

**Biology 10 - Introduction to the Principles of Biology**

Spring 2015 Section 6305

Lecture:	Lab:	Office Hours:
Tuesday and Thursday 5:30pm – 7:00pm PC 657 - Call Building	Tuesday 7:00pm-10:00pm PC 313	Thursday 7:00pm-8:30pm PC 667 - Call Building

**Instructor:** Alexandra “Zannie” Dallara, M.Sc.

- **Location:** Petaluma Campus 675 Call Hall, Phone: \_\_\_\_\_ Email: \_\_\_\_\_
- **Homepage:** <http://zannedallara.weebly.com/bio10--srjc.html>
- **Office Hours:** Thursday from 7:00pm- 8:30pm

**Course Description:** This is an introductory lecture and laboratory course for biology majors and non-majors. The course will cover the key concepts and vocabulary in: scientific method, ecology, biodiversity, physiology and anatomy, chemistry of life, cell and molecular biology, genetics, and evolution. The official course outline of record may be found here:

[https://portal.santarosa.edu/SRweb/SR\\_CourseOutlines.aspx?CVID=23972&Semester=20137](https://portal.santarosa.edu/SRweb/SR_CourseOutlines.aspx?CVID=23972&Semester=20137) If you have not taken a science class recently or have tried and failed bio 10 in the past, please consider taking Biology 100 first; see me for details.

**Time Commitment:** For all college classes you are expected to complete approximately 2-3 hours per week outside of class for every 1 hour spent in lecture. For Bio 10, that is approximately **6-9 hours EVERY WEEK of study time**. Depending on your level of preparation that may or may not be enough time for you to earn the grade you want.

**Student Learning Outcomes (what you will be able to do by the end of the semester):**

1. Apply the scientific method to investigating and evaluating biological phenomena.
2. Summarize the concept of evolution including the historical development, evidence and mechanisms, and apply these to patterns of biodiversity.
3. Integrate basic principles as they apply to biological systems, such as cellular processes, anatomy, physiology, genetics, ecology, and evolution.
4. Investigate how humans are impacted by ecological processes and relationships and how humans affect these.
5. Perform laboratory techniques, including microscopy, with a high level of expertise without assistance or instruction.

**Texts:** Simon, Dickey, and Reese, Campbell Essential Biology with Physiology, 4<sup>th</sup> Ed. with Mastering Biology Access  
Petaluma Biology 10 Laboratory Manual

**Material:** 1 Blue Book – Bluebooks should be brought to each class and are due the day of each Lecture Exam. You will be asked to write/draw in them during or outside of class throughout the semester.

**Mastering Biology:** You will be completing assignments at the Mastering Biology website associated with your textbook. The website will list the assignments and the due dates. If your textbook does not come with an access code you can buy access online when you register on the website. In addition, there is a “study area” section with lots of *excellent study resources* – I recommend that you use these on a weekly basis. Register at <http://www.masteringbiology.com/> using the course title: Dallara Spring 2015 and the course ID: ZDallara25226. Please note: **you must use your name as you are registered at the JC, no nicknames and use only the last 4 digits or your student ID**. You will be able to access this website and complete your homework from computers in the school computer lab or the library. **Therefore, computer problems are not an excuse for late homework**. Late homework is penalized 20% for each day late. *Time estimate on syllabus are rough approximation to help you budget your time.*

**Attendance:** If a student misses more than two class sessions, please be aware that on the third absence, s/he may be dropped from the class; however, this is not a guarantee that a student will be dropped. Students who choose not to continue the course are responsible for turning in a drop card to the admissions office or online. Failure to officially drop the course may result in an "F". If you miss work after the deadline to drop and have an acceptable reason (like hospitalization), an "Incomplete" may be more appropriate. When in doubt, ask.

**Exams:** You may make-up an exam only under very extraordinary circumstances. You must contact the instructor with your request before the exam begins. Instructor approval and written verification (such as a doctor’s note) is required. You must take the final to pass the class. If you are too sick to take the final you may request an incomplete.

**Grading:** Your grade will be based on your total number of points as compared to the total number of points available for the entire semester. The following is an approximate break down of the points:

	<b>Each</b>	<b>Total</b>
4 Lecture Exams	100	400
3 Lab Exams	100	300
Lab Pre Quizzes and Assignments	varies	50
Mastering Biology	10	150
Bluebook Questions	varies	100
1 Cumulative Final Exam	200	200
<b>Total</b>		<b>1200 points</b>

A = 90-100%; B = 80-89%; C = 70-79%; D = 60-69%; F = <60%

**Labs:** The lab is an integral part of this course. **You are expected to read both the lab manual assignment and the text reading assignment prior to coming to lab.** Use the information from your reading and from lecture to fill in some of the answers to the lab before arriving. Please bring your entire lab manual to each lab, we sometimes need other sections other than the current week. Your textbook is not required for lab, but can occasionally be helpful. If you miss a lab it is **sometimes** possible to attend another lab section for that week, otherwise, you will not be able to make up the assignment for that lab, you will need to email other professors in advance to arrange this, as seating is limited. Please talk to me before attending another section. If you have more than three lab absences you may be dropped from the course and you will not earn an A in the course, regardless of other points accumulated.

**Lab Safety:** Safety protocols will be explained in lab on the first day. Failure to follow safety procedures or mishandling of laboratory equipment will result in suspension of up to two lab periods. Repeated offences will result in being expelled from the class.

**Cheating:** I expect students to comply with universal guidelines of academic integrity. This refers to cheating on exams as well as plagiarism (copying the work of others and turning it in as your own). All parties involved in cheating or plagiarism will be given a zero for that assignment and may be suspended from class for two class periods. You may not wear headphones or use or look at any electronic device (including cell phones) during exams; doing so will be deemed cheating and you will receive zero points for the exam and be reported to the Dean. Details of the student code of conduct can be found here: [http://www.santarosa.edu/for\\_students/rules-regulations/scs/section1.shtml](http://www.santarosa.edu/for_students/rules-regulations/scs/section1.shtml)

**Classroom Etiquette:** All students shall comply with the standards of conduct for the college. If a student disrupts the learning environment in any way, s/he will be asked to leave the class for two class meetings and will be subject to further disciplinary action. **Please turn off all cell phones before coming into class.** If you wish to use a laptop to take notes do not use the web or other programs in class. This is disruptive to students around you. If you use your laptop in this way you will lose the option of using your laptop in class. Everyone using a computer to take notes must sit in the back row of the class to minimize disruption.

#### **Emergency Evacuation Plan:**

In the event of an emergency during class that requires evacuation of the building, please leave the class immediately, but calmly. We will meet outside the classroom. I will take roll to make sure everyone got out safely so please check in with me immediately. If you are a student with a disability who may need assistance in an evacuation, please see me during my office hours as soon as possible so we can discuss an evacuation plan.

#### **Accommodations for Students with Disabilities:**

If you need disability related accommodations for this class, such as a note taker, test taking services, special furniture, use of service animal, etc., please provide the Authorization for Academic Accommodations (AAA letter) from the Disability Resources Department (DRD) to me as soon as possible. You may also speak with me privately during office hours about your accommodations. If you have not received authorization from DRD, it is recommended that you contact them directly (778-2491), as soon as possible to better ensure such accommodations are implemented in a timely fashion.

#### **Use of E-mail:**

E-mail is an effective way to handle brief communications, but is not effective to communicate concepts, major ideas, or to discuss a student's performance in the course. Thus:

##### E-mail should be used to:

- Point out any errors or oversights made by the instructor during lectures.
- Set up an appointment to talk with the instructor if you cannot meet during regularly scheduled office hours.
- Ask questions about lecture material that can be answered in one to two brief sentences.

Tentative Lecture Schedule

Week	Dates	Lecture topics	Reading Assignment	Mastering Biology HW
1	1/13, 1/15	How Science Works Overview of Biology	Chapter 1	Intro to Mastering & Science of Life
2	1/20, 1/22	Chemistry	Chapters 2 & 3	Chemistry *Longer assignment
3	1/27, 1/29	Cells & Cell Membranes	Chapters 4, 5 and Page 306	Cells
4	2/3, 2/5	<b>Tuesday: Exam 1 (Ch. 1-4)</b> Thursday: Cell Respiration	Chapters 6	Membranes
5	2/10, 2/12	Tuesday: Photosynthesis <b>Thursday: No lecture</b>	Chapters 7	Cell Respiration & Photosynthesis
6	2/7, 2/19	DNA structure and function	Chapter 10	DNA
7	2/24, 2/26	Tuesday: Mitosis, Cancer <b>Thursday: Exam 2 (Ch. 5, 6, 7, 10)</b>	Chapter 8 & pages 211-215	<b>No Homework</b>
8	3/3, 3/5	Meiosis and Inheritance	Chapters 8 & 9	Mitosis/Meiosis
9	3/10, 3/12	Inheritance and Evolution	Chapters 9 & 13	Genetics
<b>10</b>	<b>3/17, 3/19</b>	<b>Spring Break</b>		<b>No Homework</b>
11	3/24, 3/26	Evolution	Chapters 13 & 14	Evolution 1
12	3/31, 4/2	Evolution	Pages 294 -298, 311	Evolution 2
13	4/7, 4/9	Populations Community Biology and Food Webs	Chapter 19, 20	<b>No Homework</b>
14	4/14, 4/16	<b>Tuesday: Exam 3 (Ch. 8, 9, 13, 14, 15)</b> Thursday: Nutrient Cycles & Human Impacts	Pages 373-379, 391-399 and Chapter 20	Ecology 1
15	4/21, 4/23	More Nutrient Cycles and Human Impacts	Pages 373-379, 391-399 and Chapter 20	Ecology 2 *Longer assignment
16	4/28, 4/30	Plant Anatomy Plant Physiology	Chapter 28 Chapter 29	Plants
17	5/5, 5/7	Tuesday: Animal Homeostasis and Digestion <b>Thursday: Exam 4 (Ch.18, 19, 20, 28, 29)</b>	Chapters 21 & 22	Animals 1 *Longer assignment
18	5/12, 5/14	Animal Gas Exchange and Circulation	Chapter 23	Animals 2
19	<b>5/22</b>	<b>FINAL EXAM:</b> <b>Tuesday, May 19, 4 – 6:45pm</b>		<b>No Homework</b>

**Lab Schedule**

<b>Week</b>	<b>Dates</b>	<b>Laboratory topic</b>	<b>Text Reading Assignment</b>
1	1/13	Introduction, safety, Biology Concepts	Chapter 1
2	1/20	How to read a textbook and study tools and techniques	
3	1/27	Water	Chapter 2 and pages 84-85
4	2/3	Enzymes	Pages 80-82
5	2/10	1 <sup>st</sup> ½: Observation of Life on campus (mandatory) 2 <sup>nd</sup> ½: Study group for exam (optional)	
6	2/17	<b>Lab Exam 1</b>	
7	2/24	Microscopes and Cells	Chapters 4
8	3/3	Mitosis, microscope practical (10 lab points)	Chapters 8
9	3/10	Meiosis	Chapters 8
10	<b>3/17</b>	<b>Spring Break</b>	
11	3/24	<b>Lab Exam 2</b>	
12	3/31	Genetics (10 lab points)	Chapter 9
13	4/7	Evolution	Chapter 13
14	4/14	Protist and Pondwater (10 lab points)	Pages 306-311
15	4/21	Fungi	Pages 315-316, 328 - 332
16	4/28	Plant	Pages 316-326, Chapter 28, and pages 628-631
17	5/5	Animal	Pages 340-352, and Chapters 21-23
18	5/12	<b>Lab Exam 3</b> (Fungi, Plants, Animals only)	
19	5/19	<b>No labs – finals week</b>	