

BIO 10 Sct 1038
Introduction to Principles of Biology
Fall 2020 Syllabus

INSTRUCTOR

Dr. Brittany Demmitt

Email: bdemmitt@santarosa.edu

Office Hours: M 2:00-3:00, Tue 2:00-3:30, W 11-12:00, Th 2:00-3:30

- Office hours will be held via Zoom. Please see the Zoom info pages on canvas for meeting information.

CLASS TIMES

All lectures, labs, exams, and quizzes will be held on Zoom unless otherwise indicated. Please see the Zoom info pages on canvas for meeting information. Each section has their own zoom info assignment page, please refer to your own section and attend meetings only for your section.

Section 1038 Bio10

Lecture: TTh 9:00-10:30 AM PT

Lab: Th 11:00 AM-2:00PM PT

COURSE DESCRIPTION AND LEARNING GOALS

In this course we will be discussing the principles of biology, including the structure of cells, genetics, ecology, and much more! We will also be discussing the principles of science and how to apply scientific approaches to questions. In addition to lectures we will have a lab about each week. What is covered in lab and lectures will relate and build upon one another.

The broad learning outcomes and objects for this course taken from the Course Outline of Record are as follows:

- 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.

Please consult the Course Outline of Record (COR) for additional information.

- https://portal.santarosa.edu/srweb/SR_CourseOutlines.aspx?CVID=38161&Semester=20195

COURSE MATERIALS

Textbook: *Concepts of Biology* by Dr. Samantha Fowler, Dr. Rebecca Roush, Dr. James Wise

Good news: your textbook for this class is available for free online! If you prefer, you can also get a print version at a very low cost.

Your book is available in web view and PDF for free. You can also choose to purchase on iBooks or get a print version via the campus bookstore or from OpenStax on Amazon.com.

You can use whichever formats you want. Web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on your book page on openstax.org so you get the official OpenStax print version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.)

Concepts of Biology from OpenStax, Print ISBN 1938168119, Digital ISBN 1947172034,
www.openstax.org/details/concepts-biology

Laboratory Book: *Biology 10 Laboratory Manual, SRJC Campus*

You can order printed copies from the SRJC bookstore or amazon. (Amazon ISBN: 9781724537997)

*NOTE we are using the Santa Rosa Junior College (SRJC) version of the lab manual (not the Petaluma version)

Additional Required Materials: We will use zoom for many aspects of this course. Therefore, you will need access to a webcam and microphone. The SRJC media services has provided resources on how to access and operate zoom.

- <https://media.santarosa.edu/zoom>

COURSE CANVAS PAGE

The canvas page for this course is extremely important. It is where content for this course will be posted, announcements, lecture material, lab material, assignments, exams, and any other relevant info for the course. Please let me know if you have any issues logging into the canvas page for this course or navigating it.

I have cross-listed the three sections of Bio10 that I am teaching (sections 1000, 1037, and 1038). Therefore, your name and coursework may be visible to students in another section. Please let me know if you have any questions or concerns.

GRADING POLICY

Writing: 100pts (10%)

- Lab reports 11 (6pts each x 11=66pts)
- Scientific Claims Project
 - Annotated Bibliography (34pts)

Problem Solving: 100pts (10%)

- Chemistry HW (33pts)
- Ecology HW (33pts)
- Genetics HW (34pts)

Skill Demonstrations: 40pts (4%)

- Microscope quiz (40pts)

Exams: 700pts (70%)

- 3 Lecture exams (100pts x3 =300pts)
- 3 Lab exams (100pts x3 =300pts)
- Final exam (100pts x1=100pts)

Other: 60pts (6%)

- Select Scientific Claims Project
 - Select claim & meeting (10pts)
 - Scientific Claims Report Review (15pts)
 - Scientific Claims Presentation (35pts)

Total: 1000pts (100%)

Letter Grade Description

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

COURSE INFORMATION

Academic Integrity: Cheating or plagiarism of any kind will not be tolerated and will result in an automatic zero for the relevant assignment(s). All work should be completed independently unless otherwise specified. We will follow the SRJC policies on academic integrity which can be reviewed at the website below.

<https://rightsresponsibilities.santarosa.edu/academic-integrity>

All members of the SRJC academic community assume responsibility for providing an environment of the highest standards, characterized by a spirit of academic honesty and mutual respect. Because personal accountability is inherent in an academic community of integrity, this institution will not tolerate or ignore an form of academic dishonesty.

Academic dishonesty is regarded as any act of deception, benign or malicious in nature, in the completion of any academic exercise. Examples of academic dishonesty include cheating, plagiarism, collusion and other academic misconduct.

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](#).

Classroom Etiquette: Everyone should be valued and respected in this course and you can do your part to help make our classrooms a positive place to be by treating everyone with respect and kindness. The best way to learn is through active participation; therefore, we respect others when talking, by being on-time, listening actively, and being polite even when we disagree with another's viewpoint. I ask that you follow the guidelines below. Violating any of these policies may result in a warning or being asked to leave the class.

- Be respectful and inclusive in your communication

- Do not use cell phones, computers, tablets, or other electronics for non-class purposes (ex: texting, surfing the web, using social media).
- Refrain from judgement of opinions or beliefs
- Show up to class on time and ready to be engaged
- All electronic devices must be turned off and put away during class, labs, and exams except the device(s) being used for the class

We will conduct ourselves in a manner which reflects our awareness of common standards of decency and the rights of others. All students are expected to know the [Student Conduct Policy](#) and adhere to it in this class. Students who violate the code may be suspended from 2 classes and may be referred to the Conduct Dean for discipline.

Participation and Attendance: I work hard to make our class time useful to your learning. Therefore, I expect you to attend each class and lab when required. Attending and participating includes having your camera turned on and participating in the breakout groups.

Minimum Required Attendance: SRJC attendance policy states that a student who misses over 10% of the class may be dropped from the course. (Policy 8.1.5 and Procedure 8.1.5P)

Class Schedule: I have outlined a class schedule that describes lecture topics, when assignments are due, when exams will be, and what we will be covering in each lecture and lab class. We will adhere to this schedule as best as we can, though I reserve the right to adjust the schedule if needed. You must plan to accommodate the assignment/quiz/exam dates listed.

Online Behavior: I am asking that keep your camera on and uncovered during our zoom meetings which include lectures, labs, quizzes, exams, and office hours. You may use a virtual background if you would like. You are not permitted to record any lectures, labs, quizzes, exams, or office hours. If you have any questions or concerns about these policies, please reach out to me prior to the relevant meeting.

If you have concerns about having access to the technology you need please reach out to me or visit the SRJC website below.

- <https://onlinestudentservices.santarosa.edu/free-or-affordable-technology>

Exam Policies: The dates of exams are listed in the course schedule in the syllabus.

Make-up Exams: If you anticipate needing to complete a make-up exam for a special circumstance (ex: religious holiday) please let me know within two weeks of the first day of class via a written request (ex: email). If you need to make-up an exam for an unexpected reason (ex: family emergency) please let me know in advance of the exam via a written request (ex: email). Upon receiving the request for a make-up exam I will honor the request at my discretion.

Missed Exams: Missed exams will result in an automatic zero for the exam.

Replacing One Exam Score: You may replace your lowest scored lecture exam score with the comprehensive final exam score. This must be requested two weeks prior to the comprehensive exam via a written request (ex: email). Once requested, the comprehensive final exam score will replace the lowest exam score regardless if the comprehensive score is lower or higher than the score it replaces. You may not replace a missed exam with the comprehensive exam score.

Exam Review Policy: It is the policy of Biological Sciences Department to not return exams to students. Exams will be available for review after they have been graded and kept in my office for the period of one year. After the one year the exams will be shredded. Within two months of receiving final grades for the course you may request an appointment to review exams.

Final Exam Policy: You must take the final exam to pass this course.

Grading Policies:

Rebuttal Submissions: You have one week after an assignment or exam is graded to submit a written rebuttal (ex: email) regarding the grading, after which the grade is final.

Late Submissions: Late submissions for some assignments can be turned in after the due date for partial credit. All late assignments are due Monday, December 14, 2020. The following assignments are those that are eligible for a late submission for partial credit at my discretion: Chemistry HW, Ecology HW, Genetics HW, Scientific Claim Project Select claim & meeting, Scientific Claim Project Annotated Bibliography.

Special Considerations: Please let me know of any special needs or concerns you may have. You may reach out to me via email, during office hours, or set up an appointment to discuss your needs or concerns. We will work together to address them if possible.

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. Please contact DRD if you have not received authorization for accommodations. DRD is located in the Bertolini Student Center on the Santa Rosa campus, and Jacobs Hall on the Petaluma Campus, or available via email at disabilityinfo@santarosa.edu.

Group Work: For certain assignments group work will be permitted and designated as such. For example, many labs will be completed in groups as well as the Scientific Claims Project. However, for such group assignments you are required to work with individuals in the same section number for the course.

ONLINE LEARNING

Here I will describe the general format we will be following to conduct the class meetings online. However, I appreciate your flexibility as the approach is optimized in the upcoming semester for your learning experience.

Online Behavior Guidelines: Please mute yourself unless you are speaking. This will make it easier for everyone to hear the current speaker. Please keep your video feed on so as to make the experience feel more like an in-person interaction.

Online Office Hours: I will be holding open online office hours. This means that anyone can join the office hours during the designated time. This will allow anyone present to hear questions answered (much like traditional office hours). If however you would like to meet in private please reach out to me (such as via email) so that we can set up a private meeting at different time.

Online Polling: We will be using real time polling methods to evaluate the class's understanding of a topic. Typically, how this will be done I will pose a question to the class and ask you to respond via an online polling system, zoom's polling system, or using the chat function in zoom.

ADDITIONAL INFORMATION

Tips for doing well in this course:

1. **Attend class:** Assignments and exams will focus on the material that I cover in class. Come prepared to participate and take notes.
2. **Ask questions:** Asking questions in class, at office hours, via email, ect is a great way to keep up with the material. Not to mention it makes class more fun and helps out others since more likely they had the same question! ☺
3. **Complete the assignments:** Assignments are a great tool to help both me and you identify what content you have mastered and what you need to continue to work on.
4. **Start studying ~2wks before an exam:** I find that starting to study at least 2wks before an exam can be really helpful. This gives you enough time to study without feeling rushed and panicked. It also gives you time to reach out to me with any questions you have or content you would like to review.
5. **Keep up on reading assignments:** I have found it really helpful to do reading assignments either right before or after the relevant class so that class and text reinforce one another.
6. **Form study groups:** Studying with a partner or in a small group can be really helpful. You can compare notes, ask each other questions, and practice for exams together.
7. **Focus on understanding (not memorizing):** In this class we will focus on understanding and applying the biological principles we learn rather than just memorizing facts.
8. **Prep or review the material for each lecture that week:** To learn the material presented in this class it is important that you work and study the material. I recommend doing such prep/review as close to the lecture on the material as possible to solidify your understanding the material. This also gives you time to ask me questions if you don't understand something, I am happy to help! It will also take the pressure off of studying for exams, because you will just be reviewing the material rather than learning it for the first time.

Important things to know:

- A. **Emails:** I will work to respond to an email within 48hrs, excluding weekends. Please practice professionalism in your emails addressed to me. This includes using formal greetings, respective language, and signing with your full name. I may not respond to an email that is not professional.
- B. **Office Hours:** Office hours is a time I have set aside to meet with students to discuss concepts from class, answer questions, or just discuss science and academics. If you can't make office hours but would still like to meet just send me an email and we will set up a different time to meet.
- C. **Learning Styles:** Everyone has a learning style that works best for them. It may take some experimentation to find what works best for you. Below I have listed techniques you may find helpful to learn the material.
 - a. Rewrite your notes.
 - b. Write practice exam questions after each class. Then practice answering these questions before the exam.
 - c. Read the textbook assignment for each class before the class to prep your mind for the class content.
 - d. Read the textbook assignment for each class after the class to reinforce what you have learned.
 - e. Draw out pathways, biological process, and other relevant diagrams.
 - f. Read over your notes and highlight key concepts.
 - g. Explain out loud a concept (or better yet explain it to a study partner).
 - h. Create flashcards to review key terms and concepts.

- D. Additional learning materials:** In addition to the textbook, lab manual, and lectures you may find the resources below helpful to learn the material.
- a. Concepts of Biology digital resources (ex: movies)
<https://openstax.org/details/books/concepts-biology>
 - b. Khan Academy
<https://www.khanacademy.org/science/biology/intro-to-biology>
 - c. Biology Ninja
<https://ib.bioninja.com.au>

TENTATIVE CLASS SCHEDULE

The tentative class schedules can be found on the course's canvas page as well as below. This tentative schedule describes material to be covered in each lecture and lab, corresponding reading assignments, assignment due dates, quiz dates, and exam dates. **Assignments, quizzes, and exams are listed on the day they are due/take place on the schedule.** Note, the tentative plan for lab reports is that they will primarily be submitted over zoom to Dr. Demmitt at the end of each lab.

Please be sure to refer to the schedule for your section as dates of classes, lab dates, assignment due dates, quiz dates, and exam dates are specific to each section.

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Week	Date	Topic	Readings	Assignments or Exams	Lab	Lab Assignments
1	8/18	Intro to Biology (Intro to Biology Module)	Ch1 (pp.5-23)		Basic Biological Concepts (pp.1-14) (Basic Biological Concepts Lab Module)	Basic Biological Concepts Lab Report
	8/20	Chemistry of Life: Intro (Chemistry of Life Module)	Ch2 (pp.27-33)			
2	8/25	Chemistry of Life: Hydrogen & Water (Chemistry of Life Module)	Ch2 (pp.34-38)	Syllabus Extra Credit (Intro to Biology Module)	Enzymes (pp.27-36) (Enzymes Lab Module)	Enzyme Lab Report
	8/27	Chemistry of Life: Macromolecules (Chemistry of Life Module)	Ch2 (pp.39-50)			
3	9/1	Cell Structure (Cell Structure and Physiology Module)	Ch3 (pp.55-73)		Properties of Water (pp.15-26) (Properties of Water Lab Module)	Properties of Water Lab Report
	9/3	Cell Physiology (Cell Structure and Physiology Module)	Ch3 (pp.74-84)	SCP: Select claim and meet with Dr. Demmitt (Scientific Claims Module)		
4	9/8	No Class	No Class		No Lab	
	9/10	Cellular Respiration Prt1 (Cell Respiration & Photosynthesis Module)	Ch4 (pp.91-112)			
5	9/15	Cellular Respiration Prt1 (Cell Respiration & Photosynthesis Module)	Ch4 (pp.91-112)	Chemistry HW (Chemistry of Life Module)	Lab Exam 1	
	9/17	Photosynthesis (Cell Respiration & Photosynthesis Module)	Ch5 (pp.117-131)			
6	9/22	Lecture Exam 1	-----	Lecture Exam 1	Microscope/Cell (pp.37-56) (Microscope/Cell Lab Module)	Microscope/Cell Lab Report
	9/24	Cell Reproduction: Mitosis (Cell Reproduction Module)	Ch6 (pp.135-148)			
7	9/29	Cell Reproduction: Meiosis (Cell Reproduction Module)	Ch7 (pp.153-169)	SCP: Annotated bibliography (Scientific Claims Module)	Mitosis (pp.57-68) (Mitosis Lab Module)	Mitosis Lab Report Microscope Quiz (Microscope/Cell Lab Module) Microscope/Cell Lab Extra Credit (Microscope/Cell Lab Module)
	10/1	Ecology: Population (Ecology Module)	Ch19 (pp.499-524)			
8	10/6	Ecology: Community (Ecology Module)	Ch19 (pp.499-524)		Meiosis (pp.69-78) (Meiosis Lab Module)	Meiosis Lab Report
	10/8	Ecology: Energy Flow and Biomes (Ecology Module)	Ch20 (pp.529-555)			

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9	10/13	Ecology: Humans (<i>Ecology Module</i>)	Ch20 (pp.529-555)		Lab Exam 2	
	10/15	Lecture Exam 2	-----	Lecture Exam 2		
10	10/20	Genetics Prt1 (<i>Genetics Module</i>)	Ch8 (pp.173-193)		Genetics (pp.79-98) (<i>Genetics Lab Module</i>)	Genetics Lab Report
	10/22	Genetics Prt2 (<i>Genetics Module</i>)	Ch8 (pp.173-193)			
11	10/27	Molecular Biology (<i>Molecular Module</i>)	Ch9 (pp.199-219)	Ecology HW (<i>Ecology Module</i>)	Other Organisms (pp.99-112) (<i>Other Organisms Lab Module</i>)	Other Organisms Lab Report
	10/29	Evolution: Mechanisms Prt1 (<i>Evolution Module</i>)	Ch11 (pp.249-269)			
12	11/3	Evolution: Mechanisms Prt2 (<i>Evolution Module</i>)	Ch11 (pp.249-269)	Genetics HW (<i>Genetics Module</i>)	Pond Water Observations (pp.113-116) (<i>Pond Water Observations Lab Module</i>)	Pond Water Observations Lab Extra Credit (<i>Pond Water Observations Lab Module</i>)
	11/5	Evolution: Phylogeny (<i>Evolution Module</i>)	Ch12 (pp. 275-287)	SCP: Presentation (<i>Scientific Claims Module</i>)		
13	11/10	Plants: Anatomy & Physiology Prt1 (<i>Plants Module</i>)	*Handout-Openstax <i>Biology 2E</i> Ch30-32		Plant Kingdom (pp.117-134) (<i>Plant Kingdom Lab Module</i>)	Plant Kingdom Lab Report
	11/12	Plants: Anatomy & Physiology Prt2 (<i>Plants Module</i>)	Handout-Openstax <i>Biology 2E</i> Ch30-32			
14	11/17	Animals: Intro and Anatomy (<i>Animal Module</i>)	Ch15 (pp.355-394) Ch16 (pp.403-439)	SCP: Class Reviews (<i>Scientific Claims Module</i>)	Fungi (pp.135-146) (<i>Fungi Lab Module</i>)	Fungi Lab Report
	11/19	Animals: Homeostasis & Endocrine System (<i>Animal Module</i>)	Ch16 (pp.404-407, 420-425)			
15	11/24	Lecture Exam 3	-----	Lecture Exam 3	No Lab	
	11/26	No Class	No Class			
16	12/1	Animals: Respiratory System (<i>Animal Module</i>)	Ch16 (pp.414-420)		Animal Kingdom (pp.147-169) (<i>Animal Kingdom Lab Module</i>)	Animal Kingdom Lab Report
	12/3	Animals: Circulatory System (<i>Animal Module</i>)	Ch16 (pp.414-420)			
17	12/8	Animals: Immune System (<i>Animal Module</i>)	Ch17 (pp.449-471)		Lab Exam 3	
	12/10	Catch Up & Review				
Final	12/17	Final Exam	---	Final Exam		

* Pages listed under readings are the pages I recommend focusing on, but the entire chapter is the assigned reading

Key Dates:

August 30, 2020 – Last day to drop semester length class and be eligible for a refund

September 6, 2020 – Last day to drop a semester length class without “W” symbol

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November 15, 2020 – Last day to drop a semester length class with “W” symbol

**see the SRJC Academic calendar for additional important dates: <https://admissions.santarosa.edu/academic-calendar>*