

# **Principles of Biology (Biol 101)**

## **2011 Summer I**

### **Class Time & Location**

Time: MTWRF 11:30 AM – 1:00 PM

Location: Coker Hall 201

### **Instructor**

#### **Dr. Kenny Kuo**

Office: 303 Fordham Hall

E-mail: [kennykuo@email.unc.edu](mailto:kennykuo@email.unc.edu)

Phone: 843-9401

Office hours: Tue 1:00 PM – 3:00 PM (512 Fordham Hall)

Thu 1:00 PM – 3:00 PM (212 Fordham Hall)

Or by appointment

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

#### **Chelsea Steele**

E-mail: [steelc@email.unc.edu](mailto:steelc@email.unc.edu)

SI times/locations: TBA (see blackboard under the SI folder)

### **Required Course Textbook**

Campbell Biology, Concepts and Applications, 7th Edition by Reece et. al.  
Required reading: Particular chapters are required (see course schedule for details) and you will be expected to have read them for homework assignments, Team-based learning activities and exams. You may use the ebook if you prefer.

### **Course Website**

<http://blackboard.unc.edu/> (you will need your onyen to log on)

This site will have postings from my lectures such as outlines, power point slides, and supplemental material I mention in lecture. I will also post announcements regarding student concerns on this site. **It is your responsibility to check it regularly.**

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

Your SI sessions will be offered 2 times a week. Each session will be scheduled for 1 hour. The times and location of these sessions will be posted on blackboard. You are not required to attend SI, but it is highly recommended, since this is your opportunity to get more “one-on-one” attention for this course. Your SI instructor’s contact information is listed above.

## Course Goals

1. This course should provide you with the basic language and principles of biology.
2. This course should excite you about biology.
3. This course should prepare you to succeed in future science courses. You should learn how to be an active learner in the lecture hall and you should learn how to actively study.

## “Mastering Biolog” Homework (10% of your grade)

Mastering Biology is an interactive online tutorial and homework program provided for you by your textbook. Homeworks will be based on your assigned reading (see course schedule for details.) The homeworks are intended to prepare you:

1. to become an active reader/learner.
2. to participate in class for interactive learning.
3. to actively participate in group discussion.

Homeworks will be due every night (except Fridays and Saturdays) **by 11:55 PM**. It is your responsibility to do the reading and then answer the homework on Mastering Biology. To be safe, you want to start it in a timely fashion, so that you finish it by 11:55 PM. Late homeworks will receive zero credit, even though you can still do them for practice. **See blackboard for how to register for Mastering Biology.com**

## Team-Base Learning

I will be using this active learning approach intermittently throughout the class. This teaching strategy involves dividing the class into 7-member teams. The teams will be formed the first day of class and remain the same for the entire course. Before a given Team-based learning (TBL) session you will be given an out of class reading assignment (see course schedule for details.). During the TBL session:

1. A short individual assessment will be given in class. This is design to assess your individual preparedness for the TBL session.
2. Following the individual assessment, the same assessment will be done as a team. Following the team assessment, we will discuss the assessment and any issues with the content will be dealt with.
3. Next a group learning problem will be given to each team followed by a class discussion of the problem.

Your performance in TBL will be 10% of your grade and will be based on your performance on the individual assessment, group assessment, group learning problem and peer evaluation. This strategy is designed to help you to:

1. Apply the course concepts in thinking and problem-solving.
2. Develop interpersonal and team interaction skills.
3. Become an active and life-long learner.

### **What you should bring to class everyday**

1. Outlines from blackboard (either printed or on laptop).
2. Extra blank paper for drawings, notes, activities etc.
3. Most important of all: YOU (Yes, that's right. Not just your physical body, but also your mind, your heart and your soul).

### **Exams**

There will be two exams and a final exam given for this class. The format will be multiple choices. For all exams, you will need:

1. Scantron sheets with letters (A-E). (You can be purchase them from student stores)
2. Two #2 pencils.
3. One-card. You will need 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.

Test material to study: chapter reading outlines/homeworks, lecture activities, and power point slides. 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!**

***All work done in this class must be carried out within the letter and spirit of the UNC Honor Code. You must sign a pledge on all graded work certifying that no unauthorized assistance has been given or received. You are expected to maintain the confidentiality of examinations by divulging no information about any examination to a student who has not yet taken that exam. You are also responsible for consulting with your professors if you are unclear about the meaning of plagiarism or about whether any particular act on your part constitutes plagiarism. Please talk with the professor if you have any questions about how the Honor Code pertains to this course.***

## Grading

Homework	10%
TBL	10%
Group participation	5%
Exam I	25%
Exam II	25%
Final exam	25%

## Course Schedule/Topics

	Date	Topic	Reading & Homework
M	May 9	-	1.8-1.9
T	May 10	Introduction & The Process of Science	2.5-2.9 & 3
W	May 11	Chemical Bonds & Macromolecules	4.3-4.22 (TBL)
R	May 12	<b>TBL: Cell Structures</b>	5
F	May 13	Membranes, Energy & Enzymes	6
M	May 16	Cellular Respiration	7
T	May 17	Photosynthesis	-
W	May 18	<b>Exam I</b>	8.1-8.10 & 11.16-11.19
R	May 19	Mitosis & Cancer	8.11-8.23
F	May 20	Meiosis	9.1-9.8 & 9.16-9.23 (TBL)
M	May 23	<b>TBL: Patterns of Inheritance</b>	10.1-10.5
T	May 24	DNA Structure and Function	10.6-10.16 & 11.4
W	May 25	From DNA to Protein	13
R	May 26	Process of Evolution	14
F	May 27	The Origin of Species	-
M	May 30	Memorial Day Holiday	-
T	May 31	<b>Exam II</b>	20
W	June 1	Animal Structure and Function	21.2, 21.4-21.13
R	June 2	Digestion System	21.14-21.22 (TBL)
F	June 3	<b>TBL: Nutrition</b>	23.3-23.15
M	June 6	Circulatory System	22.6-22.12
T	June 7	Respiratory System	27.1-27.8
W	June 8	Animal Reproduction	27.9-27.18
R	June 9	Embryonic Development	31.9-31.15 & 12.8-12.9
F	June 10	Plant Reproduction	-
M	June 13	<b>Final Exam (11:30-2:30)</b>	

### **Hints for doing well in this class:**

- Summer class is not like your regular semester class. It is intensive and fast-paced. You need to spend time everyday to read the textbook for each corresponding homework. Take your time and **be an active reader**.
- How to be an active reader? Fill out the class outlines and add your own notes to them.
- **Review your notes multiple times in multiple ways!** The more times you review biology, the better it will stick. 1) read it in the book 2) hear it in class 3) review your notes 4) review all power points 5) make flashcards 6) rewrite outlines 7) teach a friend or 8) explain it to the wall! 9) make up quizzes for yourself or a friend that you can do later.
- **REVIEW YOUR NOTES AFTER EACH CLASS!** How long will this take? Set aside 15 minutes and make this a HABIT!! I guarantee that it will pay off.
- **Attend each lecture, and pay attention.** Drink coffee if necessary! Take good notes to help yourself retain the information.
- Find a classmate or a group of classmates to study with. Talking about material will significantly enhance your learning, and it is a good way to be sure you took comprehensive notes. Don't *rely* on your group...you need to study alone before meeting with them!
- **"Reading over your notes" is NOT studying.** You need to "quiz" yourself in some way to see what you are retaining from your "reading". Have you tried drawing the illustrations? Have you constructed flow charts or concept maps? Have you tried explaining the concept aloud? Have you made paper cut-outs and tried acting out the process? Have you compared and contrasted major concepts/processes that you have learned? Have you used the book's website for quiz questions?
- Discuss material and concerns with me during office hours, after class, or by email. I am a really nice person...nobody to be scared of!! *But... you need to come see me well in advance of an exam. Come see me after the first exam if you did not do well. What suggestions can I have for you if you wait until you did poorly on all three exams?*
- Uphold the honor code. Observing the Honor Code means that during exams, you may **not** look at another person's exam; talk to anyone, either in person or by cell phone or email; or use the Internet, another person's calculator, or any other text or notes. Please report any violations that you observe.
- Get plenty of sleep before an exam! If you have followed my advice, you should be reviewing notes and relaxing the night before an exam.