results of the experiments, and interpretations of the results. Guidelines for writing a lab report are in the laboratory manual and include:

- Limitation of 10 pages of text exclusive of title page and graphs, charts and tables. Lab reports should not be less than 5 pages of text.
- All text should be double-spaced
- All margins should be 1 inch
- Written in past tense and in paragraph form with the following sections: Introduction, Materials and Methods, Results and Discussion.

To help you write a full scientific lab report, Biology 101 requires students to write an outline (1-2 pages long), a partial draft (2-3 pages long and typed) and critique another student's draft report of the photosynthesis experiment. An outline of the experimental procedure for the enzyme experiment is also required and should be 2-3 pages in length and typed. The outline should be written in standard hierarchical outline format using numbers and letters to identify sections and major points. The partial rough draft of the photosynthesis lab report should include the Introduction and Materials and Methods sections. The partial rough draft will then be critiqued in lab by your lab partners.

*Genetics Case Study Presentation:* You will work as a group with your lab partners to prepare and present a genetics case study from the lab manual. The assignment requires working outside of lab. Research on the genetic disorder assigned is done by all members of the group and is then presented in lab. Presentations are no longer than ten minutes and require participation by all students in the group.

*Adaptation Essay:* The writing assignment at the end of the Natural Selection and Adaptation laboratory is to demonstrate your understanding of the mechanisms of adaptation by mutation and natural selection, using examples from the lab. You will explore evolutionary mechanisms in this assignment and turn it in at the end of lab.

*Exams:* Biology 101L has two exams: a midterm and final. The midterm is one hour and covers material from the first lab through the photosynthesis lab. The final is one and a half hours and covers material from the entire semester, however, more emphasis is on the material after the midterm. Leaving the lab during an exam is not permitted unless excused by the TA. Cell phones must remain in the lab if leaving to use the restroom. Exams are practical and the format includes short answer, true/false, multiple choice and calculations.

*Studying for the exams:* In addition to studying terms throughout the manual and understanding the Learning Outcomes for each lab, it is important to know what you did in lab and why it is important. Ask yourself what was the goal of today's lab? How does it relate to what you studied in lecture? What was the purpose of using specific equipment? Peer tutoring is available in Dey Hall for students struggling with biological concepts.

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### **Understanding the UNC Honor Code**



The Biology 101 Lab course upholds the Honor Code within the University of North Carolina's Honor System. Academic progress in this course is determined by all graded work, therefore, no collaboration on any written work is allowed. We do encourage students to study together and collaborate on assignments that are not collected for grading or on assignments where permission to collaborate is given (Case Study

Presentation). Information about the Honor Code can be found at <https://studentconduct.unc.edu/instrument>.

So that there are no misunderstandings about academic integrity, we have provided examples of honor code violations below. In this course, students often work in pairs or groups to collect data. Students should not collaborate on any written assignments after leaving lab. Submitting work from other sources that is not properly referenced is also a violation of academic integrity. All work submitted must be your own independent written work. If you ever have trouble with an assignment, you should see your TA or instructor for help instead of asking help from your peers.

Possible honor code violations:

- Unauthorized collaboration on written assignments – all written work must be your own and written in your own words. Emailing, texting or using any other form of communication to discuss the writing of the assignment is prohibited.
- Plagiarism – practice of taking someone else’s work and passing them off as one’s own
- Cheating – Unauthorized behavior to gain an advantage (as on exams)
- Violation of procedures pertaining to the academic process (providing materials such as lab reports, exams, essays, quizzes and outlines) for others to use

Honor Code Pledge below should be included on the title page of LAB REPORTS.

**“I pledge that no unauthorized assistance has been given or received in the completion of this work. Experiments described were performed by me and/or my lab group and this write-up is entirely my own creative work.” Signature: \_\_\_\_\_**

For ALL OTHER WRITTEN ASSIGNMENTS, use the Honor Code pledge below:

**“I pledge that I have neither given nor received unauthorized assistance on this assignment and it is entirely my own creative work.” Signature: \_\_\_\_\_**

Copyright Information: All materials used in this course including notes and assignments are covered by copyrights and the University's Copyright Policy, which can be found at

<http://www.unc.edu/campus/policies/copyright%20policy%2000008319.pdf>

"STUDENT WORKS THAT CONSTITUTE NOTES OF CLASSROOM AND LABORATORY LECTURES AND EXERCISES SHALL NOT BE USED FOR COMMERCIAL PURPOSES BY THE STUDENT GENERATING SUCH NOTES."

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### Resources



For students who register through **Accessibility Resources and Service (ARS)** <https://ars.unc.edu/> for different types of disabilities, you will be given accommodations such as extended time on exams or help in the lab if needed. Please note that lab exams can only be taken in the lab and not at a specific testing location through ARS. The lab exams have a practical component to them which ARS cannot provide.

The Department of Biology values the perspectives of individuals from all backgrounds reflecting the diversity of our students. We broadly define diversity to include race, gender identity, national origin, ethnicity, religion, social class, age, sexual orientation, political background, and physical and learning ability. We strive to make this lab and this department an inclusive space for all students.

## Introduction to Principles of Biology 101 Laboratory Schedule

### Fall 2019 (See Complete Lab Syllabus for Laboratory Regulations)

Week	Laboratory Exercise	Assignment Due/Points
Aug 26-Aug 29	Process of Science, Microbiology & Microscopy	
Sept 2 – Sept 5	<b>NO LABS – LABOR DAY</b>	
Sept 9 – Sept 12	Cells (Eukaryotes), Gram Stain (Appendix)	Outline of Hand Washing Experiment <b>4pts</b>
Sept 16 – Sept 19	Photosynthesis Analysis	Procedures Outline <b>2pts</b> Quiz <b>3pts</b>
Sept 23 – Sept 26	Photosynthesis Experiments	Draft of Intro, Materials & Methods <b>2pts</b>
Sept 30 – Oct 3	MIDTERM	<b>30pts</b>
Oct 7 – Oct 10	Genetics: The Principles of Mendel & Molecular	Photosynthesis Lab Report <b>20pts</b>
Oct 14 – Oct 17	<b>NO LABS – FALL BREAK</b>	
Oct 21 – Oct 24	Natural Selection & Adaptation	Present Case Study <b>2pts</b>
Oct 28 – Oct 31	Enzymes	Enzymes Procedures Outline <b>2pts</b> Adaptation Essay <b>8pts</b> Enzymes Quiz <b>3pts</b>
Nov 4 – Nov 7	Mammalian Anatomy I	Enzyme Lab Report <b>20pts</b>
Nov 11 – Nov 14	Mammalian Anatomy II	Pig Part Quiz (Oral) <b>4pts</b>
Nov 18 – Nov 21	FINAL EXAM	<b>50pts</b>

**Lab Times:** Mondays & Wednesdays: 9:05am – 12:05pm, 1:25pm – 4:25pm, 5:00pm – 8:00pm  
 Tuesdays & Thursdays: 9:30am – 12:15pm, 1:00pm – 4:00pm, 5:00pm – 8:00pm

**Lab TAs:** The teaching assistants will provide their name and email address in lab. Sakai will be used for accessing slides and grades on assignments. The Sakai site is named BIOL101L.401.FA19 for all lab sections. *The lab coordinator reserves the right to make changes to the syllabus, including assignment due dates and test dates. These changes will be announced as early as possible.*