

Instructor: Dr. Paul Bradley (he/him)
Office Hours: 1pm – 4pm Tuesdays (other days/times available by appointment via email)
Use the following link to setup an appointment: <https://calendly.com/paulwbradley>
Email: pbradley@santarosa.edu
Lecture: Monday/Wednesday 5:30pm – 6:50pm (in Baker Hall 1809 on Santa Rosa Campus)
Lab: Monday -or- Wednesday 7:00pm – 9:50pm (in Baker Hall 1869 on Santa Rosa Campus)
Materials/Texts: Concepts of Biology by OpenStax available online on Canvas
Lab Manual available at SRJC Bookstore

Course Description: This one semester introductory course focuses on the study of biology including: scientific method, ecology, biodiversity, physiology and anatomy, chemistry of life, cell and molecular biology, genetics, and evolution.

Expected Learning Outcomes: By the end of the semester students will be able to:

- Explain the core concepts of biology (evolution and adaptation, structure and function, systems and biology, flow of information, flow of energy and matter) as they apply to appropriate topics of cell and molecular biology, organismal biology, genetics, evolution, and ecology.
- Integrate related core concepts.
- Demonstrate skill in core competencies.

Objectives: During this course, student will:

- Discuss relationship and connections between the five core concepts.
- Evaluate how evidence for evolution relates to the scientific process and be able to construct an argument to counter common evolution misconceptions.
- Apply the core concept of evolution and adaptation to all course content, cell and molecular biology, genetics, organismal, and ecology.
- Integrate microevolutionary mechanisms with macroevolution.
- Correlate the structure and function of plant and animal organ systems, organs, tissues and cells.
- Compare and contrast the cell structure and function of prokaryotic and eukaryotic cells and of plant and animal cells.
- Integrate concepts of diffusion and osmosis with cell membrane structure and mechanisms of transport.
- Explain the relationships between the structure of atoms, molecules, and biological polymers, and their significance to cells, physiology, genetics, and evolution.
- Integrate knowledge of molecular genetics, inheritance, and cell division (mitosis and meiosis), and apply these to evolutionary biology.
- Apply understanding of negative feedback loops at the cellular and physiological level.
- Integrate concepts of molecular, cellular, physiological, and ecological energy flow and nutrient cycling.
- Apply knowledge of ecological principles to current ecological problems.
- Integrate different levels of the biological hierarchy and examine emergent properties.
- Test ideas with evidence, applying the scientific process to biological investigation including data analysis and interpretation.
- Evaluate evidence as part of a scientific community.
- Apply laboratory techniques, including proper microscope use, to observe and experiment with biological phenomena.

Expectations: To help create a successful classroom environment it is my expectation that you will:

- Arrive to class on time prepared to actively participate in all classroom activities. This includes doing all assigned readings and homework before lecture. Be prepared to be called on for answers.
- Recognize and appreciate the uniqueness of your classmates and be respectful of each other's views and opinions.
- Work collaboratively with fellow classmates.
- Come to me with any comments, questions, or concerns as soon as they arise.

<u>Course Evaluation & Grading</u>		<u>Grade Distribution</u>	
Exams	700 pts	100 – 90%	A
Written Assignments	125 pts	90 – 80%	B
Open-note (not open book) quizzes	50 pts	80 – 70%	C
Participation/Daily Writing	25 pts	70 – 55%	D
Total	900 points	55 – 0%	F

Late work: Late work will be accepted however I will set late penalties as part of the arrangements, based on what is warranted by the circumstances. Learning during a pandemic has many challenges and I am ready to work with you to ensure that your domestic circumstances, health concerns, and other pandemic related responsibilities have a minimal impact on your educational success this semester.

Academic Integrity: Plagiarism and cheating are serious offenses that undermine the integrity of any academic institution. Plagiarism occurs when an idea is taken from a source other than the writer without citing that source. Quoting and paraphrasing ideas without citations are a form of plagiarism. Plagiarism and cheating on exams and/or assignments will most often result in an automatic “F” for the assignment and, as required, a report to the college. Students are held accountable to SRJC’s Student Conduct Code: <https://rightsresponsibilities.santarosa.edu/academic-integrity>

Lectures & Canvas Use: PowerPoint slide sets for the lectures will be available on Canvas. Please familiarize yourself with Canvas, communication regarding the course will be based there, and you will upload some assignments there. You can access the course Canvas site using <https://canvas.santarosa.edu>. If you need more information, please contact Information Technology (<https://it.santarosa.edu>).

Access and Inclusion: I strive to make my classroom accessible and welcoming to all. If you have concerns about your learning style in this course, please feel free to speak to me about it and/or visit the Disability Resources Department (DRD). Students with accommodations approved through DRD are responsible for contacting me during the first week to discuss these accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DRD should contact DRD immediately: Room 4844 (3rd floor), Bertolini Student Center – (707) 527-4278.

Attendance: Attendance is required. However, if something arises in your life that prevents you from attending class ***such as getting sick***, please reach out to me to let me know. A portion of your grade is based on positive participation and attendance. Points will be deducted for excess absences from lab and lecture. Please contact me in advance if you cannot attend class due to illness or emergency. Any student who fails to attend the first-class meeting will be dropped. Additionally, you may be dropped from the class if your absences exceed 10% of the total hours of class time (10.5 hours). ***When you are absent, it is your responsibility to obtain notes from a classmate, review my lecture slides, and/or complete the assigned homework for the day you missed. After you have reviewed all that on your own, you are welcome to come see me in office hours with any questions or clarifications.***

Diversity, Inclusion, & Classroom etiquette: If you go by a name that is different from what is on the official course roster, please just let me know. Also, please don't hesitate to help me know your pronouns. Mine are he, him, his. Whereas I do not expect this to be a problem, any disruption to the learning environment will not be tolerated and will be referred to the college for disciplinary action. Examples of behaviors that interfere with student learning and are inappropriate during class: arriving late or leaving early, using cell phones or other electronic devices, packing up before the end of class, chatting with neighbors, and any offensive or demeaning behavior.

Pomo & Coast Miwok Land Acknowledgements: I want to, and hope you will too, acknowledge that the land on which the Santa Rosa Junior College campuses sit upon are the traditional and unceded territories of the Pomo People in Santa Rosa and the Coast Miwok People in Petaluma. I hope we all can pay respect to the citizens of these nations, both past and present, and their continuing relationship to their ancestral lands. By incorporating this land acknowledgement into our syllabus, I intend to encourage students to think about their connection to the land and to the Pomo and Coast Miwok people. Recognizing the land is an expression of gratitude and appreciation to those whose territory our campus resides on, and a way of honoring the Indigenous people who have been living and working on the land from time immemorial. It is important to understand the long-standing history that has brought us to reside on the land, and to seek to understand your place within that history. Land acknowledgements like this do not exist in a past tense, or historical context: colonialism is a current ongoing process, and we need to build our mindfulness of our present participation.

Additionally, this land acknowledgement calls us to commit to continuing to learn how to be better stewards of the land we inhabit. We recognize that every member of the Santa Rosa Junior College community has benefitted, and continues to benefit, from the use and occupation of this land since the institution's founding in 1918. Consistent with our values of community and diversity, we have a responsibility to acknowledge and make visible the colleges' relationship to Native peoples. By offering this Land Acknowledgement, we affirm Indigenous sovereignty and will work to hold Santa Rosa Junior College more accountable to the needs of American Indian and Indigenous peoples.

Pandemic Wellness: During this time of the COVID19 global pandemic, as a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, trauma, alcohol and other drug concerns, difficulty concentrating, and/or lack of motivation. These types of stressful events or mental health concerns can lead to diminished academic performance or reduce a student's ability to participate in daily activities. SRJC Student Health Services offers services to assist all students if you or a friend are experiencing concerns. Please visit SHS website at:
<https://shs.santarosa.edu/health-promotion-wellness>

Food Insecurity: Any student who faces challenges securing food or reliable housing, which may affect their academic performance in this course, is urged to contact the Student Resource Center so that you can gain access to resources on or off campus:
<https://sustainability.santarosa.edu/equity>
(click on either the "Basic Needs Self Referral Form" or "Food Resources")