

BIO 10: Introduction to Principles of Biology
Sections 1035 and 1036

INSTRUCTOR: Dr. Caryl Chlan

Office Hours:

Tuesday and Thursday from 4:30 to 5:30 PM or by appointment

Office: Baker Hall Room 1812B

E-mail: cchlan@santarosa.edu

INSTRUCTIONAL AIDE (Laboratory): Ms. Debbie Eakins Office: Room 1869A Baker Hall Phone: 707-521-7842

E-mail: deakins2@santarosa.edu

LECTURE :

Lark Hall Room 2004

Tuesday and Thursday

5:30 - 7:00 PM

LAB INSTRUCTION:

Baker Hall Room 1869

Tuesday (section 1035) OR Thursday (section 1036)

7:00- 10:00 PM

TEXTS (Required):

Campbell Essential Biology with Physiology, 5th Ed. **With Mastering Biology**

Bio 10 Laboratory Manual Santa Rosa Campus

SUPPLIES: Required for Lecture Exams – 5 Scantrons and a #2 pencil. Colored pencils recommended for lab.

COURSE DESCRIPTION:

Introductory course in biology including: scientific method, ecology, biodiversity, physiology and anatomy, chemistry of life, cell and molecular biology,

Transfer Credit: CSU; UC.

Recommended: Eligibility for ENGL 100 or ESL 100.

Objectives:

Upon completion of this course, student will be able to:

1. Apply the scientific method to biological investigation.
2. Apply laboratory techniques, including proper microscope use, to observing and experimenting with biological phenomena.
3. Describe the role of biotic and/or abiotic factors to structuring biomes, ecosystems, communities, and populations, and how humans interact with these systems.
4. Correlate the structure and function of plant and animal organ systems, organs, tissues and cells.
5. Compare and contrast the cell structure and function of prokaryotic and eukaryotic cells and of plant and animal cells.
6. Explain the relationships between the structure of atoms, molecules, and biological polymers, and their significance to cells, physiology, genetics, and evolution.

7. Integrate knowledge of molecular genetics, inheritance, and cell division (mitosis and meiosis), and apply these to evolutionary biology.
8. Relate the mechanisms of evolution, adaptation, and speciation.
9. Recognize major evolutionary patterns and adaptations in the biodiversity of major taxa (domains, kingdoms, and phyla).
10. Describe the values, themes, methods, and history of biology and relate them to a course of study in the major.

GRADING SYSTEM	EACH	TOTAL
TEST or ASSIGNMENT		
Lab Exams:		300
Concepts, Water, Enzymes	100 pts	
Mitosis, Meiosis, Genetics, Evolution	100 pts	
Protists, Fungi, Plants, Animals	100 pts	
Lecture Exams:		400
Chemistry & Cells	100 pts	
Genetics	100 pts	
Evolution	100 pts	
Physiology	100 pts	
Final Exam:	100 pts	200
Ecology	100 pts	
Comprehensive	100 pts	
Assignments/Other		
On-line Quizzes Mastering Biology Site (13 quizzes, top 11 count, multiple choice, variable number of questions)	10 pts	110
Homework Assignments Mastering Biology Site	Variable	150
Lab Manual (checked throughout the semester)		20
Lab Quizzes (12)	1-3 pts	20
Participation & Attendance		100
Semester Total:		1300

Exam points are awarded as a percent of the highest score.

Homework points are awarded based on the total number of correct answers divided by the total number of incorrect answers for the semester.

Lab quizzes will be administered at the start of lab and test your understanding of the lab for that day (please read the lab and prepare in ADVANCE).

Lab Manuals will be checked throughout the semester for completeness and accuracy.

Final grades are calculated as a percent of the total possible points as follows:

100-90%	A
89-80%	B
79-70%	C
69-60%	D
59-0%	F

EXPECTATIONS

Attendance: Required. Tardiness or leaving early is disruptive to the class. Email me if you cannot attend due to illness or some other emergency. Missed classes and tardiness will affect your participation grade, as well as your exam performance. Repeated occurrences may result in your being dropped as per the SRJC policy.

DISTRICT POLICY ON ATTENDANCE:

It shall be the policy of the Sonoma County Junior College District to maintain an attendance policy and procedures consistent with State and local requirements.

1. Attendance

- a. Students are expected to attend all sessions of the course in which they are enrolled.
- b. Any student with excessive absences may be dropped from the class.

2. Excessive Absence Defined

- a. A student may be dropped from any class when that student's absences exceed ten percent (10%) of the total hours of class time.
- b. Instructors shall state in each course syllabus what constitutes excessive absence for that course.

3. Excused vs. Unexcused absences

- a. Unless state or federal law requires that the absence be deemed excused, no instructor shall be required to make a distinction between excused and unexcused absences.
- b. If individual Instructors wish to distinguish between excused and unexcused absences the instructor shall state in each course syllabus all criteria for any excused absences in addition to those required by state or federal law.

4. Nonattendance

- a. Students who fail to attend the first two class meetings of a full semester course, or the first class meeting for classes that meet once a week may be dropped by the instructor. For classes that meet online, students must log on and initiate participation by 11:59 p.m. of the third day from the official start date of the class.
- b. Faculty are required to drop all No-Show students by the Census Date of each census course. A No-Show is an enrolled student who has not attended any class meeting of the course at any time, or who has not contacted the instructor to make arrangements to remain enrolled in the course. For classes that meet online, a No-Show is an enrolled student who has not logged on and initiated active participation by 11:59 p.m. of the third day from the official start date of the class.

ABSENCE PENALTIES IN THIS CLASS:

Lecture Attendance: Sign in sheets will be provided at the front of the room before each lecture. Please sign in when you enter the room. Your attendance along with your participation will contribute to your participation and attendance score (100 total possible points). After two unexcused lecture absences, you will be penalized 5 points for each additional lecture absence.

Lab attendance directly affects your grade in this class. In order to be eligible for an "A", you cannot miss more than **one** lab. You cannot miss more than **2 labs** to be eligible for a "B" and **3 labs** for a "C". Please note that attendance is not the only thing you must do to earn these grades; it is simply a minimum qualification.

Lecture Exams: There are NO makeup exams, however you may arrange to take a lecture exam in advance (adequate notice must be given).

Lab Exams: There are NO makeup Lab Exams. These are set up for all sections ONLY during the scheduled week.

Note! Anyone missing the FINAL EXAM (for any reason) may fail regardless of previous scores.

Exam Review: It is the policy of the Biological Sciences Department to not return exams to students. Once graded, your exams will be filed in my office and available for review during the semester. After each exam is graded you have one week to hand in any rebuttals, in writing, concerning the grading of that exam. After that week, your grade will remain as given. Once final course grades are submitted, students have two months to request an appointment to review any exam for the previous semester. After that time exams will be shredded.

Code of Conduct: Please come to class prepared to learn and participate. Coming or going after class has started is disruptive. Students who disrupt the learning of others, may be asked to leave the classroom and may

be disciplined. Inappropriate behavior, cheating, or plagiarism will not be tolerated. Those who cheat or plagiarize will be penalized points and may not receive credit for their assignment or they may receive disciplinary action that will result in an “F” in the course.

Cell Phones: PLEASE be sure they're turned off during class!

If you are having problems keeping up with class, please come to see me before you get too far behind!

Special Considerations: If you have any special needs or concerns please do not hesitate to let me know. We will be working in a hands-on environment. Therefore, challenges may arise that do not generally come up in a lecture classroom. During labs, close physical proximity and possible physical contact may occur (especially microscope labs). Please let me know if this makes you uncomfortable.

Accommodations for Students with Disabilities

If you need disability related accommodations for this class, such as a note taker, test taking services, special furniture, etc., please provide the Authorization for Academic Accommodations (AAA letter) from the Disability Resources Department (DRD) to the instructor as soon as possible. You may also speak with the instructor privately during office hours about your accommodations.

Academic Integrity

All written work is to be original; plagiarism of any kind will result in a failing grade on that assignment. Students who plagiarize or cheat may be suspended – for one or two class meetings by the instructor – and referred to the Conduct Dean for discipline sanction, in cases of egregious violation. Please see [Policy 3.11 for Academic Integrity](#).

Student Grievances: All necessary forms for these procedures can be found on the college website at http://www.santarosa.edu/for_students/rules-regulations/ and at the Student Affairs Office on either the Santa Rosa or Petaluma Campus

Assignments:

Textbook Reading: Read your text before coming to a lecture on that topic. This will help you understand the lectures and help you keep up with the pace. Read and learn thoroughly the pages in your text that refer directly to lecture material or study guide questions. Material not covered in either of these ways should be looked upon as reference material.

Laboratory Material and Lab Quizzes: There will be a brief quiz at the beginning of each lab. These quizzes will mostly pertain to that day's lab. The Lab Manual is used to test lab concepts. Answer all questions carefully. Unless indicated, lab material may be helpful for lecture exams, but will not be directly tested. However, most material will be covered in lab exams. Your lab manuals will be graded and checked throughout the semester.

Lecture On-line Quizzes and Homework: The Mastering Biology site provides a student learning area with videos, flash cards and lots of helpful information. In addition, the Mastering Biology site is where you will complete your quizzes and homework assignments.

Lecture Quizzes will be open for set periods of time. Quizzes are closed book and timed. There number of questions will range between 10 and 15 questions. You will have 15 minutes to complete the quiz once you start. There will be 13 on-line quizzes. The top 11 quizzes will count towards your grade. Please note that each quiz is open for a limited time and closes on a specific date and time. Try to complete the quizzes as soon as we've covered material that the quiz pertains to. This will help you do well on the quizzes and be better prepared for exams.

Lecture Homework: There will be weekly homework assignments on the Mastering Biology site. Homework assignments are open book – you can use whatever resources you like to answer the questions. Please note that each homework assignment is due at a certain date and time. If you do not have reliable internet access at home, computers are available to you on campus. Please let me know if you have any problem accessing the quizzes or need access to a computer.

Participation and Effort: Ultimately your success in school (or a job) will result from your willingness to be actively engaged in your work. 100 points will be given for your active participation in lab and lecture. This includes: attentiveness, participation in group and individual exercises; attendance and staying until the end of class; and completion of laboratory preparation assignments or quizzes.

In Case of Emergency...

Evacuation/Fire Alarm Sounding: Audible alarm means exit the building. We will meet in the grass area between Lark and Baker Hall and I will take roll. **DO NOT LEAVE** the designated area before you have been accounted for.

Earthquakes: Take shelter under desk, table or door frame to protect yourself. After shaking stops – if there is damage – collect your belongings and evacuate the area. Again, we will meet in the pre-determined area and I will take roll.

Power Outage: If there is a power outage for longer than 10 minutes, we will evacuate the building and meet at our predetermined area. At this point we will attempt to locate another classroom with power to resume class.

Reporting an Emergency: Call the Junior College Police Dept. dispatch at 527-1000.

How to Succeed in this Class:

If you are having problems keeping up with class, please come to see me before you get too far behind!

1. Read assigned pages before you come to class. This will help you understand and keep up in lecture. Attend every class and stay through the end of the period. Be alert and take good notes.
2. **As soon as possible after every class review, organize your notes** and add extra notes from your reading. Study for understanding concepts, not just memorization of facts. Review vocabulary terms and write definitions of those that are unfamiliar. The unfamiliar ones you know you need to look up, but can you really define the familiar terms? Write down any questions you have on the class material that day. Try to answer your own questions if you can, using the textbook or support materials. If you can't find the answers save the questions to ask the instructor or classmate.
3. **Use the class study guide.** The Study Guide questions tell you what you are expected to know for the exams. After each class, use lecture notes and the textbook to answer all the questions to summarize the information. **DO NOT leave this until the weekend or night before the exam!** Having a regular study partner or group can be very helpful; that way you can work through the questions together and compare notes. Before taking the exam be sure to practice answering study guide questions in the style they will occur on the exam.
4. **Look for the deeper meaning/context of material.** Try to link new topics with previous ones. Fill out study tables in the lab manual. Look for patterns that may emerge. How do concepts tie together? Draw "big picture" diagrams or concept maps to show the linkages.
5. **Test yourself with a study partner.** Ask questions of each other. **If you say: "I know it, but I can't explain it," then you don't know it. "Knowing" is the ability to explain to others, not the ability to understand when others explain to you.**
6. **Use the lab manual:** the manual contains material you should learn and questions to help you comprehend the material. Lab material complements the lecture material and will be examined in lab quizzes and lab exams. Extra time in lab may also be needed to review slides and other materials.
7. **Use other resources:** use your class online resources, practice using online lab quizzes, YouTube videos, Google images and other web-related materials. The Mastering Biology website has practice tests, animations, videos, MP3 mini lectures, etc. If you find something especially helpful, please share your discovery with your classmates and me.
8. **Be an active learner:** if you do not understand a concept, make a concerted effort to overcome the obstacle. Ask questions. You can ask in class, or ask your study partners, or visit me in my office hours. Gather more information: if your textbook is unhelpful, try the internet.

Above all, strive to do your very best in this class!

Tentative Class Schedule

Date	Topics	Text Chapter	Lab Topics
21-Aug	Introduction to Biology	Chapter 1	Lab 1. Biological Concepts
23-Aug	Essential Chemistry	Chapter 2	
28-Aug	Molecules of life	Chapter 3	Lab 2. Water
30-Aug	Introduction to Cells and Microscopy	Chapter 4	
4-Sep	No Class - PDA		No Lab
6-Sep	Cell Structure & Function	Chapter 4	
11-Sep	Cellular Energy & Enzymes	Chapter 5	Lab 3. Enzymes
13-Sep	Cellular Respiration	Chapter 6	
18-Sep	Photosynthesis	Chapter 7	Lab 4. Microscopes/Cells
20-Sep	Lecture Exam 1: Cells and Chemistry		
21-Sep	Lab Exam Self-Guided Review		Room 1869 9am – 2 pm
25-Sep	Cell Reproduction	Chapter 8	Lab Exam 1
27-Sep	Mendelian Genetics	Chapter 9	
2-Oct	Post-Mendelian Genetics	Chapter 9	Lab 5. Mitosis
4-Oct	DNA Replication/ Protein Synthesis	Chapter 10	

9-Oct	Lecture Exam 2: Genetics		Lab 6. Meiosis
11-Oct	Intro to Evolution	Chapter 13	
16-Oct	Microevolution	Chapter 13	Lab 7. Genetics
18-Oct	Macroevolution	Chapter 14	
23-Oct	Lecture Exam 3: Evolution		Lab 8. Evolution
25-Oct	Plant Tissues and Function	Chapters 16 and 28	
26-Oct	Lab Exam Self-Guided Review		Room 1869 9 am – 2 pm
30-Oct	Plant Nutrition	Chapter 29	Lab Exam 2
1-Nov	Animal Diversity	Chapter 17	
6-Nov	Animal Diversity	Chapter 17	9A. Protists 9B. Pond Water
8-Nov	Animal Nutrition /Gas Exchange	Chapter 22	
13-Nov	Human Digestion/Circulation	Chapter 23	Lab 10. Plants
15-Nov	Climate and Biomes	Chapter 18	
20-Nov	Lecture Exam 4: Physiology		No Lab
22-Nov	No Class – Thanksgiving		
27-Nov	Terrestrial Biomes	Chapter 18	Lab 11. Fungi
29-Nov	Aquatic Biomes	Chapter 18	
4-Dec	Ecosystems	Chapter 20	Lab 12. Animals

6-Dec	Community Structure	Chapter 20	
7-Dec	Lab Exam Self-Guided Review		Room 1869 9 am – 2 pm
11-Dec	Community Dynamics	Chapter 20	Lab Exam 3
13-Dec	Population Ecology	Chapter 19	
Final Exam Tuesday, December 18 4 – 6:45pm			

Lab Exam Reviews: These are self-guided reviews with sample questions and examples from labs. Lab assistance may or may not be available, but Ms. Debbie Eakins is generally there 9-10:30 and 1-2. You should bring your lab books and notes. This is an excellent time for study groups.