# Syllabus: full syllabus

# Biology 16, Introduction to Biology for Non-Majors Section 2430 - Course Syllabus

Visit the Syllabus page in the Canvas course navigation to see syllabus sections with links.

#### Welcome!

Welcome to Biology 16! I am so excited to work with you this semester, and hopefully help you accomplish goals beyond this course. I hope that you are just as excited to get to know and work with each other.

We will be learning and growing as Biology students (myself included!) together this semester. We all have our own valuable talents, skills, experiences, and perspectives to bring to the table, and we all have things to learn from one another. I hope that you will all share these unique contributions with our class this semester.

No student is expected or believed to speak for all members of a group. In this classroom, you have the right to determine your own identity. You have the right to be called by whatever name you wish, and for that name to be pronounced correctly. You have the right to be referred to by your correct pronouns. You have the right to adjust those things at any point in your education.

If you find that there are aspects of course instruction, subject matter, or classroom environment that result in barriers to your inclusion, please talk with me. My goal is to help you access information and skills, and students are always teaching me how to do that better.

## **Course Description**

An introduction for non-majors to the core concepts of biology by studying current issues in modern biology with an emphasis on the scientific method and scientific literacy.

## Student Learning Outcomes

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

- 1. Apply the scientific method to investigating and evaluating biological phenomena.
- 2. Explain the application of the core concepts of biology to current issues.
- 3. Evaluate the scientific background of and debate on current biological issues.
- 4. Demonstrate knowledge of laboratory and field biology techniques, including microscopy.

#### Objectives

During the course students will:

1. Explain the scientific method and assess information about current scientific issues using this methodology

- 2. Compare and contrast science and pseudoscience
- 3. Assess the role of science in society
- 4. Demonstrate knowledge of each of the following core concepts: evolution, structure and function, flow of information, flow of matter, systems biology
- 5. Apply core concepts to specific current issues in modern biology
- 6. Analyze and critically evaluate a current issue in biology and current events using the principles of the scientific method
- 7. Apply the steps in the scientific method for problem solving and biological investigation
- 8. Apply laboratory techniques, including proper microscope use, to observing and experimenting with biological phenomena

## **Class Meetings**

Lectures will be mostly asynchronous (pre-recorded, watch when you can) with some exceptions.

Labs will be mostly synchronous (live on zoom) with some exceptions.

See the tentative course calendar for details.

#### Instructor Contact

#### Riva Bruenn

Please call me Riva (pronounced REE-vah) and use she/her pronouns for me.

Office Hours (find zoom links by clicking TechConnect Zoom in the course navigation):

- I will have 2 hours per week of office hours over zoom. The schedule for these office hours will be determined through a survey taken the first week of class.
- I am also available for 1 on 1 or group meetings by appointment send me a Canvas message with a few days and times that work for you

I respond to Canvas Inbox message within 24 hours M-F, by Monday afternoon if sent between 5pm Friday and 5pm Sunday.

I prefer Canvas messages (I will see those first), but you may also email me at rbruenn@santarosa.edu

# What are office hours for?

Office hours are a time when I will be available by zoom to help any and all students who stop in. You don't have to make an appointment. There may be other students in the session.

I LOVE having students come to office hours - you are never a bother, always a joy.

Ideas for things to discuss during office hours:

- get help answering a study question, or another content question you have
- go over a quiz after your first attempt to improve for the 2nd attempt

- go over an exam after your last attempt
- go over an assignment before you submit it, or discuss feedback on a graded assignment
- get help navigating Canvas
- get help finding an SRJC or community resource (like writing help, mental health care, food, equipment loans, etc.)
- make a priority list and schedule, and set course goals together
- chat and help me get to know you (great idea if you might ever want me to write a recommendation letter for you, which I love to do)
- get advice or ask for help connecting with helpful people for your future academic or professional career
- ask random biology questions I may or may not be able to help you with
- work on an assignment quietly by yourself and ask me questions when they come up as you work
- come with your study group and study, asking me questions when they come up

## Course Website

Students will use this Canvas course web site for instructional content, assignment instructions, submitting assignments, viewing classmate's work, sharing resources, and viewing grades.

#### Instructor Announcements and Q and A Forum

I will post announcements on the "Announcements" page in Canvas throughout the semester. Make sure to set up your notifications so you get one when I post an announcement.

There are also two discussion boards you can use to post questions. I encourage students to answer each other's questions, but if no one has answered, I will respond within 48 hours. You can find the Q & A discussions under "Discussions" in the course navigation.

#### Textbooks

Concepts of Biology, OpenStax free online textbook

You can find our textbook 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

#### Required software

You will need the following software for this course.

- Adobe Reader
- Open Office

## Take-home kits

You will need to come to Petaluma campus to pick up take-home lab supplies. Alternatively, if unable to pick up a kit, you will be supplied with a list of required lab materials.

- Tentative dates/times you can pick up your kit (will be confirmed soon!): 8/19, 2-4pm, 8/20, 1030-noon, and 8/21 1030-noon.
- Map and exact location on Petaluma campus coming soon!

## 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.

| Α | 90% | 900 points or more |
|---|-----|--------------------|
| в | 80% | 800 to 899 points  |
| С | 70% | 700 to 799 points  |
| D | 60% | 600 to 699 points  |

#### Grades will be assigned as follows:

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.

#### Points will come from the following assignments and assessments:

Breakdown of points for the semester

| Assignment/assessment | Description  | Points | % of your<br>final<br>grade |
|-----------------------|--|--------|-----------------------------|
|                       | 350 word reflections on a scientist's life and/or research | 40     | 4                           |

| 6 discussions (each worth 10)  | Initial post and reply to a classmate   | 60   | 6   |
|--|---|------|-----|
| Microgreens report (6 journals each<br>5pts, 3 results discussions each<br>5pts, final writeup 55pts)                                      | We will plant microgreens 3 times to learn about growing plants and to practice the scientific method.  | 100  | 10  |
| scientific claims project (annotated<br>bibliography 20pts, practice peer<br>review 10pts, draft 10pts, peer<br>review 10pts, final 50pts) | An individual or group project<br>evaluating a claim using database<br>research and a graphical<br>presentation of your findings.                 | 100  | 10  |
| 5 graded labs each 10pts<br>(graphing, cancer, scientific claims,<br>carbon cycle, 1 chosen from list)                                     | Lab activities usually completed<br>during lab period, but occasionally<br>some groups will need to finish for<br>homework                        | 50   | 5   |
| 10 quizzes each 20pts  | multiple choice and short answer quiz on lecture and lab material   | 200  | 20  |
| 4 unit exams each 50pts  | multiple choice and short answer exam on lecture and lab material   | 200  | 20  |
| 3 self assessments each 15pts  | Surveys taken after each unit about<br>your study strategies and their<br>effectiveness. Also an opportunity<br>to give course feedback.          | 45   | 4.5 |
| 3 surveys each 15pts   | Surveys to help me (Riva) assess<br>how I am doing on non-grade<br>related metrics of student success<br>and get to know students<br>individually | 45   | 4.5 |
| 4 success activities each 15pts  | 1 activity per Unit from a list of<br>activities that typically help students<br>succeed in college courses                                       | 60   | 6   |
| nature journaling project (3<br>discussions each 10pts, 3 journal<br>entries each 15pts, 1 journal share<br>15pts, 1 reflection 10pts)     | Practice observing and describing<br>nature using drawings and notes, to<br>be verbally presented at the end of<br>the project.                   | 100  | 10  |
| totals:  |   | 1000 | 100 |

See each assignment page for more details.

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.

| Course Outline Category                    | Assignments & Assessments   | % of your grade from that<br>category |
|--|---|---------------------------------------|
| writing - response papers                  | scientist spotlights, discussions,<br>microgreens project, scientific<br>claims project | 30                                    |
| problem solving - analysis of case studies | labs  | 5                                     |
| Exams lecture & lab                        | quizzes and exams   | 40                                    |
| Other - oral report, participation         | self assessments, surveys, success activities, nature journal project                   | 25                                    |

## Extra Credit

Each unit you may complete 1 additional success activity to earn +5 extra credit points, which will be added to your exam score for that unit. (Even if you score 50/50 on the exam, the points will still improve your grade).

I do not promise any additional extra credit opportunities, but if an event or other opportunity is announced which is directly relevant to the course and accessible to everyone I will consider adding it as an additional opportunity.

## 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. Except for the nature journal, do not submit 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 lecture exams and semi-weekly quizzes taken as Canvas quizzes. The material comes from the textbook, recorded and live zoom lectures, labs, and supplemental materials provided to you. If any exam is missed, a zero will be recorded as the score. It is your responsibility to take the online exams by the close date. I will work with the Disability Resources Department to ensure any accommodations requirements are met.

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 at least once a week 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 and first exam 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 for full credit up unit the unit closes (9/19 for unit 1, 10/17 for unit 2, 11/14 for unit 3, 12/16 for unit 4) except for projects that rely on all students finishing at the same time and some surveys (see assignments for details). To prevent any students from falling too far behind and to help me manage my own time, after a unit closes, I will not accept, give feedback on, or grade late work.

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.

# Pass-No Pass (P/NP)

This class is a grade only class. P/NP is not an option for this course. See the course outline of record for more information.

#### Accommodations

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.

#### Additional resources for success

- Student Success Team student coaches
- Tutorial Centers
- Library resources Librarians are available online. Go to "online chat" or "zoom appointments"
- Need A Laptop? Get a Laptop loan from SRJC

- Apply for Crisis Financial Assistance
- Online Student Services
- Basic Needs Student Resource Center supports meeting student needs for food, housing, transportation, and much more

## My tips for success

- Regularly check Canvas, especially the tentative course schedule, and plan at least a week ahead.
- Plan to spend 5-8 hours on this class outside of lecture and lab hours.
- Make a schedule for yourself with reachable, prioritized goals for each study/work period.
- Review lecture notes after each class (especially study guide questions and questions in the lecture videos)
- Review and prepare for each lab. Read lab pages ahead of time and answer some questions.
- If you miss a question on a quiz or activity, figure out why your answer was not correct, what the correct answer is, and why.
- Use the student services.
- If you have a question or are confused, *please speak up*! Other students are almost certainly confused as well but may not want to ask.
  - ASK LOTS OF QUESTIONS during labs, office hours, and on discussion boards.
- Every class and every student is different work with me to make this the most effective learning environment it can be by communicating your needs and giving me feedback.

# Advice from Fall 2020 students, in their own words

- "stay up on your assignments and turn in by the due date even though you technically don't have to have assignments submitted until the end of the unit. It's so easy to get behind and stress yourself out, so it is better just to get things turned in by the date it is due and have all the assignments evenly spaced out."
- "take breaks when you feel like you need to. It is completely understandable that remote learning isn't
  necessarily the best thing out there right now, and maybe Biology isn't your best subject, whatever the case
  may be -- PLEASE take some time out of your hands to give yourself a break. We all deserve it!!! (:"
- "add the canvas to do list to your calendar on your phone"
- "connect with other students in the class. It is really beneficial to have conversations about the work we are doing in the class. It sheds different views of understanding the material."
- "don't be shy. Riva is very open and willing to answer any questions or help in any way. She just wants to see everyone be successful"
- "answer the study questions in a google doc, and save a google doc of weekly science notes/study questions"
- "having a journal just for biology and making sure to organize it well. For example, when taking notes on a video labeling it that specific videos notes, that way it is easy to find when taking [quizzes]."
- "set a organized schedule for the week to look at the modules and plan out time to do the reading and complete the assignments because it makes doing the work much easier and less stressful."
- "go to every review sesh and watch the videos!"
- "allow yourself enough time to complete any of the work because you're going to need it! :)"
- "Science isn't as difficult or scary as it might come out to be as long as you commit to doing your work."

# Important Dates

Day Class Begins: 8/16 Day Class Ends: 12/17 Last Day to Add without instructor's approval: 8/22 Last Day to Drop with a refund: 8/29 Last Day to Add with instructor's approval: 9/5 Last Day to Drop without a 'W' symbol: 9/5 First Census Day: 9/7 Last Day to Opt for Pass/No Pass: 9/26 Midterm progress indicators posted in student portals: 11/14 Last Day to Drop with a 'W' symbol: 11/14 Final Grade Rosters due: 12/31

#### No-show drop

If you do not sign into Canvas or if you do not attend the first two zoom or in-person 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.

#### 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.

Live zoom meetings will not be recorded, but I will take notes that will be published within 2 days of the session.

#### Strategies for avoiding falling behind in the case of absences:

Strategies to use ahead of time:

- work ahead of schedule to protect yourself from unforeseen events
- exchange contact information with lab group members so you have someone to go to for notes and help on what you missed

Strategies to use after you miss a session:

- come to office hours after the missed session to ask questions and get an overview of what you missed
- read the posted notes
- post in the course Q & A boards for help with things you missed or help finding resources you need to catch up
- schedule a 1 on 1 meeting to think through your priorities and make a list and schedule for catching back up

## Class goals and values

In our first class 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.

I will link that document here once it is complete.

#### Zoom best practices

We will be using live zoom sessions for labs and some lecture sessions. I recognize that by signing into zoom, we are all essentially inviting each other into our homes. This requires respect and trust.

We are also taking steps to connect in ways that will make our class more effective.

- You will never be required to share your video for this class, but I encourage you to do so especially during small group work in breakout rooms. Seeing each others faces helps us communicate more easily and effectively, and humanizes our online learning environment.
- Respect each other's privacy. Think carefully about impact before making any comments about anyone's background environment or choice to share or not share video.
- Feel free to move around your own home as you wish (bathroom breaks, snacks, stretching, etc.) no need to ask permission.

- Keep your microphone muted when you are not speaking to prevent background noise (I may mute everyone if background noise is becoming a problem).
- Make sure the name that shows is what you'd like to be called.
- If you are comfortable, please add your pronouns to your name (ex. she/her, he/him, they/them, ze/zir). This normalizes pronoun sharing and ensures that we all refer to each other properly.
- Contribute to our full class and small group (in zoom breakout rooms) discussions. We will all be depending on one another to make this work online!
- If you have a pet animal/plant/sourdough starter/rock/other pet and you are comfortable with sharing, I
  encourage you to show the class your pet people love this and pets make them happy :)

#### I challenge you to 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 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 the links in the Canvas syllabus section titled "conduct."

#### 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:

- 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.

#### Tentative course schedule

| If this schedule needs to change, I will send a course announcement. |   |  |  |  |  |
|--|---|--|--|--|--|
|  |   | last to t  | Tentative schedule   |  |  |
| Week (dates)   | Live zoom   | lecture topics<br>Tues/Thurs 12-1:30pm   | lab topics<br>Tues/Thurs 2-4pm   | things due (date due)<br>late work accepted until unit close date  | SRJC events  |
|  | sessions  | live zoom sessions are in bold   | live zoom sessions are in bold.  | unless noted in <i>italics</i>   |  |
| 1 (8/15-8/21)  | Tues 8/17<br>12-1:20pm  | Introductions and the<br>scientific method     The process of science                        | no labs  | <ul> <li>pre-semester survey (8/22)</li> <li>no late work</li> <li>Discussion: biology introductions (8/22)</li> </ul>   | first day of classes 8/16  |
| 2 (8/22-8/28)  | none  | <ul> <li>viruses and bacteria vs.<br/>eukaryotic cells</li> <li>protein synthesis</li> </ul> | no labs  | Quiz 1 (8/29)     scientist spotlight 1 (8/29)     Lab group preferences survey     (8/29)     no late work  | last day to add without code (8/22)  |
| 3 (8/29-9/4)   | Tues 8/31<br>2-3:50pm<br>Thurs 9/2<br>2-3:50pm                | immune system basics     vaccines, antibiotics, and     antivirals                           | <ul> <li>Scientific method and<br/>microgreens 1st planting</li> <li>drawing and reading graphs</li> </ul>             | Microgreens journal 1 (8/31)     Quiz 2 (2/9)  | last day to drop with refund (8/29)  |
| 4 (9/5-9/11)   | Thurs 9/9<br>2-3:50pm   | <ul> <li>natural selection</li> <li>antibiotic and antiviral resistance</li> </ul>           | <ul> <li>natural selection</li> <li>interpreting graphs/<br/>misleading graphs</li> </ul>                              | <ul> <li>microgreens journal 2 (9/7)</li> <li>Graphing lab (9/9)</li> <li>Quiz 3 (9/12)</li> </ul>   | <ul> <li>last day to add with code or drop<br/>without "w" (9/5)</li> <li>labor day (NO CLASSES on 9/6)</li> <li>census day (9/7)</li> </ul> |
| 5 (9/12-9/18)  | Tues 9/14<br>2-3:50pm<br>Thurs 9/16<br>12-12:30pm<br>2-3:50pm | implications and solutions     review session  | microgreens harvest 1     connecting evidence to     claims and evaluating     sources                                 | Exam 1 (9/19)     Microgreens results post planting 1 (9/19)     Success activity 1 (9/19)     Last date to turn in unit 1 work for credit (9/19)  | Constitution and citizenship day -<br>classes meet as usual (9/17)   |
| 6 (9/19-9/25)  | Tues 9/21<br>2-3:50pm<br>Thurs 9/23<br>2-3:50pm               | <ul> <li>biological polymers, digestion</li> <li>diabetes, cell signaling</li> </ul>         | <ul> <li>microgreens planting 2,<br/>enzyme simulation</li> <li>enzymes</li> </ul>                                     | microgreens journal 3 (9/21)     Quiz 4 (9/26)     Discussion: diabetes article     (9/26)   | none   |
| 7 (9/26-10/2)  | Tues 9/28<br>2-3:50pm<br>Thurs 9/30<br>sign up for time       | cell respiration     how diabetes treatments work  | <ul> <li>scientific claims practice +<br/>library workshop</li> <li>choosing a claim and group<br/>meetings</li> </ul> | <ul> <li>microgreens journal 4 (9/28)</li> <li>scientific claims practice (9/28)</li> <li>Self assessment 1 (10/3)</li> <li>Discussion: learning strategies (10/3)</li> </ul>  | last day to declare pass/no pass<br>(9/26)   |
| 8 (10/3-10/9)  | Tues 10/5<br>2-3:50pm   | cell cycling and cell division     mutations and cancer                                      | microgreens harvest 2     cancer   | microgreens results post planting<br>2 (10/5)     cancer lab (10/7)     Ouiz 5 (10/10)     scientific claims annotated<br>bibliography (10/10)     o no late work  | none   |
| 9 (10/10-10/16)  | Thurs 10/14<br>12-12:30pm<br>2-3:50pm                         | cancer treatments     review session   | microgreens planting 3 and<br>practice peer reviews     guest speaker  | microgreens journal 5 (10/12)     Exam 2 (10/17)     scientific claims practice peer     reviews (10/17)     o no late work     Success activity 2 (10/17)     Last date to turn in unit 2 work     for credit (10/17) | none   |
| 10 (10/17-10/23)   | Tues 10/19<br>2-3:50pm<br>Thurs 10/21<br>sign up for time     | mendelian genetics     limitations and misconceptions  | <ul> <li>scientific claims<br/>consultations</li> <li>introduction to nature<br/>journaling</li> </ul>                 | microgreens journal 6 (10/19)     intro to nature journaling post     (10/19)     Quiz 6 (10/24)     scientific claims draft (10/24)     o no late work  | none   |
| 11 (10/24-10/30)   | Tues 10/26<br>2-3:50pm<br>Thurs 10/28<br>sign up for time     | genetic ancestry services     gene and genome editing  | microgreens harvest 3     microgreens consultations  | microgreens results post planting<br>3 (10/31)     self assessment 2 (10/31)     scientist spotlight 2 (10/31)     scientific claims peer reviews     (10/31)     o no late work                                       | none   |
| 12 (10/31-11/6)  | Tues 11/2<br>2-3:50pm   | gene therapy     GMOs  | nature journaling practice     choosing a field site   | practice nature journal post (11/2)     field site post (11/4)     Quiz 7 (11/7)     microgreens report (11/7)     Discussion: GMOs (11/14)  | none   |
| 13 (11/7-11/13)  | Tues 11/9<br>12-12:30pm                                       | review session   | field site visit 1   | nature journal entry 1 (11/9)     Exam 3 (11/14)     Success activity 3 (11/14)     Last date to turn in unit 3     work (11/14)   | professional development day<br>NO CLASSES (11/10)     veterans day NO CLASSES<br>(11/11)  |
| 14 (11/14-11/20)   | Tues 11/16<br>sign up for time                                | <ul> <li>climate change intro and evidence</li> <li>biomes</li> </ul>                        | <ul> <li>scientific claims<br/>consultations</li> <li>field site visit 2</li> </ul>                                    | nature journal entry 2 (11/18)     Quiz 8 (11/21)     scientist spotlight 3 (11/21)     scientific claims final project     o no late work   | last day to drop with a "w" (11/14)  |
| 15 (11/21-11/27)   | none  | energy flow and     biogeochemical cycling   | carbon cycle   | <ul> <li>carbon cycle lab (11/23)</li> <li>Quiz 9 (11/28)</li> <li>self assessment 3 (11/28)</li> </ul>  | Professional development day<br>NO CLASSES (11/26)     Thanksgiving holiday NO<br>CLASSES (11/25-11/28)                                      |
| 16 (11/28-12/4)  | Tues 11/30<br>2-3:50pm  | <ul> <li>CA ecosystems</li> <li>biodiversity and threats to<br/>biodiversity</li> </ul>      | water properties     field site visit 3  | nature journal entry 3 (12/2)     Quiz 10 (12/5)     Scientist spotlight 4 (12/5)     Discussion: social implications     (12/5)   | none   |
| 17 (12/5-12/11)  | Tues 12/7<br>2-3:50pm<br>Thurs 12/9<br>12-12:30pm             | climate solutions     review session   | field journal sharing     choose from list   | Nature journal share (12/7)     Lab chosen from list (12/9)     Exam 4 (12/12)     Nature journal reflection (12/12)     Discussion: climate solutions     (12/12)   | none   |
| 18 (12/12-12/18)   | finals week no<br>classes                                     | finals week no classes   | finals week no classes   | Success activity 4 (12/16)     teaching and course survey (12/16)     post semester survey (12/16)     Last date to turn in unit 4 work (12/16)  | 12/11-12/18 finals week no classes<br>Final grades posted by 12/31   |