

# BIOLOGY 100: General Biology

## Fall 2010 Syllabus

**Instructor:** Dr. Lee McClenaghan  
**Office:** Physical Sciences, Room 257 (PS-257)  
**Phone:** (619) 594-3751  
**Email:** lmcclena@sciences.sdsu.edu  
**Office Hrs:** 1400-1450 Monday through Thursday or by appointment

If my scheduled office hours are not convenient for you, please make an appointment. **The best way to reach me is by e-mail**, but feel free to talk with me after class or phone me at my office. If you are having problems in class, please see me as soon as possible. I will do everything I can to help you with your problems, but don't wait until mid-semester or immediately before exams to contact me.

### COURSE FORMAT

General Biology (Biology 100) is an introductory biology course for non-majors. The class meets for 75 minutes twice a week (1230-1345 TTh) in ENS-280. Lectures will be supplemented with readings from the text. Four lecture periods have been set aside for exams and you can expect unannounced, in-class quizzes throughout the semester. A tentative lecture and examination schedule are provided below.

### LEARNING OBJECTIVES

The objectives of this course are to provide students with a working knowledge and an understanding of

- 1) How energy is used and transformed in cells, organisms and ecosystems.
- 2) Basic patterns of Mendelian inheritance and modern biotechnology protocols.
- 3) The principle of evolution and the evolutionary history of the major groups of living organisms.
- 4) Basic ecological principles and their application to human impacts on the environment.

### COURSE MATERIALS

**Blackboard** (<http://blackboard.sdsu.edu/>) will be used for electronic posting of course announcements, lecture slides, grades, and other materials.

#### **Text Book (required)**

Phelan, J. 2010. *What Is life? A Guide to Biology*. W.H. Freeman & Co.

#### **Scantrons (required)**

These testing forms are available at the Aztec bookstore. **NOTE: You must have the correct forms.** You'll need one scantron form (#882-ES) and #2 pencils and a **good** eraser for each exam (4 scantrons total). Small scantron forms (#815 or #815-E) are required for in-class quizzes. **The #815 forms come in packs of 15; bring them to each class meeting starting the second week of class.**

### POWERPOINT SLIDES

I will post the Powerpoint slides for each lecture in Powerpoint and PDF format on the Blackboard website 24 hours before class. I am providing these as a note-taking aid. **NOTE: These slides are not the total lecture but are topic outlines to be used as an aid in note taking during lecture. They do NOT take the place of coming to class.**

### ADDING AND DROPPING THE CLASS

**September 13** is the last day to drop this or any other class, while **September 15** is the last day to add classes. Make sure you take care of **all** of your adding and dropping by these dates.

Crashers must **legibly** write their name and Red ID numbers on "crash cards" provided on the first day of class. Crash cards will not be accepted after the second day of lecture (**Thursday, September 2**). Crash cards will be drawn at random as space becomes

available through drops during the add/drop period. Students whose names have been drawn will be announced at the beginning of each class period and they can obtain their Regline add code after class. The last day for adding crashers will be **Tuesday, September 14**. **Note: You must be present on the day your name is called or your add code will be given to another student.**

### **EXAMINATIONS, QUIZZES, AND GRADING**

Your grade will be determined by your performance on examinations and in-class quizzes. Exams will be multiple-choice and will consist of questions taken from my lecture notes. You will **not** be tested on material from the book unless it has been discussed in lecture. Four lecture exams have been scheduled. These four exams are of equal weight (100 points each). Each exam will be graded on a curve based on overall class performance. Exam keys will be put on the class Blackboard site immediately after each exam. The scantron grading machine sometimes makes errors. If you believe there were errors made in the grading of your exam, you may request that it be re-graded by hand. **You have ONE WEEK after the scores for the exam have been posted on Blackboard to request a re-grade of your scantron.**

Here is the examination schedule for the semester:

**Exam 1: September 23**

**Exam 2: October 19**

**Exam 3: November 18**

**Exam 4: December 16 (Note: This exam begins at 1300)**

If illness or other serious problems beyond your control prevent you from taking an exam, you are expected to provide some kind of verification of the reason, such as a note from Student Health Services. **Make-up exams (upon verified excused absence) will consist of essay and short-answer questions. You must contact me no later than one day after the regular exam with a valid excuse to be accorded the privilege of taking a make-up exam.**

In addition to exams, in-class quizzes will also be given and will make up about 15% of your grade. There will be 8 **unannounced** quizzes and each quiz will be worth 10 points. **Your lowest quiz score will be dropped. There are no makeup quizzes regardless of your reason for missing the quiz.**

Your semester grade will be based upon the **total number of points** that you accumulate on exams and your best 7 quizzes. A total of 470 points are possible for the semester. Plus/minus grades be assigned at the end of the semester.

I may give the entire class an opportunity to earn “extra credit” from time to time. **However, there’s no such thing as “extra credit” on an individual basis.**

### **CHEATING**

It is hoped that cheating will not be a problem in this course. Nevertheless, to avoid any possibility of you not recognizing what the consequences are, this is my policy: **If you are caught cheating on an exam or quiz, you will receive a zero on the exam or quiz. In addition, the event may be reported to campus judicial authorities, which may lead to additional actions by the University. NOTE: Turning in work for other students in their absence from class IS CHEATING and will be dealt with as such.**

### **HOW TO SUCCEED IN BIOLOGY 100**

- 1. Make coming to class a habit.** Scientific studies show that students who come to class get better grades than those who do not. **NOTE:** Simply obtaining the lecture slides from the class’s Blackboard site is **NOT** a substitute for coming to class!
- 2. Make use of my office hours to get help if you need it.** If you are not free during my office hours, make an appointment with me for some time that is convenient for both of us.
- 3. Be on time to class.** Class runs from 1230 to 1345. Be ready to begin **promptly** at 1230 and don't plan on leaving before 1345.
- 4. Be attentive in class.** Please sit quietly, pay attention and take notes. Turn off your cell phones and remove your iPod earbuds. Distractions and disruptions during lecture will not be tolerated; **I will ask you to leave if, in my judgment, you are being disruptive.**
- 5. Ask questions.** If something in lecture isn’t clear, don’t be afraid to ask questions. Undoubtedly, someone else has the same question.

6. **Be organized.** Use a binder or folder to keep your notes, handouts, scantrons and any other course materials together all in one place. Bring your binder to class.

7. **Be prepared.** Read the assigned readings from the text and download the lecture slides **BEFORE** class.

## **BIOLOGY 100 CALENDAR – Fall 2010**

<b>Week #</b>	<b>Date</b>	<b>Topic</b>	<b>Text Readings*</b>
<b>1</b>	August 31	Lecture 1: Introduction to Bio 100; Scientific Thinking	Chpt. 1
	September 2	Lecture 2: Chemistry -- Part 1	Chpt. 2: 36-49
<b>2</b>	7	Lecture 3: Chemistry – Part 2	Chpt. 2: 50-71
	9	Lecture 4: Cells – Part 1	Chpt. 3: 76 - 100
<b>3</b>	14	Lecture 5: Cells – Part 2	Chpt. 3: 103 - 121
	16	Lecture 6: Energy -- Photosynthesis	Chpt. 4: 122 - 142
<b>4</b>	21	Lecture 7: Energy – Cellular Respiration	Chpt. 4: 143 - 157
	23	<b>EXAM 1</b>	
<b>5</b>	28	Lecture 8: DNA	Chpt. 5: 158 - 178
	30	Lecture 9: Biotechnology	Chpt. 5: 179 - 207
<b>6</b>	October 5	Lecture 10: Chromosomes and Cell Division – Part 1	Chpt. 6: 208 - 234
	7	Lecture 11: Chromosomes and Cell Division – Part 2	Chpt. 6: 235 - 247
<b>7</b>	12	Lecture 12: Mendelian Inheritance – Part 1	Chpt. 7: 248 - 264
	14	Lecture 13: Mendelian Inheritance – Part 2	Chpt. 7: 265 - 281
<b>8</b>	19	<b>EXAM 2</b>	
	21	Lecture 14: Evolution and Natural Selection – Part 1	Chpt. 8: 282 - 303
<b>9</b>	26	Lecture 15: Evolution and Natural Selection – Part 2	Chpt. 8: 304 - 327
	28	Lecture 16: The Origin and Diversification of Life on Earth	Chpt. 10: 374 - 398
<b>10</b>	November 2	Lecture 17: Animal Diversification – Part 1	Chpt. 11: 406 - 426
	4	Lecture 18: Animal Diversification – Part 2	Chpt. 11: 427 - 445
<b>11</b>	9	Lecture 19: Plant and Fungi Diversification	Chpt. 12
	11	<b>VETERAN'S DAY – NO CLASS</b>	
<b>12</b>	16	Lecture 20: Evolution and Diversity Among the Microbes	Chpt. 13: 482 - 503
	18	<b>EXAM 3</b>	
<b>13</b>	23	Lecture 21: Population Ecology – Part 1	Chpt. 14: 514 - 531
	25	<b>THANKSGIVING VACATION – NO CLASS</b>	
<b>14</b>	30	Lecture 22: Population Ecology – Part 2	Chpt. 14: 538 - 547
	December 2	Lecture 23: Ecosystems and Communities – Part 1	Chpt. 15: 548 - 568
<b>15</b>	7	Lecture 24: Ecosystems and Communities – Part 2	Chpt. 15: 569 - 585
	9	Lecture 25: Conservation and Diversity	Chpt. 16: 586 - 613
	16	<b>EXAM 4 (1300 - 1500)</b>	

\*Phelan, J. 2010. *What Is life? A Guide to Biology*. W.H. Freeman & Co.