

BIO 10 Section 5703
Introduction to Principles of Biology
Spring 2021 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 5703 Bio10

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

Lab: M 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: *Campbell Essential Biology with Physiology* by Eric J. Simon, Jean L. Dickey, Jane B. Reece (Pearson; 6th edition (6e))

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>)

Take-home Lab Kit: SRJC has assembled a take-home lab kit that you will need to pick up from the SRJC Santa Rosa campus during specified times between January 21-27, 2021. More details will be provided the first week of class. For those unable to pick up in-person, a list of required items will be provided.

COURSE EXPECTATIONS

The following are my expectations of you to participate in Biology 10 and help create a successful learning environment:

- Be respectful and inclusive in your communication and refrain from judgement of opinions or beliefs
- Do not use cell phones, computers, tablets, or other electronics for non-class purposes
- Show up to class and lab on time and ready to be engaged (including completing prelab work)
- Ability to work alone or collaboratively with fellow classmates in lecture and lab.
- Come to me with any comments, questions, or concerns as soon as they arise--don't fall behind
- Know the **Student Conduct Policy** and adhere to it in this class (students who violate the code may be suspended from up to 2 classes and may be referred to the Conduct Dean for discipline)

COURSE EVALUATIONS

Writing: 100pts (10%)

- Lab reports 12 (6pts each x 12=72pts)
- Communicating Science Assignment (28pts)

Problem Solving: 80pts (8%)

- Chemistry Assignment (20pts)
- Genetics Assignment (20pts)
- Critical Thinking Assignment 1 (20pts)
- Critical Thinking Assignment 2 (20pts)

Skill Demonstrations: 20pts (2%)

- Microscope quiz (20pts)

Exams: 750pts (75%)

- 3 Lecture exams (100pts x3 =300pts)
- 3 Lab exams (100pts x3 =300pts)
- Final exam (150pts x1=150pts)

Other: 50pts (5%)

- Class Introductions Assignment (5pts)
- Learning, Memory and College Success Assignment (5pts)
- Science Spotlight Assignment (20pts)
- Ecology Assignment (20pts)

Total: 1000pts (100%) (may change)

Letter Grade Description

100-90%	A
<90%-80%	B
<80%-70%	C
<70%-60%	D
<60%-0%	F

COURSE INFORMATION

Canvas: Canvas will be used heavily in this course including to administer assessments so please check it regularly. I have cross-listed the three sections of Bio10 that I am teaching (sections 5703, 5055, and 5056). Therefore, your name and coursework may be visible to students in another section. Please let me know if you have any questions or concerns.

Minimum Required Attendance: According to the SRJC attendance policy if you miss over 10% of the class you may be dropped from the course. (Policy 8.1.5 and Procedure 8.1.5P)

Camera On Requirement During Zoom Meetings and Assessments: Many aspects of this course will be completed over zoom. I think that keeping our cameras on and our faces visible during these interactions enhances the learning environment and promotes academic integrity. However, I recognize that time on zoom can also be draining. Therefore, I have tried to balance the number of zoom meetings in this course with asynchronous work. Some labs, exams, and quizzes will be asynchronous on a trial basis. The hope is that this more limited zoom schedule will make it more manageable to keep your cameras on and face visible during your zoom interactions with myself and other students, which is my expectation of you. However, if I find that things are not working well with the asynchronous work, I reserve the right to change asynchronous aspects of this course to synchronous including exams and quizzes.

Failure to turn on your camera and show your entire face during a zoom meeting when required can result in one or more of the following: warning issued, zero for the assignment or assessment being completed during the meeting (including exams), removal from the meeting. I will let you know that it is required to have your camera on and face visible during a meeting either at the beginning of the meeting or via email or canvas message prior to the relevant meeting(s). For exams and quizzes administered over zoom it will be required that your camera be turned on and your face visible during the assessment unless otherwise noted.

If you have any questions or concerns about this policy, please reach out to me 48 hours 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. (<https://onlinestudentservices.santarosa.edu/free-or-affordable-technology>)

Zoom Name Requirement: Please have the name you display in the zoom meeting be your preferred name. If you prefer a name that is different than what is on the class roster, please let me know so that I can make a note of your preference. If the name used in the zoom meeting does not match what is on the roster or what has been previously noted to me as your preferred name it can result in one or more of the following: warning issued, zero for the assignment being completed during the meeting, removal from the meeting. This policy is so that I can more effectively monitor who attends our meetings and keep them a safe place for everyone.

Recordings: You are not permitted to record any lectures, labs, quizzes, exams, or office hours either with video or photos. You are permitted to make audio only recordings of lectures for your own use.

Exam Policies: The dates of exams are listed on the tentative schedule. On a trial basis, exams will be completed asynchronously. However, I reserve the right to change exams to synchronous during our scheduled class time over zoom if I see fit. Therefore, you should keep your schedule open for the lecture and lab times on exam days listed on the tentative schedule to take the exam.

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.

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.

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 must be turned in by Monday, May 17, 2021. Please reach out to me to clarify if an assignment can be turned in late. Point penalties for late submission will be as follows (in addition to any points lost on the assessment itself).

- <8 days late = deduction of 10% of the total points for the assignment
- 8-14 days late = deduction of 20% of the total points for the assignment
- 15-21 days late = deduction of 30% of the total points for the assignment
- 22-28 days late = deduction of 40% of the total points for the assignment
- 29 or more days late = deduction of 50% of the total points for the assignment

Academic Integrity: Students are expected adhere to strict academic honesty: Every student is expected to adhere to strict academic honesty. Cheating and/or plagiarism of any sort can result in one or more of the following: zero for the assignment or relevant portion of the assignment, referral to the department chair or referral to the appropriate dean. SRJC policies on academic integrity which can be reviewed at the following website. <https://rightsresponsibilities.santarosa.edu/academic-integrity>

Special Considerations: Please let me know of any special needs or concerns you may have. You may reach out to me via email or canvas message, 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: Accommodations are collaborative efforts between students, faculty, and 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. Their office is located in Room 4844 (3rd floor), Bertolini Student Center (707) 527-4278.

Student Health Services: Health issues (physical and mental) can interfere with your academic success. Student Health Services is here to support you. Details are at shs.santarosa.edu.

FREQUENTLY ASKED QUESTIONS

Can I email or canvas message you with a question? YES! I will work to respond to an email or message 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.

What are 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.

About how many hours a week should I expect to study for this class? College classes typically require a lot of time studying the material outside of class to help you keep up with the large amount of material that is covered each week. A general rule of thumb that can be applied to this course is that for every 1 credit hour you should expect to study 3 hours on your own. This course is 4 credit hours so you should expect to study about 12 hours a week on your own.

I don't feel like I am very good at "studying" do you have any suggestions of what may help? 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.

- Write practice exam questions after each class. Then practice answering these questions before the exam.
- Draw out pathways, biological process, and other relevant diagrams.
- Read over your notes and highlight key concepts.
- Explain out loud a concept (or better yet explain it to a study partner).
- Complete the practice questions in the textbook and fill out any study guides provided by the instructor

After reading the textbook and looking over notes I still have questions. Do you know of other resources that might be helpful to review the material in a *different* way? In addition to the textbook, lab manual, and lectures you may find the resources below helpful to learn the material.

- Khan Academy (simple explanations and demonstrations, <https://www.khanacademy.org/science/biology/intro-to-biology>)
- Biology Ninja (simple explanations and demonstrations, <https://ib.bioninja.com.au>)
- Biology Simulations (simulations and games, <https://www.biologysimulations.com/>)
- Bioman (simulations and games, <https://www.biomanbio.com/>)
- Amoeba Sisters (videos, <https://www.youtube.com/user/AmoebaSisters>)

TENTATIVE CLASS SCHEDULE

This tentative schedule describes material to be covered in each lecture and lab, and due dates for assigned reading, corresponding reading assignments, assignments, quizzes, and exams. 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. **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	1/18	No Class	-----		No Lab	No Lab
	1/20	Major Themes in Biology & Scientific Studies	Ch1 (pp.3-18)			
2	1/25	Chemistry of Life: Intro	Ch2 (pp.23-28)	Class Introduction Assignment Due Learning, Memory and College Success Assignment Due	Basic Biological Concepts (pp.1-14) (Synchronous over zoom) (Basic Biological Concepts Lab Module)	Basic Biological Concepts Lab Report
	1/27	Chemistry of Life: Hydrogen & Water	Ch2 (pp.29-33)			
3	2/1	Chemistry of Life: Macromolecules	Ch3 (pp.35-51)	Critical Thinking Assignment 1 Due	Properties of Water (pp.15-26) (Synchronous over zoom) (Properties of Water Lab Module)	Properties of Water Lab Report
	2/3	Cell Structure	Ch4 (pp.55-71)			
4	2/8	Cell Physiology Part 1	Ch5 (pp.75-87)		No Lab	No Lab
	2/10	Cell Physiology Part 2	Ch5 (pp.75-87)			
5	2/15	No Class	No Class		Enzymes (pp.27-36) (Synchronous over zoom) (Enzymes Lab Module)	Enzyme Lab Report
	2/17	Cellular Respiration	Ch6 (pp.91-103)	Chemistry Assignment Due		
6	2/22	Photosynthesis	Ch7 (pp.107-116)		Lab Exam 1	Lab Exam 1
	2/24	Lecture Exam 1	-----			
7	3/1	Cell Reproduction: Mitosis	Ch8 (pp.121-129) Ch11 (pp.209)		Microscope/Cell (pp.37-56) (Asynchronous) (Microscope/Cell Lab Module)	Microscope/Cel 1 Lab Report
	3/3	Cell Reproduction: Meiosis	Ch8 (pp.130-140)	Science Spotlight Assignment Due		
8	3/8	Genetics Part 1	Ch9 (pp.145-165)		Mitosis (pp.57-68) (Synchronous over zoom) (Mitosis Lab Module) *Review Microscope/Cell Lab during zoom meeting	Mitosis Lab Report
	3/10	Genetics Part 2	Ch9 (pp.145-165)			
9	3/15	Molecular Biology	Ch10	Microscope Quiz	Meiosis	

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			(pp.171-185) Ch12 (pp.220-221)		(pp.69-78) <i>(Asynchronous)</i> <i>(Meiosis Lab Module)</i>	Meiosis Lab Report
	3/17	Evolution Prt1	Ch13 (pp.243-265) Ch14 (pp.269-289)			
10	3/22	No Class	-----		No Lab	No Lab
	3/24	No Class	-----			
11	3/29	Evolution Prt2	Ch13 (pp.243-265) Ch14 (pp.269-289)	Genetics Assignment Due	Genetics (pp.79-98) <i>(Synchronous over zoom)</i> <i>(Genetics Lab Module)</i> *Review Meiosis Lab during zoom meeting	Genetics Lab Report
	3/31	Evolution Prt3	Ch13 (pp.243-265) Ch14 (pp.269-289)			
12	4/5	Lecture Exam 2	-----		Lab Exam 2	
	4/7	Plants: Anatomy & Physiology Prt1	Ch16 (pp.315-333)			
13	4/12	Plants: Anatomy & Physiology Prt2	Ch28 (pp.605-621) C29 (pp.624-631)		Other Organisms (pp.99-112) <i>(Asynchronous)</i> <i>(Other Organisms Lab Module)</i>	Other Organisms Lab Report
	4/14	Animals: Intro and Anatomy	Ch17 (pp.337-368)	Critical Thinking Assignment 2 Due		
14	4/19	Animals: Homeostasis & Endocrine System	Ch21 (pp.455-471) Ch25 (pp.535-547)		Animal Kingdom <i>(Asynchronous)</i> (pp.147-169) <i>(Animal Kingdom Lab Module)</i>	Animal Kingdom Lab Report
	4/21	Animals: Circulatory System	Ch23 (pp.495-507)			
15	4/26	Animals: Respiratory System	Ch23 (pp.507-513)	Communicating Science Assignment Due	Plant Kingdom (pp.117-134) <i>(Synchronous over zoom)</i> <i>(Plant Kingdom Lab Module)</i> *Review Other Organisms Lab and Animal Lab during zoom meeting	Plant Kingdom Lab Report
	4/28	Animals: Immune System	Ch10 (pp.186-192) Ch24 (pp.517-531)			
16	5/3	Lecture Exam 3	-----		Fungi (pp.135-146) <i>(Asynchronous)</i> <i>(Fungi Lab Module)</i>	Fungi Lab Report
	5/5	Ecology: Intro	Ch18 (pp.373-399)			
17	5/10	Ecology: Population	Ch19 (pp.403-421)			

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	5/12	Ecology: Community	Ch20 (pp.425-437)	Ecology Assignment Due	Outdoor Experience Lab (Asynchronous) (Outdoor Experience Lab Module) *Review Fungi Lab at 11AM over zoom (Synchronous over zoom)	Outdoor Experience Lab (Outdoor Experience Lab Module)
18	5/17	Ecology: Ecosystem Cycling of Energy and Chemicals	Ch20 (pp.437-449)		Lab Exam 3	
	5/19	Catch Up & Review				
Final	Week of 5/22- 5/28	Final Exam	---	Final Exam		

- * Pages listed under readings are the pages I recommend focusing on, but the entire chapter is the assigned reading
- * Prelab assignments are found in the each lab module and are to be completed **PRIOR** to lab
- * Exams and quizzes may be administered asynchronously or synchronously, so I am requiring you remain available during regular lecture and lab meetings times for those dates listed above for exams and quizzes.

Key Dates:

January 31, 2021 – Last day to drop semester length class and be eligible for a refund

February 7, 2021 – Last day to drop a semester length class without “W” symbol

April 25, 2021 – 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>