

BIOL101: General Biology
Spring 2017

Dr. C. Young

Lecture/Discussion: T 5:30-9:45, Room 420

Office hours: M 3:00-5:00, T 1:00-4:30, Room 411-17

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Home Page: <http://staffwww.fullcoll.edu/cyoung>

MasteringBiology: <http://www.masteringbiology.com> (BIOL101YOUNGSp17)

Labs:

CRN23565: M 6:20-9:30, Room 422, Dr. Young

CRN24483: M 6:20-9:30, Room 429, Atousa Doust (atosam2000@yahoo.com)

CRN23566: Th 6:20-9:30, Room 422, Tu Do (tdo@fullcoll.edu)

TEXT: *Campbell Essential Biology with Physiology* by Simon, Dickey, Reece, and Hogan. 5th ed., Pearson Publishing, 2016 with MasteringBiology access (ISBN 9780321967503). Access to MasteringBiology is **required** for the course. It provides access to quizzes, problem-solving videos, and animations. There will also be graded MasteringBiology homework for each chapter.

LAB TEXT: Labs are available for download from MyGateway.

COURSE OBJECTIVES: This course is designed to **challenge** you to develop a better understanding of some of the processes required for life. It will deal with the diversity of living organisms as well as the complex interactions that exist between different populations. The idea is to better prepare you for this, the biological century.

STUDENT LEARNING OUTCOMES

1. **Outcome:** Upon successful completion of BIOL101F, General Biology, the student will be able to collect and analyze data using standard scientific techniques and methodology.
2. **Outcome:** Upon successful completion of BIOL101F, General Biology, the student will be able to evaluate the relationships between various components of an ecosystem.
3. **Outcome:** Upon successful completion of BIOL101F, General Biology, the student will be able to summarize the relationships between genetic variation, natural selection, and speciation in evolutionary terms.

NAVIGATING MY WEBSITE: From my home page, scroll down to the bottom and click on BIOL101. This will take you to the all-important *Course Guide Page*. From here, you can access *Course Announcements*, *Class Presentations* outlines, *MasteringBiology*, *Links*, and the course *Syllabus*.

EVALUATION: The course includes a discussion component (exams and assignments = 65%), MasteringBiology online homework component (10%), and a laboratory component (25%). Your final grade will be based on this combination with two very important stipulations. **Your final grade will not be more than one letter grade higher than the discussion grade! You must complete the lab section of the course with a C (65%) or better in order to pass the class! Failure to do so will result in a D grade or lower.**

GRADE DISTRIBUTION FOR THE COURSE:

Lecture/Discussion (Exams and Assignments)	65%
MasteringBiology	10%
Lab	25%

Proposed Percentage Grade Scale (Subject to change) A = 90+; B = 80 – 89; C = 65 – 79; D = 55 – 64

CLASS PARTICIPATION: Your attendance and participation in class are absolutely required. There will be a MasteringBiology assignment due for each chapter that we cover during the semester. I will explain how these are laid out during the first class meeting. Although much of the important material will be found in your text, some will come straight from class. Since you won't always know what to expect, it is important to show up for every class and pay attention. **Excessive absences will affect your grade!**

TIPS FOR SUCCESS

- Become part of a study group.
- Read the chapter assignment before coming to class and complete the pre-class assignment.
- Take the post-class quiz after you have studied the material.
- Pay attention to figures in the book. These are valuable learning tools.
- Keep an index card file of words you don't know. Write definitions on the backs of the cards.
- Ask questions in class.
- Consider my office hours a private or small-group tutoring session and use them to help yourself before you fall behind.
- Modify the material to suit your learning style: make up songs, tell stories, draw pictures - anything to make it easier to learn.
- Check the course web site often. You will find everything from class notes to assignments to fun links.
- Pay attention and take notes during the multimedia presentations (videos, video segments, animations, etc.). These have been carefully chosen and are not simply "filler". You are responsible for any information provided during these segments.

PEANUTS Classics By Charles M. Schulz



INSTRUCTOR INFORMATION: As your instructor, I thought you should know a little about me. I am married and my wife teaches Life Science at Valencia High School in Placentia. I have three children, a son 24, a daughter 22, and my youngest daughter 16 years old. We have four dogs, all mutts, all adopted. We also have 1 guinea pig, 1 snake, 1 bearded dragon, and 2 horses. I grew up in San Francisco, received my B.A. in Bacteriology and Immunology from the University of California, Berkeley, my Ph.D. in Microbiology from Columbia University, and did post-doctoral research at the University of Washington. I moved to southern California to take a position at California State University, Fullerton and joined the faculty of Fullerton College in 1996. I teach *General Biology* and *Genetics & Evolutionary Biology* at Fullerton College. When I'm not trying to stay in shape, I try to spend time with my wife and kids. I enjoy working with power tools, especially with wood. Oh, in my spare time, I am constantly striving to stay current and bring the newest, most exciting information into the classroom. I keep up with news on the web and have physical subscriptions to Science and Science News, among others. I am also on the Teacher Advisory Board for the Understanding Evolution web site (<http://evolution.berkeley.edu>).

COURSE CONDUCT: Please refer to the Fullerton College catalog for information on academic honesty.

The use of electronic devices of any sort (unless you receive prior clearance from me) is not allowed during class. You are more than welcome to use them before or after class or during break. Once class starts, the devices should be turned off and cleared off of your desks. During lecture/discussion exams, the only calculators you can use are dedicated calculators. Cell phones and MP3 players are not allowed.

Any number of unexcused absences beyond two will result in your being dropped from the course. If you miss a discussion, it is solely your responsibility to find out what went on in class and to keep up with the material. To help with this, I will post my discussion notes and the assignment on the course website. **Keep in mind that the notes are a skeleton outline of the material covered and cannot possibly be expected to substitute for coming to class.** They are meant to serve as a guide for your study. If you miss a discussion exam with a legitimate reason, you will be allowed to take a make-up exam at a later date. You will need to provide complete documentation of the reason for the absence. You may only take one make-up exam during the semester.

Attendance is a matter of individual choice in this class. However, a strong association exists between attendance and grades. Students who miss regularly *rarely* do well in the course, and I hope you don't decide to test this already proven hypothesis.

Tardiness will not be tolerated. Every two tardies count as one absence. Lots of stuff goes on at the beginning of class, including important announcements. If you miss this crucial time period, you are likely to be lost the rest of the class.

Late assignments will be penalized. Assignments are due when I collect them. If you do not turn in your assignment when I collect it, it will be considered late, no matter how soon it is after the assignments are collected. This will result in a minimum 10% penalty. You will have a specific deadline to finish each assignment. For assignments that you turn in, the following penalty will be assessed for any late assignments:

an additional 10% deducted per day late (Note: This is per day, not per class day.)

Participation, not merely attendance is mandatory. Under Title 5 of the California Administrative Code, Section 58004: A student may be dropped if no longer participating in the course. No longer participating includes but is not limited to excessive absences.

Emergency Response. Please take note of the safety features in and close to your classroom, as well as study the posted evacuation route. The most direct route of egress may not be the safest because of the existence of roofing tiles or other potentially hazardous conditions. Similarly, running out of the building can also be dangerous during severe earthquakes. During strong quakes the recommended response is to duck--cover--and hold until the shaking stops. Follow the guidance of your instructor. You are asked to go to the designated assembly area. Your cooperation during emergencies can minimize the possibility of injury to yourself and to others.

Fullerton College is committed to providing reasonable accommodations for students with disabilities upon request of the student (in a timely fashion) and upon verification of disability.

Dates	Discussion Topic	Lab Exercise
1. Jan 31	Introduction/ 1. Biology Today 2. Essential Chemistry for Biology	(A) Laboratory Safety (B) Data Tables & Graphs Applying the Scientific Method
2. Feb 7	3. The Molecules of Life 4. A Tour of the Cell	(E) The Microscope
3. Feb 14	Feb 12 Last day to drop classes without a "W" 5. The Working Cell 6. Cellular Respiration: Obtaining Energy from Food	(F) Cell Processes
Feb 20 4. Feb 21	Presidents Day – No Classes 7. Photosynthesis: Using Light to Make Food 22. Nutrition and Digestion	No Labs
5. Feb 28	Exam #1 (Chapters 1-7, 22) 8. Cellular Reproduction: Cells from Cells	(D) Digestion
6. Mar 7	8. Cellular Reproduction: Cells from Cells 9. Patterns of Inheritance	(H) Mitotic Cell Cycle (J) Chromosomal Problems and Karyotypes
7. Mar 14	9. Patterns of Inheritance 10. The Structure and Function of DNA	(I) Meiotic Cell Cycle (K) Human Genetics and Create-A-Kid (L) Genetics Problems
8. Mar 21	11. How Genes Are Controlled 12. DNA Technology	(G) Protein Synthesis
9. Mar 28	Exam #2 (Chapters 8-12) 13. How Populations Evolve	(R) CSUF Arboretum Field Trip
10. Apr 4	13. How Populations Evolve	(M) Plant Reproduction
Apr 10-14	Spring Recess – No Classes	
11. Apr 18	14. How Biological Diversity Evolves	(P) Natural Selection
12. Apr 25	17. The Evolution of Animals 26. Reproduction and Development	Hominid Evolution
13. May 2	Apr 30 Last day to withdraw from classes Exam #3 (Chapters 13-14, 17, 26) 18. An Introduction to Ecology and the Biosphere	(T) Cabrillo Marine Aquarium Field Trip
14. May 9	19. Population Ecology	(N) Interaction of Predator Prey Populations
15. May 16	20. Communities and Ecosystems	Lab Exam
16. May 23	Exam #4 (Chapters 18-20)	

Grade Distribution for Laboratory

Remember that the laboratory component of your grade accounts for 25% of your total course grade. The laboratory component consists of 9 quizzes at 5 points each, 2 field trips at 30 points each, and lab reports at 10 points each. If you miss a lab, you must check with me on how to make it up. **You must complete the lab section of the course with a C (65%) or better in order to pass the class! If you do not, you will receive a D or lower for the course.**

Assignments	Points
Laboratory Quizzes (9 x 5 points)	45
Data Tables & Graphs (B)	10
Applying the Scientific Method (B)	10
The Microscope (E)	10
Cell Processes (F)	10
Digestion (D)	10
Mitotic Cell Cycle (H)	10
Chromosomal Problems and Karyotypes (J)	10
Meiotic Cell Cycle (I)	10
Human Genetics and Create-A-Kid (K)	10
Genetics Problems (L)	10
Protein Synthesis and Mutations (G)	10
Plant Reproduction (M)	10
Natural Selection (P)	10
Hominid Evolution	10
Interaction of Predator Prey Populations (N)	10
Cabrillo Marine Aquarium Field Trip (T)	30
CSUF Arboretum Field Trip (R)	30
Total Lab Points	255