SANTA ROSA JUNIOR COLLEGE

Biology 10: Introduction to Principles of Biology

Instructor: Caprice Disbrow (she/her)

Email: cdisbrow@santarosa.edu

Office Hours:

- Monday/Wednesdays from 2:45-4:15 pm
- Tuesdays/Thursdays 10:45-11:45 am

Office: Baker Hall 1869a

Section	Lecture	Lab
1000	Monday/Wednesday 9-10:30am, Lark 2009	Monday 11-2pm Baker 1869
1001	Monday/Wednesday 9-10:30am, Lark 2009	Wednesday 11-2pm Baker 1869
0483	Tuesday/Thursday 10:30am-12:00pm, Lark 2004	Tuesday 2:30-5:30pm Baker 1869
0482	Tuesday/Thursday 10:30am-12:00pm, Lark 2004	Thursday 2:30-5:30pm Baker 1869

Welcome!

Welcome to Biology 10! I am so excited to work with you this semester! If you find that there are aspects of course instruction, subject matter, or classroom environment that are barriers to your inclusion, please talk with me. My goal is to help create a learning environment that will work for each of us.

Course Description and Learning Objectives

Course Description

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

Student Learning Outcomes

Upon completion of the course, students will be able to:

1. 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.
2. Integrate related core concepts.
3. Demonstrate skill in core competencies.

Learning Objectives

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

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

Instructor Contact, Office Hours, Communication

Instructor Contact

Caprice Disbrow (she/her). Feel free to call me Caprice. My office is 1869a (connected to our lab room).

Office Hours

I love having students come to office hours. Please come by!

Fall 2022: Monday/Wednesdays from 2:45-4:15 pm and Tuesday/Thursdays 10:45-11:45 am in Room 1869a.

I am available to meet by appointment at other times, including early mornings and evenings for those of you who cannot meet during the scheduled office hours.

Canvas Inbox and Course Website

I prefer to communicate through the Canvas Inbox but feel free to email me, as well, at cdisbrow@santarosa.edu. If you're not familiar with the Canvas Inbox, here is a Canvas Inbox Tutorial. I aim to respond to emails within 24 hours Monday-Thursday and intermittently Friday-Sunday. Always feel free to re-send your email if I haven't responded within the above timeframe.

You'll use this Canvas course website for instructional content, assignment instructions, submitting assignments, viewing classmate's work, sharing resources, and viewing grades.

I send Canvas announcements on Sundays with information for the following week and summarize the topics we covered that previous week. From time to time, I'll send more personalized emails to individuals or to groups, as needed.

Course Materials and Technology

Textbook and Online Resources

You can find our textbook for free online here: https://openstax.org/books/concepts-biology/pages/1-introduction
You can also locate and order a paper copy of the textbook online via the SRJC Bookstore. Note that if you want to pick your books up in Petaluma, you need to order them from the Petaluma Bookstore website.

OpenStax Concepts of Biology

- Fowler, Samantha and Roush, Rebecca and Wise, James
- ISBN for digital (free) version: ISBN-10: 1-947172-03-4
- ISBN for paperback (buy it if you want a paper copy) version: ISBN-13: 978-1-50669-653-9

Biology 10 Lab Manual, Santa Rosa Campus

- Arbor Crest Publishing, 2019
- make sure to get the Santa Rosa version, not Petaluma

Grading, Assignments and Due Dates

Grading Policy

Visit the "Grades" page in Canvas course navigation to keep track of your grades. I grade and post grades and comments on the online Canvas gradebook. I will return grades and/or feedback 1 week after the deadline for most assignments (2 weeks for written assignments and projects, 2 weeks after the unit close date for exam short answers). If work is submitted late, I will have it graded within 2 weeks of the submission date.

I encourage you to keep a close eye on your grades and feedback. For most assignments you can resubmit with corrections to earn more points. Keep your goals in mind to decide when this is worth your time and make a 1 on 1 appointment if you want help strategizing.

Grades will be assigned as follows:

A	**90%**	**900 points or more**
B	80%	**800 to 899** points
C	70%	**700 to 799** points
D	60%	**600 to 699** points

If taking Pass/No Pass you need at least 700 points to pass the course.

Grades are transferred directly from Canvas into the final grade system, so what shows in Canvas is accurate.

You can use the What If? grade function in Canvas to set specific goals on assignments - it will show you how your grade will change given an assignment grade you enter. Here is a link to learn about this tool: What If Grades in Canvas.

The course outline of record is the required organization of this course for any instructors that teach it. The % of your grade that comes from each category is part of the course outline of record. The following table illustrates which assignments and assessments fit into each required category.

See the course outline of record for more information: Bio 10 COR

Course Outline Category	Assignments & Assessments	% of your grade from that category
Lab reports or essays	1 essay, 3 discussions	10
problem solving/homework and labs	12 labs, 3 case studies, note taking	10
skill demonstrations	microscope quiz	5
Exams lecture & lab	10 quizzes, 3 lecture exams (plus 1 optional cumulative exam), 3 lab exams	65
Other/participation	3 scientist spotlights, 3 self-assessments, 2 success activities, surveys	10

Points will come from the following assignments and assessments:

Assignment/assessment	Description	Points	% of your final grade
1 essay (outline 10pts, draft 10pts, peer review 10pts, final 25pts)	Summary of a current research news article and analysis of how it relates to class material	55	5.5
3 discussions (15pts each)	Canvas discussion including initial post and reply to a classmate	45	4.5
12 labs (7pts each)	Lab activities usually completed during lab period, but occasionally some groups will need to finish for homework	84	8.4
2 lecture notes (8pts each)	Sign up to be a note taker for 2 lectures over the semester, take a picture of or otherwise share notes for the class (notes don't have to be perfect!)	16	1.6
microscope quiz	Multiple choice, short answer and demonstration related to the microscope skills you will learn in lab, will take place during lab	50	5
10 quizzes (15pts each)	Most weeks there will be an open note multiple choice quiz on lecture material taken through Canvas	150	15
3 lecture exams (100pts each) optional: replace lowest score with cumulative final exam grade (optional 4th lecture exam)	Multiple choice and short answer including drawing related to lecture material. Will take place during lecture	300	30
3 lab exams (50pts, 50pts, 100pts)	Multiple choice and short answer related to lab material. Will take place during lab	200	20
3 scientist spotlights (15pts each)	350-word reflections on a scientist's life and/or research	45	4.5
3 self-assessments (10pts each)	Surveys taken after each unit about your study strategies and their effectiveness. Also, an opportunity to give course feedback.	30	3
2 success activities (10pts each)	1 activity per Unit for units 1 and 2 from a list of activities that typically help students succeed in college courses	20	2
pre and post semester surveys (5pts each)	Surveys to help me (Caprice) assess how I am doing on non-grade related metrics of student success and get to know students individually	10	1
totals:	----------	1000	100

See each assignment/assessment page for details.

Turning in assignments

In this course, all assignments will be submitted through Canvas. I will not accept assignments through email, because I grade anonymously using the Canvas grading system. Each assignment will have a due date (listed in the course schedule) and a close date (the Unit close date except for essay assignments and surveys). I will accept assignments for full credit up until the close date.

Some assignments will require file uploads. The acceptable file formats are: pdf, jpg, jpeg, tiff, png, doc, docx, xls. Never submit a .pages document, or a live document (like a google doc or google spreadsheet) - I cannot accept these, as I won't be able to view them through the Canvas grading tool.

Each assignment page will have directions and upload help links. Make sure to start your upload at least 30min before the close time (11:59pm). Submit a day in advance if you might need help from me.

Exams and quizzes

There will be online weekly quizzes taken as Canvas quizzes, as well as in-person lecture and lab exams. The material comes from the textbook, lectures, labs, and supplemental materials provided to you. I will not be able to arrange make up exams for missed lab exams, as they require lab space, lab specimens, and lab equipment but I will work with the Disability Resources Department to ensure any accommodations requirements are met. A makeup lecture exam may be possible, but only in the event of unforeseen emergencies. This policy is to protect my time, as proctoring an exam takes hours away from my other work, which is difficult for me to do without advance notice and planning.

Many students experience exam anxiety. Some strategies that have worked for other students:

- Go over your notes after each class (after lecture, after lab). Some students reorganize notes by making tables, charts, diagrams, and word banks or by color coding. Keep a well-organized study guide.
- Write down questions you need help with and plan to come to office hours to get help.
- Schedule time to study. Turn off all devices during this time. When your scheduled study time is over, move on to something else.
- Take your first quiz attempt early, treat it as a practice test.
- After your first quiz attempt, come to office hours to go over what you missed before taking the second attempt.

Late Policy

This course is set up so that you can learn from your mistakes by correcting work, and practice time management skills without fear of failure. You should plan on completing good work on time, but when your work does not meet the criteria, or when you fall behind, you will have the space to fix mistakes and catch up again.

All assignments are due **at 11:59pm PST** on the due date. There is no need to ask for an extension: I will accept late work including quizzes taken through Canvas for full credit up until the unit closes except for the assignments related to the essay, which rely on all students finishing drafts at the same time, and some surveys whose results I need to use immediately. To prevent any students from falling too far behind and to help me manage my own grading and preparation time, after a unit closes, I will not accept, give feedback on, or grade work from that unit.

If you are struggling to keep up with the course, I encourage you to make a 1 on 1 appointment. We will talk about your grade goals and together as a team we will make a priority list and schedule to help you readjust.

Extra Credit

Each student is assigned as note taker for 2 lectures in the semester. Students may sign up to be a note taker for 1 additional lecture, to earn +5 extra credit. These points will be added to the lowest exam score (lecture or lab).

Occasionally, a unique opportunity or event occurs which is directly related to our class material. If this happens, I will consider providing extra credit for attendance/participation at this event, but only if the date and time make it accessible to everyone (and/or a recording or other alternative is available). I do not wish to penalize students with non-flexible schedules (ex. care giving, jobs, and other responsibilities).

Important Dates, Enrollment, and Attendance

Important Dates

Monday, August 15, 2022	**CLASSES BEGIN**
Sunday, August 21, 2022	Last day to register/add semester length class without instructor's signature or add code
Sunday, August 28, 2022	Last day to drop semester length class and be eligible for a refund
Sunday, September 4, 2022	Last day to register/add semester length class with the instructor's signature or add code
Sunday, September 4, 2022	Last day to drop a semester length class without "W" symbol
Monday, September 5, 2022	**Labor Day Holiday (No Classes, District Closed)**
Tuesday, September 6, 2022	First Census Day
Saturday, September 17, 2022	Constitution Day and Citizenship Day (Classes will meet)
Monday, October 17 – Sunday, November 13, 2022	Midterm progress indicators posted in student portal
Thursday, November 10, 2022	**Professional Development Flex Day (No Classes)**
Friday, November 11, 2022	**Veterans Day Holiday (No Classes, District Closed)**
Sunday, November 13, 2022	**Last day to drop a semester length class with "W" symbol**
Friday, November 25, 2022	Professional Development 1/2 Flex Day (No Classes or Activities, District Closed)
Thursday, November 24 – Sunday, November 27, 2022	**Thanksgiving Day Holidays (No Classes, District Closed)**
Saturday, December 10 - Friday, December 16, 2022	**Final Examinations**
Friday, December 16, 2022	Last day to opt for P/NP for a semester length class (Board approved due to COVID-19 pandemic)
Saturday, Dec 17, 2022 – Sunday, Jan 15, 2023	Semester Break (No Classes)
Friday, December 30, 2022	**Final grade rosters due**

No-show drop

If you do not sign into Canvas or if you do not attend the first two class meetings and I don't hear from you, I may drop you from the course to make space for waitlisted students. If you know you will miss sessions, communicate with me to avoid being dropped.

During the semester, if you do not sign into Canvas and miss 2 consecutive sessions and/or 5 assignments without contacting me, I may drop you from the course up until census day (when the college reports enrollments to the state).

I expect you to take responsibility for your own enrollment - if you plan to withdraw make sure you do so by the posted deadlines. Do not rely on me to drop you from the course.

Withdrawing and Excused Withdrawal (W and EW)

You might decide that this course doesn't fit into your life this semester. If you do, know that I am not judging you. I know that you have priorities outside of this class. Before you withdraw, I encourage you to check in with me 1 on 1 to see if we can work together to help you prioritize your time in the course to succeed. I also encourage you to meet with a counselor to make sure withdrawing is the best option, and to discuss whether you are eligible for an excused withdrawal.

- A regular withdrawal will show up as a W on your transcript and will count towards your number of attempts in the course.
- An excused withdrawal will show up as an EW on your transcript wand will not count towards your number of attempts in the course.

Here is a link for scheduling a counseling meeting: Meet with a counselor.

Attendance

I expect you to attend all class sessions. That said, I am aware that students may have unavoidable conflicts and emergencies. If for some reason you cannot attend a class session, I expect you to contact me as far in advance as possible (or as soon after the absence as possible in unforeseen circumstances). We will work together as a team to get you caught up. To set your expectations accurately, in my experience catching up after missing a class requires more time and effort than coming to the class.

You may be able to attend my other section's lab in a given week if you are able to plan ahead or contact me quickly to schedule.

Accommodations, Health, and Resources

Accommodations and Adjustments

Access and Accommodations: It is the mission of the Santa Rosa Junior College to support inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or to accurate assessment of achievement—such as time-limited exams, inaccessible web content, or the use of non-captioned videos—please notify the instructor as soon as possible. Students are also welcome to contact the Disability Resources Department (DRD). DRD is a resource for students that provides authorization for academic accommodations, training and access to assistive technology, and collaborates on strategies for academic success.

Students with disabilities who need or may need accommodations in this class are encouraged to contact Disability Resources (527-4278), disabilityinfo@santarosa.edu as soon as possible to better ensure such accommodations are implemented in a timely fashion. You will need to provide the Authorization for Academic Accommodations (AAA letter) from the Disability Resources Department (DRD) to receive accommodations.

I want you to have what you need to succeed, so if you may be eligible, please seek all accommodations you are entitled to even if you have not done so in previous classes.

Physical & Mental Health

Should you experience any physical or mental health issues, know that all of us at SRJC care about your well-being. SRJC's Student Health Services (SHS) has nurse practitioners and mental health therapists available. Confidential sessions are provided via secure Zoom or in-person. Sessions are free for SRJC students taking credit or non-credit classes, and some providers can converse with you in Spanish if you prefer. SHS also has on-site covid rapid testing and vaccinations available also at no cost. To start the process for any type of physical or mental health appointment contact Student Health at 707 527-4445 or email studenthealthservices@santarosa.edu. More information about all that Student Health Services provides is available at shs.santarosa.edu.

Additional resources for success

- Student Success Team – student coaches
- Tutorial Centers
- Library resources - Librarians are available online. Go to "online chat" or "zoom appointments." Libraries are open in person this semester (check website for hours)
- Need A Laptop or other equipment? Borrow from SRJC Library
- Apply for Crisis Financial Assistance: Emergency grant application
- Accessing Online Student Services
- Basic Needs – Student Resource Center supports meeting student needs for food, housing, transportation, and much more

Conduct and Integrity

Class goals and values

In our first lecture session we will brainstorm and agree together on a shared list of class goals and values (for students and for the instructor). Once that list is complete, we can revisit it any time this semester as needed/wanted by any of us.

Present your own creative, original work

I trust you and believe that no student sets out to plagiarize (copy) the work of others. This can happen due to unbearable stress, mistake, or confusion about what counts as plagiarism.

Plagiarism is not just submitting someone else's paper as your own. It's taking sentences, even several-word phrases directly from another source or sources without proper attribution. You are a creative, intelligent, capable person and you can communicate in your own original way with your own words. If you're not doing original work, all the assigned work is really just busywork and is not a useful learning tool. Copy/paste is not worth your valuable time. I encourage students to share information and ideas, but not their work.

All work for this class must be original (in your own words) and completed individually (each student submits their own unique work) unless otherwise specified in the assignment details. Quotes, even if properly attributed, are not permitted in any assignment unless otherwise specified in the assignment details.

No credit will be earned for plagiarized assignments, quizzes, or exams.

My best advice for avoiding plagiarism is to always take notes in your own words, and never look at the original source while doing your work. If you're ever confused about whether you're writing in your own words or not, come to office hours or the writing center. We'd all love to help you!

To learn more, including specific examples, see these links on Plagiarism:
SRJC Writing Center Lessons on avoiding plagiarism
SRJC's policy on Academic Integrity

SRJC Standards of Conduct

Students who register in SRJC classes are required to abide by the SRJC Student Conduct Standards. Violation of the Standards is basis for referral to the Vice President of Student Services or dismissal from class or from the College. See the Student Code of Conduct page.

Netiquette, or Why Is It Harder to Be Polite Online?

Netiquette refers to using common courtesy in online communication.

In our first week of classes, we will come up with shared classroom goals and values. In the meantime, please use these guidelines for discussions and communications through Canvas:

- Forward emails and other private messages only with a writer's permission.
- Be considerate of others' feelings and use language carefully.
- Cite all quotations, references, and sources (otherwise, it is plagiarism).
- Use humor carefully. It is hard to "read" tone; sometimes humor can be misread as criticism or personal attack. Feel free to use emoticons like :) for a smiley face to let others know you are being humorous.
- To ensure that others can understand you, use complete sentences to compose posts. Review work before submitting it.
    - Abbreviations, such as "ur" for "your" or "ru" for "are you" etc., is confusing for many people, so please use full words.
    - If you don't understand what someone else has said, try asking for clarification.
    - If you notice wording that is confusing in an assignment or from me (the instructor), ask for clarification so I can fix it for everyone.
- Focus on impact first, not intent. If something you communicate has a negative impact (hurts someone for example), try to understand the impact, and change your behavior first, before communicating what your intent was. Curious about this idea? Read this Scientific American blog post.

Week (dates)	Lecture Topics Sections 1000/1001 M/W rm 2009 9-10:30am Sections 0482/0483 T/Th rm 2004 noon-1:30pm	Lab Topic 11am-2pm M for section 1000 W for section 1001 2:30-5:30pm T for section 0482 Th for section 0483 room: 1969	Things Due (date due) late work accepted until unit close date unless noted in *italics*	Reading	SRJC events
1 (8/15-8/21)	M/T: science and the scientific method W/Th: exploring the elements	1: Biological Concepts	• Surveys from week 0 module (8/21) ○ *no late work accepted* • Discussion: introduction vid (8/21)	ch. 1.1, 1.2, 2.1UCMP Understanding Science	
2 (8/22-8/28)	M/T: water properties and pH W/Th: biological polymers	2: Water	• Quiz 1 (8/28)	ch. 2.2, 2.3	8/21: last day to add without add code
3 (8/29-9/4)	M/T: cell diversity W/Th: energy and membrane transport	3: Enzymes	• Quiz 2 (9/4)	ch. 3.1-3.6	8/28: last day to drop with refund
4 (9/5-9/11)	M: holiday T: Library workshop/ cellular respiration W/Th: cellular respiration	no lab	• Scientist spotlight 1 (9/11)	ch. 4.1-4.5	9/4: last day to add with code, last day to drop without W 9/5: Labor Day Holiday (NO CLASSES) 9/6: first census day
5 (9/12-9/18)	M: library workshop/review T: Review session W/Th: unit 1 lecture exam	4: The microscope and cells	• Quiz 3 (9/18) • **last day to turn in Unit 1 work (9/18)**	none	
6 (9/19-9/25)	M/T: photosynthesis W/Th: protein synthesis	Lab Exam 1	• success activity 1 (9/25) • Scientist spotlight 2 (9/25)	Ch. 5.1-5.3, 9.1-9.4	
7 (9/26-10/2)	M/T: mitosis W/Th: meiosis	5: Mitosis, Microscope quiz	• Quiz 4 (10/2) • essay outline (10/2) ○ *no late work accepted*	ch. 6.1-6.4, 7.1-7.3	
8 (10/3-10/9)	M/T: genetics W/Th: gene regulation and biotechnology	6: Meiosis	• Quiz 5 (10/9) • self-assessment 1 (10/9) ○ *no late work accepted*	ch. 8.1-8.3, 9.5, 10.1-10.3	
9 (10/10-10/16)	M/T: microevolution W/Th: macroevolution	7: Genetics	• Quiz 6 (10/16) • essay draft (10/16) ○ *no late work accepted*	ch. 11.1-11.5, 12.1, 12.2 UCMP Understanding Evolution	10/17-11-13: Midterm progress indicators available
10 (10/17-10/23)	M/T: review session W/Th: Unit 2 lecture exam	8: Evolution and natural selection	• Discussion: misconceptions (10/23) • lab group survey 2 (10/23) • essay peer reviews (10/23) ○ *no late work accepted*	none	10/17-11-13: Midterm progress indicators available

11 (10/24-10/30)	M/T: prokaryotes and protists W/Th: fungi	Lab exam 2	• success activity 2 (10/30) • **last day to turn in Unit 2 work (4/10)**	ch. 13.1-13.4	10/17-11-13: Midterm progress indicators available
12 (10/31-11/6)	M/T: plants W/Th: animal diversity	9: Protist and pond water	• essay final version (11/16) ○ *no late work accepted* • Quiz 7 (11/6)	ch. 14.1-14.4, 15.1-15.6	10/17-11-13: Midterm progress indicators available
13 (11/7-11/13)	M/T: homeostasis and the digestive system W: the circulatory and respiratory systems Th: PDA no class	10: Fungi Kingdom	• self-assessment 2 (11/13) ○ *no late work accepted* • Quiz 8 (11/13)	ch. 16.1-16.3	11/10: PDA day (NO CLASS) 11/11: Veteran's day (NO CLASS) 11/13: last day to drop with a "W"
14 (11/14-11/20)	M: the immune system T: the circulatory and respiratory systems W: small scale ecology Th: the immune system	12: Animal Kingdom	• Quiz 9 (11/20)	ch. 17.1-17.4, 19.1-19.4	
15 (11/21-11/27)	M/T: small scale ecology W: large scale ecology Th: no class	(Fungi lab set up on Monday/Tuesday for Thursday folks)	• scientist spotlight 3 (11/27)	Ch. 19.1-19.4	11/24-27: Thanksgiving (NO CLASS) 11/25: PDA ½ day
16 (11/28-12/4)	M/T: ecology W/Th: conservation and biodiversity	11: Plant Kingdom	• Quiz 10 (12/4)	ch. 20.1-20.4, 21.1-21.3	
17 12/5-12/11)	M/T: review session W/Th: unit 3 lecture exam	Lab exam 3	• Discussion: Learning Strategies and Advice • **Last day to turn in unit 3 work (12/11)**	none	
18 (12/12-12/18)	Cumulative Final Exam Sections 1000/1001 W 12/14: 7-9:45am Sections 0482/0483 Th 12/15: 10-12:45pm	none	• self-assessment 3 (12/18) • post semester survey (12/18) • teaching evaluation (12/18) • **last day to turn in any course work (12/18)**	none	12/10-16: final exams 12/16: Last day to opt for P/NP