

# Spring 2012 Biology 101 Section 001 – Principles of Biology

## Dr. Erin Friedman

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## Course Hours

100 Hamilton Hall, M, W, F 9:00 – 9:50 am

## Office Hours

Monday 1:00 - 2:30 pm

Wednesday 11:00 - 1:00 pm

If you can't make it at these times, I am available to answer quick questions after class each day, and I am willing to discuss things by email or on the phone.

## Required Textbook and Online Mastering Biology Access

*Campbell Biology, Concepts and Connections*, 7<sup>th</sup> Edition, Reece *et al.*

Feel free to choose a physical book or the ebook (see Blackboard (Bb) for a full description) Access to Mastering Biology, the online activity and homework tool, is required. This is included with a NEW physical or ebook purchase or can be purchased separately if you buy a used book. Purchase instructions are posted on Bb.

Required reading assignments will be posted on your course outlines on Bb. You will be expected to have read these assignments prior to completing the Mastering Biology assignments, and they will be included on the exams.

## Course Website <http://blackboard.unc.edu>

For general announcements and assignments, visit the Blackboard (Bb) lecture site regularly. Lecture slides will be posted on Bb no later than the day before the lecture.

Posted lectures may differ slightly from the version that is presented in class. Additional documents will be posted on Bb, and any course announcements or class cancellations will be made through Bb.

**Participation:** I cannot *make* you come to class, pay attention, or discuss Biology with your classmates outside of class. However, because this is your education, it behooves you to do all of these things. As a reward for participating, you will see some small bonus incentives on your exams. How will I know you are participating in this large class? You will be using a program called PollEverywhere.com through your laptop or mobile phone. **See Bb for the required registration information. If you do not register correctly, you do not have the opportunity for bonus points.**

## What You Should Bring to Class Every Day:

1. Outlines and lecture slides from Bb (either printed or on laptop)
2. Extra blank paper for drawings, notes, activities etc. (or tablet computer for drawing)
3. Poll everywhere device (either your cell phone for texting or laptop/ipad/smartphone for web access)

## Grading

*Homework assignments on masteringbiology.com:* Homework assignments will be due every Sunday and Thursday night by 11:55 PM. Some assignments will take you as little as 15 minutes, and others will take over an hour with the animations and short tutorials interspersed in the homework. **It is your responsibility to start it in a timely fashion so that you finish it by 11:55 PM.** To be safe, assume your clock is 5 minutes slower than the official *Mastering Biology* time. Late homeworks will receive zero credit, even though you can still do them for practice. Do not count on the Mastering program to give an accurate account of how long an assignment will take. These estimates can be wildly off! There will be numerous graded at-home assignments. See Bb for how to register for masteringbiology.com. This component will comprise 10% of your final grade.

*Exams:* There will be three exams given during the regular semester. The format will be multiple choice, so bring two #2 pencils and scantrons to the exam. For all exams, you will need your PID number as identification on your exam sheet. Additionally, you may be asked to verify your identity, so it is required that you bring your one card to each exam. Failure to produce a one card if asked may result in a zero on that exam. The exams are not cumulative and will only cover the material specified on the course schedule (from reading assignments, Mastering homework, and lecture discussions/powerpoints). To see exam scores, log into student central and follow link for “results of machine scored exams”. Therefore, to succeed in this class, it behooves you to take each reading/homework seriously and actively engage in all class discussions. Also, see the last page of this syllabus. **NO MAKE-UP EXAMS! NO EXAMS GIVEN EARLY!** Your grade will be adjusted based on how many exams you take (see below).

*Final exam:* The final exam will be cumulative. The format will be the same as the previous exams.

*How your grade is determined:* (Note: there will be no changes to HOW your final average is calculated at the end of the semester...so please don't ask!)

If you take all three semester examinations:

**The lowest examination grade is dropped** and the total for the semester =  
 $(0.30 \times \text{exam}) + (0.30 \times \text{exam}) + (0.30 \times \text{final exam}) + (0.10 \text{ homework average})$

If you take any two semester examinations:

Both the exams you took will count and the total for the semester =  
 $(0.30 \times \text{exam}) + (0.30 \times \text{exam}) + (0.30 \times \text{final exam}) + (0.10 \text{ homework average})$

If you take one semester examination:

The total for the semester =  
 $(0.30 \times \text{exam}) + (0.60 \times \text{final exam}) + (0.10 \text{ homework average})$

If you take zero semester examinations: (*This rarely results in a passing grade—so, don't plan to do this.*)

The total for the semester =  
 $(0.90 \times \text{final exam}) + (0.10 \text{ homework average})$

Your final average will be converted to a letter grade based on your performance with respect to the overall course, and the scores will be curved such that the average grade is a C (i.e., if the course average is a 70, a 70 would be curved up to a C. The final grade conversion will not be lower than it would be on a 10-point scale (e.g., on a 10-point scale, an 80 is a B-). In Biology, the grade of C is average. In other words, the average student will get a C. More students will get a C than will get any other grade. It is not a bad thing to get a C in Biology 101. It should not dissuade you from being a Biology major or continuing in science. It means you did as well as the average Carolina student.

*Regrades:* Your exams will all be machine scored, and the correct answers will be posted on Bb after each exam. We have not yet had a problem with improperly scored exams; however, it is your responsibility to check your answers against the posted key and to notify me within 5 weekdays of any discrepancies.

### **Supplemental Instruction (SI)**

Your SI sessions will be offered 3 times a week. Each session will be scheduled for 1 hour. The times and location of these sessions will be posted on blackboard during the first week of class. You are not required to attend SI, but it is highly recommended because this is your opportunity to get more “one-on-one” attention for this course. I suggest you fit one into your schedule early in the semester and attend weekly as if it is a required class. The contact information for your SI instructors is listed above.

### **Hints for Doing Well in This Class**

*Textbook:* Read the textbook assignments, and be an active reader. For example, fill out the guided reading questions and add your own notes.

*Lecture:* Attend each lecture, pay attention, participate, and take good notes.

*Notes:* Review your notes multiple times in multiple ways, and try to set aside some time each day for this. Some suggestions include making notecards, combining your lecture and reading notes, reviewing Mastering assignments, writing your own test questions, explaining a concept to a friend, recreating illustrations, and connecting large concepts. Simply reading over your notes is not studying!

*Supplemental Instruction:* Make a point to attend SI each week. This will reinforce difficult concepts, connect concepts, present material in new ways, and allow you to ask questions in a smaller environment. Your SI instructors are very creative and are eager to help you master this material!

*Exams:* Take old semester exams as practice for the format of each exam. These are posted on Bb. The content of the old exams may differ significantly from what we covered; however, taking the exam should help you practice the type of questions that will be covered, and it will give you a feel for your timing. However, don't assume that doing well on a practice exam will mean that you have mastered this semester's material!

### **Honor Code**

The UNC Honor Code (<http://honor.unc.edu/honor/index.html>) will be in effect in this class. Although you are encouraged to discuss homework questions with one another, **submitted homework must be your own work**. Academic dishonesty will not be tolerated.

## Course Schedule/Topics for Discussion

For each assignment, you have a “Guided Reading Assignment” with the same title that you should do before doing your Mastering Homework (see your outlines for the reading assignments). Mastering will reinforce what you have independently learned from the reading. If you simply hunt and peck through the text to find the answers without doing the reading, you are missing a large chunk of information I expect you to be familiar with. You are ultimately responsible for the information in “Guided Reading”. I cannot cover everything in the class discussions. Homework assignments are shown in red.

M 1/9: Introduction and begin Process of Science

W 1/11: Process of Science (cont.)

Due Thursday 1/12 by 11:55 PM: Two Mastering assignments: 1) Introduction to Mastering and 2) Exploring Life and the Process of Science

### UNIT I: CELL BIOLOGY

F 1/13: Macromolecules

Sunday 1/15 HW- Cells (extension... due Tues 1/17)

M 1/16 : NO CLASS – MLK Day

W 1/18: Macromolecules (cont.)

Thursday 1/19 HW: Membrane Structure and Function

F 1/20: Cells

Sunday 1/22 HW: Enzymes and Energy

M 1/23: Cells cont. and Membrane Structure and Function

W 1/25: Enzymes, Energy and begin Cellular Respiration

Thursday 1/26 HW: Cellular Respiration

F 1/27: Cellular Respiration (cont.)

Sunday 1/29 HW: Photosynthesis

M 1/30: Cell Respiration/Photosynthesis

W 2/1: Photosynthesis (cont.)

Thursday 2/2 HW: Unit 1 Review Questions

### UNIT II: GENETICS

F 2/3: Mitosis and Cancer

Sunday 2/5 HW: Mitosis, Cancer and Meiosis (*be sure to read two articles on Bb*).

**M 2/6: EXAM I (all material covered in class from 1/9-2/1)**

W 2/8: Cancer cont. and Meiosis

Thursday 2/9 HW: Patterns in Inheritance I

F 2/10: Complete Meiosis and begin Inherited Traits

Sunday 2/12 HW: Patterns in Inheritance II and Nondisjunction

M 2/13: Inherited Traits (cont.)

W 2/15: Chromosomes and Human Inheritance

Thursday 2/16 HW: DNA Structure and Function

F 2/17: DNA Structure and Function

Sunday 2/19 HW: From DNA to Protein

M 2/20: Gene Expression: From DNA to RNA to Protein

W 2/22: From DNA to Protein (cont.)

Thursday 2/23 HW: Is Stem Cell Research Moving Forward? (*listen/read transcripts from NPR before completing homework*).

F 2/24: Stem Cells  
Sunday 2/26 HW: Unit 2 Review Qs

### **UNIT III: EVOLUTION/DIVERSITY/ECOLOGY**

M 2/27: Process of Evolution

**W 2/29: EXAM II (all unit 2 material covered in class from 2/6-2/24)**

Thursday 10/16 HW: How Populations Evolve

F 3/2: Process of Evolution (cont.)

M-F 3/5-3/9 **SPRING BREAK**; *Last day to drop class or declare it P/F is March 13*

M 3/12: The Origin of Species

Sunday 3/11 HW: Extension: until Tues 3/13: Two assignments: 1) Origin of Species and 2) Evolution of Vertebrate Diversity

W 3/14: Evolution of Vertebrate Diversity

F 3/16: Evolution of Vertebrate Diversity (cont.)

Sunday 3/18 HW: Population Ecology

M 3/19: Population Ecology

W 3/21: Plant Predators

Thursday 3/22 HW: Interactions within Communities

F 3/23: Interactions within Communities

### **UNIT IV: ANIMAL STRUCTURE AND FUNCTION**

Sunday 3/25 HW: Animal Tissues and Homeostasis

M 3/26: Animal Tissues and Homeostasis

W 3/28: Digestion

Thursday 3/29 HW: Digestion

F 3/30: Digestion (cont.)

Sunday 4/1 HW: Circulation 1

M 4/2: Circulation

W 4/4: Circulation (cont.)

Thursday 4/5 HW: Circulation 2

F 4/6: **NO CLASS**

M 4/9: Circulation (cont.) and begin The Immune System

Sunday 4/8 HW: Exam 3 Review Qs (extension: due Tues 4/10)

W 4/11: **Exam III (all material from W 10/12 – F 11/16)**

Thursday 4/12 HW: The Immune System

F 4/13: The Immune System

Sunday 4/15 HW: Human Reproduction

M 4/16: The Immune System (cont.) begin Human Reproduction

### **UNIT V: Reproduction**

W 4/18: Human Reproduction

Thursday 4/19: No homework

F 4/20: Human Reproduction cont.

Sunday 4/22 HW: Plant Reproduction

M 4/23: Plant Reproduction

W 4/25: LAST CLASS!

**F 4/17: Cumulative FINAL EXAM 8-10:30 AM in Hamilton 100**

*\*please bring UNC one card to show photo ID when you leave.*