| **BIOLOGY 10: Life Science**  **Syllabus for Section 09** | |
| --- | --- |
| **Fall 2021** | **California State University, Fresno** |
| **Course Number:** 76296 | **Instructor:** Dr. Emily Walter (she/hers) |
| **Units:** 3 | **Office**: 125 Lab School OR 218 Science I |
| **Days & Time:** TTh 1:00-1:50 PM | **E-Mail** (preferred):ewalter@csufresno.edu |
| **Location:** Synchronous Online Instruction | **Telephone:** Email is best |
| **Website**: To access the course, login to Canvas (<https://fresnostate.instructure.com/>) using your Fresno State username and password | **Office Hours Zoom:**  Drop in, No Appointment Needed  Mondays 12-1 PM or Thursdays 2-3 PM  **Meeting ID: 958 2657 2930** Passcode: biology10 |

Table of Contents

[Course Safety Guidelines 3](#_Toc80663521)

[Course Description 4](#_Toc80663522)

[Course Goals and Student Learning Outcomes 5](#_Toc80663523)

[Primary Learning Outcomes 5](#_Toc80663524)

[GE Learning Outcomes 5](#_Toc80663525)

[Required Textbooks and Materials 5](#_Toc80663526)

[GE Program ePortfolio Requirements 6](#_Toc80663527)

[Email and Canvas 6](#_Toc80663528)

[SupportNet 6](#_Toc80663529)

[Dr. Walter’s Teaching Philosophy 6](#_Toc80663530)

[Grading Policy 7](#_Toc80663531)

[Course Policies 7](#_Toc80663532)

[Attendance Policy 8](#_Toc80663533)

[Policy on Plagiarism Detection 9](#_Toc80663534)

[Creating an Environment for All People 9](#_Toc80663535)

[Support for Student Parents and Caregivers 10](#_Toc80663536)

[Supplemental Instruction (SI) 10](#_Toc80663537)

[Participation Standards 10](#_Toc80663538)

[Point Structure 12](#_Toc80663539)

[University Policies 13](#_Toc80663540)

[Policy on Students with Disabilities 13](#_Toc80663541)

[Additional Policies 13](#_Toc80663542)

[University Services 13](#_Toc80663543)

[University Honor Code 14](#_Toc80663544)

[Copyright Policy 14](#_Toc80663545)

[SupportNet 14](#_Toc80663546)

[Examinations and Major Assignments 15](#_Toc80663547)

[Lecture 15](#_Toc80663548)

[Lab 15](#_Toc80663549)

[Tentative Course Schedule 17](#_Toc80663550)

# Course Safety Guidelines

***The following sections regarding COVID are subject to change***

***given changing circumstances on-campus and in the community.***

***Please check the COVID website for the most up-to-date information at:***

[***www.fresnostate.edu/coronavirus***](http://www.fresnostate.edu/coronavirus)

**Vaccination:  In order to create a safe environment on campus, all students must be vaccinated against the SARS-CoV-02 virus, or obtain an exemption, in order to attend classes on campus or access any services on campus. Documentation of the first dose of the vaccination must be uploaded to the student portal by Aug 20, and documentation of the final dose by Sept 30.** Students may request an exemption to the vaccine requirement by going to their student portal to complete the COVID self-certification. Students with vaccination exemptions are subject to weekly COVID testing. You are not allowed to come to campus if any of the following is true:

* You have not been vaccinated, and have not been granted an exemption, or
* You have been granted an exemption, but have not completed your required weekly testing.

**Health Screening:** Students who come to campus and/or are participating in off-campus in-person experiential learning will be required to complete a [daily health screening](https://fresnostate.co1.qualtrics.com/jfe/form/SV_5n0jKg9SGdJcrGd) before coming to campus or learning site. You are not allowed to come to campus if any of the following is true:

* If you are experiencing COVID-19 symptoms (vaccinated or not).
* If you have tested positive within the past 10 days.

If you have a suspected or confirmed case of COVID-19, please complete the campus [online reporting form](https://fresnostate.co1.qualtrics.com/jfe/form/SV_3faIAsuC8CzuFjD?Q_FormSessionID=FS_UFJ902LXgDJbKeZ).  A campus official will reply to provide guidance and information.

**Safety Measures:** Face coverings are required to be worn indoors on-campus and during in-person classes (vaccinated or not), and/or in accordance with learning site requirements if participating in off-campus experiential learning, to reduce the risk of community spread of COVID-19. The [Student Health and Counseling Center](http://www.fresnostate.edu/studentaffairs/health/index.html) has complimentary masks available for students who need them.  The mask requirement may be modified if/when transmission rates in Fresno Country drop below the threshold identified by the CDC.

Please remember that the same student conduct rules for in-person classroom instruction also apply for virtual/online classrooms. Students are prohibited from any unauthorized recording, dissemination, or publication of any academic presentation, including any online classroom instruction, for any commercial purpose.  In addition, students may not record or use virtual/online instruction in any manner that would violate copyright laws.  Students are to use all online/virtual instruction exclusively for the educational purpose of the online class in which the instruction is being provided.  Students may not record any online recordings or post any online recordings on any other format (e.g., electronic, video, social media, audio recording, web page, internet, hard paper copy, etc.) for any purpose without the explicit written permission of the faculty member providing the instruction.  Exceptions for disability-related accommodations will be addressed by Student Disability Services working in conjunction with the student and faculty member.

# Course Description

**Lecture:**  The course is divided into four units, based on the main topics that we will cover (Scientific Thinking, Nutrition and Infection, Evolution, and Ecology).

**Quiz preparation & studying:**  Quizzes will cover material covered in the lectures. Prepare for each class period by completing the assignments listed on the course schedule and attending and participating in each class session. Material on the quizzes is aligned to the learning goals of each class period. A good way to study is to take the learning goals (on first few slides for each day) and write notes around them by exploring the slides, links, videos, and other materials on Canvas.

It is usually expected that students will spend approximately 2 hours of study time outside of class for every one hour in class. Since this is a 3-unit class, you should expect to study, do homework, or do other coursework for an average of 6 hours outside of class each week.

**Lab:**This course has a laboratory component that you will participate in outside of lecture.  Please see below and the lab syllabus in the required lab manual for further details. *Dr. Walter is not your laboratory instructor*. All materials for the laboratory will come from a different instructor, but we correspond in regard to your final course grade (see [Point Structure](#_Point_Structure)).

Lab is either online or in person, depending on what section you signed up for. Please explore myFresnoState to see if your section is listed with a Building and Room Number or is listed as “Synchronous Online” to determine if you are going to campus for lab.

# Course Goals and Student Learning Outcomes

### Primary Learning Outcomes

At the completion of this course the student will be able to:

1. Describe what science is and be able to distinguish claims supported by science versus those that are not.
2. Know and describe the role of the major biological molecules needed for fuel and growth of organisms, especially in the human body and how these molecules contribute to human health.
3. Be able to give health advice that is based in how the human immune system fights infections, how it can be protected through scientifically smart behavior, and how your actions as an individual can affect others in the human population.
4. Describe and apply evidence for how populations, ecosystems, and global systems change, including how and why scientists agree that: (a.) Earth’s climate is changing and is influenced by human activity and (b.) populations evolve over time.

### GE Learning Outcomes

Upon completion of an Area B2 (Life Sciences) course, students will be able to:

1. Recognize and explain knowledge of scientific theories, concepts, and data about living systems.
2. Recognize scientific principles and apply the scientific method.
3. Discuss the distinctive strengths and scope of scientific endeavors and the ethics associated with intellectual inquiry.

# Required Textbooks and Materials

**Textbooks:**

1. *OpenStax: Concepts of Biology*. Edition 16. ISBN: 9781938168116. -- FREE

**Materials:**

1. Electronic Device, preferably a laptop. A smartphone or tablet will also work.
2. A notebook\*
3. Pencils/pens\*
4. Set of markers or colored pencils\*
5. We will be using the Google Suite. Be ready to use Google Docs, Sheets, Slides, and Drive. You will need to be logged into your Fresno State Gmail to have access.

\* Used for modeling and drawing in live online class, but also helpful for notetaking. Keep paper, coloring materials, and writing utensils with your electronic device so everything for class is in one place.

## GE Program ePortfolio Requirements

Our course is a General Education (GE) course for Area B2 – Life Sciences. This means you need to submit coursework to the online ePortfolio. You should submit your *second writing assignment* from lab to the online ePortfolio to meet this this requirement.

# Email and Canvas

Please check your Fresno State email daily and pay attention to the available materials on Canvas, including supplementary readings, videos, the grade book, and discussion boards.

# SupportNet

Our campus has developed [SupportNet](http://fresnostate.edu/studentaffairs/lrc/supportnet/) to connect students with specific campus resources promoting academic success. SupportNet is an early support program where faculty and staff can refer students who need academic and/or personal assistance. Dr. Walter will refer you to SupportNet if (a) after the first weeks of the course you have a D or lower (b) if at any time I have a concern for your well-being.

# Dr. Walter’s Teaching Philosophy

I look forward to being your instructor this semester. I am both a scientist and an educator, and my expertise is in how to help college students learn science best. If I were to explain how students best learn science, it would be “lecture doesn’t work”.  [Or rather, lecture doesn’t work well for most students and it does not work for long periods](https://www.pnas.org/content/111/23/8410).

This means both you as a student and me as your instructor will be *interacting* with each other and the class content! In both synchronous and asynchronous environments, I will build class materials to help you engage with one another, build your thinking and make connections among ideas, do relevant work (not boring memorization), and reflect on your understanding.

**(a)**   **Prior Knowledge and Interest Matters and should be built upon**

You already have ideas tied to what we learn in class. It is my job to help you build upon and revise old ideas and engage that prior knowledge and interest. I frequently will ask what you already know about a concept -- often in live class as a multiple choice or open-ended question.  This will help you figure out your thinking! You will be able to recognize when something is new, something is familiar, or that perhaps something you thought you knew is not clear (yet). In our online environment, I will do this through polling software and group work online through Zoom Breakout Rooms, Chat, and Google Docs.

**(b)**  **Learning Goals and Synchronous/Asynchronous Activities**

It is my duty as your instructor to provide organized instruction that is focused on key learning goals. Our learning goals always go beyond factoids. Random facts are boring, and not relevant to your future life or career. Instead, I strive to build our class material to be worth achieving. Furthermore, our class activities and assessments will always match the learning goals. In other words, you will NOT be quizzed on something that was not in class (that would be poor planning, if I care so much about goals!).

Our online class has a predictable schedule of two LIVE class periods and then either a homework or a quiz over the weekend. If you miss class, you can review the recorded class periods and do an online video module to get caught up. This way you are still interacting with the material and do not get behind, even if life got in the way.

**c) Learning is Social**

It is much easier to understand an idea in class when you explain (or hear about) that idea to others. If I am using a traditional lecture, I will break up lecture with something interactive every 10 minutes or so. Other times, you will not have any lecture until mid-way through a class period, once we’ve had time to develop our ideas and compare our thinking to what we knew beforehand. Long story short, this means that our online class is not a bunch of videos or passive listening. Social learning in our class will take many forms, from poll questions and think-pair-share in Zoom breakout rooms to more complex problem-solving discussions.

**(d)**  **Reflection is Key**

It is important in all learning that you have a chance to set goals, continually monitor their progress, identify what you know, identify what you don’t know, and adapt as necessary.  I will support you to do this in live class and in our asynchronous assignments. You can expect to see reflective prompts in many assignments and quizzes. You can also expect that we will pause at the end of a day to think about what makes sense and what is still in development. Sometimes these reflections will be worth points (when they are an assignment), and sometimes these reflections will be done as part of a Google form. Watch for the link in Zoom and on Canvas, your responses help me (and you) know where your thinking is!

# Grading Policy

A ≥ 90.00000% C = 70 – 79.99999%

B = 80 – 89.99999% D = 60 – 69.99999% F = 0 – 59.99999%

I will NOT be rounding grades up. This means if you got 89.6%, for example, that you would get a B.

# Course Policies

When in class, I expect you to be engaged and participating actively. This means that email, texting, homework for other classes, Facebook, YouTube, and online shopping can wait. It also means that you should expect to unmute and/or use chat in your breakout rooms in order to be a good group member.

**Emailing Dr. Walter**

Email is the best way to reach me and you can address me as Dr. Walter. I usually respond to emails within 24 hours. However, if I am busy, it may take me longer to respond.

**Extra Credit**

There will 50 points (5% boost) of extra credit throughout the semester. These opportunities will be available to everyone in class. I do not offer extra credit on an individual basis, as it is unfair to offer credit to some students and not others. *Extra credit will not be added to your grade until the very end of the semester.*

**Late Assignment Policy**

[University Policy on Make Up Work](http://www.fresnostate.edu/academics/facultyaffairs/documents/apm/232.pdf)

Missed homework cannot be made up, but you can complete another Biology Quest to drop your lowest homework grade. Missed quizzes can be made up by taking another version of the quiz that is all short answer and essay questions. In-class activity points must be completed within 48 hours of a class period (by Thursday at 1 PM for Tuesday class, by Saturday at 1 PM for Thursday class). In-class activity points will be waived for students on a case-by-case basis only. Please do NOT schedule avoidable conflicts (like doctor appointments) for during Biology 10 class time.

Do not let a computer crash or lack of Internet cause your assignments to be late! Please back up your work on the cloud. Be prepared to act on your feet! You can rent a free computer from the library, borrow a friend’s computer, and/or go to a location with 24-hr free Wi-Fi in order to complete your assignments on time.

## **Attendance Policy**

[University Policy on Student Absences](http://www.fresnostate.edu/academics/facultyaffairs/documents/apm/232.pdf)

Dr. Walter values punctuality and hopes you attend and arrive on time to all scheduled class sessions. However, due to circumstances beyond your control (ex: illness, family obligations) or within your control (ex: work, out of town trip, doctor’s appointments) you may have to be absent during the semester at some point.

I recommend that your absences should be used only for circumstances beyond your control.

If absent, it is your responsibility to watch the class recording, explore the slides, engage in class materials posted on Canvas, and do the in-class activity on Google Docs within 48 hours of class (by 1 PM Thursday or 1 PM Saturday). If you cannot make these deadlines due to an extended circumstance, please email Dr. Walter as soon as possible.

**Family Educational Rights and Privacy Act (FERPA)**

Federal law (FERPA) strictly prevents me from discussing your grades or class performance with your parents or anyone else without your permission. If you DO want me to discuss your performance with someone else, you will have to complete and sign a document waiving your privacy rights. Federal law does not make an exception if your parents are paying for your education. If there is a question about your grades, please come see me yourself; you are the only one with whom I can discuss your class performance.

## **Policy on Plagiarism Detection**

The campus subscribes to Turn-it-in and the SafeAssign plagiarism prevention service through Canvas, and you will need to submit written assignments to Turn-it-in/SafeAssign. Your work will be used for plagiarism detection and for no other purpose. You may indicate in writing that you refuse to participate in the plagiarism detection process, in which case I can use other electronic means to verify the originality of your work.  Turn-it-in and/or SafeAssign Originality Reports**will be available** for your viewing upon request.

**Copying and Pasting Internet Answers** (and other forms of Academic Dishonesty)

All work in this class **must be in your own words,** including quizzes, homework, quests, and in-class activities. Although we have open-book and open-note activities and assessments, you cannot copy and paste answers from the internet and get points. All answers NOT in your own words will be an automatic zero and will be reported to the university. Generally speaking, I review all Turn-It-In scores above 10%. However, any comment copied directly from another source is likely to receive a zero.

I am interested in you writing and explaining what you know, not in your ability to Google and copy/paste an answer. Furthermore, I am required to report all cases of academic dishonesty, including cases of copying and pasting written answers, to the University.

## **Creating an Environment for All People**

This class will be conducted in an environment that is open, welcoming, and safe to all students. The instructors is willing and committed to providing an atmosphere of support and affirmation for all people. **Do not display disrespectful behavior toward any individual** based upon age, ability, race/color/ethnicity, religious/spiritual, political affiliation, socioeconomic, immigration, marital, military/veteran status, gender identity/expressions, sexual/affectional orientations, relationship status, and/or anything that is likely to be perceived as disrespectful to someone’s background, culture, or identity. For instance, some derogatory, but commonly used language includes ‘that’s gay’ or ‘that’s retarded.’ Unprofessional, derogatory, and/or offensive behavior may result in disciplinary action.

## **Support for Student Parents and Caregivers**

Should you be attending class on Zoom and have children at home and/or have difficulty with obtaining childcare on a given day, *you can bring the kids with you to class*. This means it is okay if the child is on your lap or nearby. It is okay if they make noise or cry. I trust you to know whether you can successfully bring a child to class, and to mute your microphone when necessary. From my perspective, your child is welcome to attend and (a) participate or (b) do other activities, such as read, watch videos (with headphones), play video games, color, etc.

If you are breastfeeding and need to turn off your camera, please feel free to do so. However, since our class is only 50 minutes long, we do not have any scheduled breaks. Should you miss part of class time based on this need, please complete the synchronous in-class assignment within 48 hours of class. *If there is anything else that I can do to support you as a parent or caregiver, please let me know.*

# Supplemental Instruction (SI)

Supplemental Instruction (SI) is provided for all students who want to improve their understanding of the material taught in this course.  SI sessions are led by a student who has already mastered the course material and has been trained to facilitate group sessions where students can meet to compare class notes, review and discuss important concepts, develop strategies for studying, and prepare for exams.  The SI leader attends this class and communicates regularly with the instructor to ensure that accurate information is given.  Attendance at SI sessions is free and voluntary for any student enrolled in this course.  Students may attend as many times as they choose.  A session schedule will be announced in the first few weeks of class.

# Participation Standards

**Study Expectations**

It is usually expected that students will spend approximately 2 hours of study time outside of class for every 1 hour in class. Since this is a 3-unit class (4 hours/week), you should expect to study, do homework, do quizzes, or do other course-related work (like quests) for around 8 hours outside of class each week. Some students may need more time and some less.

You have found the syllabus extra credit. Congratulations. Please email Dr. Walter (ewalter@csufresno.edu) a picture of a hammerhead shark no later than September 7. You must title your email “Hammerhead Shark.” If you do this, you will receive 5 points of extra credit.

**Zoom Norms**

You are expected to stay muted on Zoom and have your camera on for the full experience during LIVE class sessions. If you are unable to have your camera on due to internet connectivity or another reason, I understand. However, having your camera on will help with creating a community-feel in our classroom.

Please use the whole group chat if you have a question. You can use a private chat with Dr. Walter if you do not want others to see your question. Class is dynamic and can be very busy, so please ask your question out loud or repeat it in chat if I happen to miss the message the first time.

When we go to breakout rooms (which will happen daily), you are expected to fully participate with your group. This means you should unmute, talk, and encourage others to talk if they seem disengaged. If you are concerned about background noise or have microphone difficulties, please use the chat to communicate with your group.

# Point Structure

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **Points** | **% of grade** | **Notes** |
| Lecture | 670 | 67% |  |
| Quizzes | 180 | 18% | Quiz 1 @ 30 points; Quiz 2, 3, 4 @ 50 points each  Quizzes are online on Canvas and timed at 60 minutes. They are open book and open note. If you miss a quiz, you can request to do an all-short answer make up quiz. |
| Homework | 180 | 18% | 9 Homework Tasks, 20 points each.  If you miss a homework, you cannot make it up. However, you can replace a homework grade by doing a fourth Biology Quest. |
| In-Class Activities | 120 | 12% | Class periods are LIVE, interactive, and worth points. Since we have 29 class periods, each day is worth about 4 points.  If you miss class, you can complete the in-class activity up to 48 hours after the start of each class period. |
| Biology Quests | 90 | 9.0% | Choose-your-own-adventure in 3 mini-projects that engage you in doing science in your everyday life. Options on Canvas.  Do 3 quests from over 20 to choose from. Done asynchronously. See [Tentative Course Schedule](#Tentative Course Schedule) for due dates. |
| Final Exam | 100 | 10% | Cumulative final exam |
| Lab\* | 330 | 33% | You must pass lab to pass Biology 10. |
| **Total** | **1000** | **100%** |  |

**\*Both writing projects from lab must be completed to pass this course. (completed = submission of a final draft)**

# University Policies

## **Policy on Students with Disabilities**

Dr. Walter is committed to creating a learning environment that meets the needs of Fresno State’s diverse student body, and to create a course that is inclusive in its design. If you anticipate or experience any barriers to learning, please discuss your concerns privately with me (Dr. Walter). In addition to speaking with me, there are many resources are available to you to ensure an opportunity to learn in an inclusive environment that values mutual respect.

If there are aspects of the instruction or design of this course that results in barriers to your inclusion or to accurate assessment of achievement—such as time-limited quizzes, inaccessible web content, or the use of non-captioned videos—please notify Dr. Walter as soon as possible.

Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the Henry Madden Library, Room 1202 (278-2811).

## Additional Policies

* [Adding and Dropping Classes](http://fresnostate.edu/studentaffairs/registrar/registration/add-drop-deadlines.html)
* [Cheating and Plagiarism](http://www.fresnostate.edu/academics/facultyaffairs/documents/apm/235.pdf)
* [Computers](https://www.fresnostate.edu/catalog/academic-regulations/index.html#computerreq)
* [Copyright Policy](http://www.fresnostate.edu/home/about/copyright.html)
* [Disruptive Classroom Behavior](http://www.fresnostate.edu/academics/facultyaffairs/documents/apm/419.pdf)
* [Honor Code](http://fresnostate.edu/academics/facultyaffairs/documents/apm/236_000.pdf)
* [Students with Disabilities](http://fresnostate.edu/studentaffairs/ssd/)
* [Title IX](http://www.fresnostate.edu/adminserv/hr/title-ix/index.html)

## **University Services**

The following University services can be found at:

* [Associated Students, Inc.](http://fresnostateasi.org/)
* [Dream Success Center](http://fresnostate.edu/studentaffairs/dsc/index.html)
* [Learning Center Information](http://fresnostate.edu/studentaffairs/lrc)
* [SupportNet Information](http://fresnostate.edu/studentaffairs/lrc/supportnet)
* [Student Health and Counseling Center](https://www.fresnostate.edu/studentaffairs/health/)
* [Writing Center](http://www.fresnostate.edu/artshum/writingcenter/)

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## **University Honor Code**

Members of the Fresno State academic community adhere to principles of academic integrity and mutual respect while engaged in university work and related activities. You should:

1. Understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism and inappropriate collaboration)
2. Neither give nor receive unauthorized aid on examinations or other course work that is used by the instructor as the basis of grading.
3. Take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate official for action.

I may require you to sign a statement at the end of all exams and assignments that “I have done my own work and have neither given nor received unauthorized assistance on this work.”

## **Copyright Policy**

Copyright laws and fair use policies protect the rights of those who have produced the material. The copy in this course has been provided for private study, scholarship, or research. Other uses may require permission from the copyright holder. The user of this work is responsible for adhering to copyright law of the U.S. (Title 17, U.S. Code). To help you familiarize yourself with copyright and fair use policies, the University encourages you to visit its [Copyright Web Page (http://libguides.csufresno.edu/copyright).](file:///Users/emwalter/Desktop/Laptop Dump Dec 2019/Jun 2019 Laptop Dump/Copyright Web Page (http:/libguides.csufresno.edu/copyright).)

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## **SupportNet**

Our campus has developed [SupportNet](http://fresnostate.edu/studentaffairs/lrc/supportnet/) to connect students with specific campus resources promoting academic success. SupportNet is an early support program where faculty and staff can refer students who need academic and/or personal assistance. Dr. Walter will refer you to SupportNet if (a) after the first weeks of the course you have a D or lower (b) if at any time I have a concern for your wellbeing.

# Examinations and Major Assignments

## Lecture

**Quizzes:**  There are 4-unit quizzes that will be given on Canvas and will be open for 60 minutes each. Quizzes are open book and open note. Each quiz will be open over a 4-day period (Friday-Saturday-Sunday-Monday). *Make-up quizzes are available by request, should extenuating circumstances cause you to miss the quiz*. All questions on the make-up quiz are short answer questions.

**Final Exam:**The comprehensive final exam is required for all students. It is worth 10% of your overall grade (100 points).

**In-class Activity Points:** Every class session will have points associated with participation in individual and/or group activities. Activities may require (but are not limited to): 1) creating materials to be turned in during class (e.g. sketches or Google slides), 2) submitting Google Form responses during class, 3) watching videos with your group or 4) going over homework. Synchronous *In-class activities must be completed within 48 hours of every class.*

**Biology Quests.** You must complete 3 Biology Quests as part of Biology 10. These quests are designed to increase your knowledge of local and scientific issues, local biodiversity, and spread your knowledge of biology to others.

Everyone will complete 3 ‘base’ quests from over 20 quests to choose from. New quests will be added throughout the semester as new opportunities arise to engage in citizen science and science communication within your community.

The quests are worth 9% of your overall grade (90 points). The quests are done outside of class (asynchronously) and are due February 16 (Quest 1), March 16 (Quest 2), and April 26 (Quest 3).

**Homework:**  There are 9 homework assignments worth 20 pts each. These are made available for 4 days, from Friday at Noon until Monday at 11:59 p.m. Pacific Time. If you miss a homework, you can make up a missing homework by doing an additional Science Quest.

These assignments can include, but are not limited to, listening to a podcast, watching a video, reading articles, and answering multiple choice questions.

## Lab

You are scheduled for a lab section that is at another time than our lecture session. *The lab is taught by another instructor, not by Dr. Walter.* Depending on your section of lab, your lab will either be in-person on online synchronous class. You must do more than attend lab to do well. You will also have lab writing assignments. The writing assignments will require you to have discussions and peer reviews in lab.

Lab Point structure: 100 for reports (10 @ 10 points each), 80 quizzes (10 @ 8 points each) and 150 writing assignments (2 @ 75 points each). See more detail on your lab syllabus.

Attending lab is required. Throughout the semester, **missing three labs will drop your overall grade by one letter grade; missing four labs will drop your overall grade by two letter grades; you will fail this class if you miss five labs.** You must receive a minimum of 180 points AND complete both writing assignments to pass the lab.  **IF YOU DO NOT PASS LAB, YOU CANNOT PASS BIOL 10.**

**Lab Writing Assignments:** You will complete two writing assignments in this course, which will be completed in your laboratory section.  You will write one report per project to fulfill the writing requirement of this GE course; the combined word count of both reports must be over 1000 words to pass this class. Detailed instructions for the assignments are available in the lab syllabus. Note: All drafts and final reports must be submitted to Turn-It-In for the peer feedback and peer review process.

# Tentative Course Schedule

**Fall 2021**

The schedule and procedures for this course are ***subject to change*** to remain responsive to your learning needs and for extenuating circumstances.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Day** | **Date** | **Unit** | **Topic** | **Assignments** | **Lab** |
| **Unit 1. Nature of Science** | | | | | |
| 1 | Tue. Aug 24 | Nature of Science | The *Real* Scientific Method Science vs. Pseudoscience | Explore Canvas  Do Learner Survey  Update Zoom  Gather course Supplies | 1 – Intro to Science |
| 2 | Thu. Aug 26 | Nature of Science | Theory/Law and Scientific Proof | Homework #1 Monday 8/30 |
| 3 | Tue. Aug 31 | Nature of Science | Public Images of Science + Science and the Supernatural | **Quiz #1**  **Open 9/3-9/6** | 2 – Scientific Method and Microscopy |
| 4 | Thu. Sept 2 | Nature of Science | Spotting Bad Science: Evaluating Claims Activity |
| **Unit 2. Nutrition and Infection** | | | | | |
| 5 | Tues. Sept 7 | Nutrition & Infection | Food, Matter, and Energy | Homework #2:  Due Mon 9/13 | No Labs, Labor Day Week |
| 6 | Thu. Sept 9 | Nutrition & Infection | Food & What Really Makes You Fat |
| -- | **Tue. Sept 14** | -- | -- | **Quest #1 Due** – Submit on both Canvas and on Google Forms | |
| 7 | Tue. Sept 14 | Nutrition & Infection | Healthy Eating & Diabetes | Homework #3:  Due Mon 9/20 | 3 – Cell Structure and Function |
| 8 | Thu. Sept 16 | Nutrition & Infection | Food and Photosynthesis |
| 9 | Tue. Sept 21 | Nutrition & Infection | Photosynthesis, Energy, and Matter in Ecosystems | Homework #4:  Due Mon 9/27 | 4 – Chemical Composition of Cells |
| 10 | Thu. Sept 23 | Nutrition & Infection | Antibiotics, Antivirals, and Intro to Identifying Science Denial |

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| **Day** | **Date** | **Unit** | **Topic** | **Assignments** | **Lab** |
| 11 | Tue. Sept 28 | Nutrition & Infection | Hygiene, The Immune System, & COVID19 | Homework #5  Due Mon 10/4 | 5 – Photo-synthesis and Respiration;  Rough Draft Due |
| 12 | Thu. Sept 30 | Nutrition & Infection | Internal Non-Specific Immune System + More Science Denial |
| **Unit 3. Evolution** | | | | | |
| 13 | Tue. Oct 5 | Nutrition & Infection | Flu, Vaccines, and How your Immune System Learns | **Quiz #2**  **Open 10/8 - 10/11** | 6 – DNA Extraction |
| 14 | Thu. Oct 7 | Evolution | What is evolution? / Theory and Law Recap |
| **--** | **Tue. Oct 12** | **--** | **--** | **Quest #2 Due** – Submit on both Canvas and on Google Forms | |
| 15 | Tue. Oct 12 | Evolution | Intro to Natural Selection | No Homework or Quiz – Rest Week ☺ | 7 – Mitosis and Meiosis; Assignment #1 is Due! |
| 16 | Thu. Oct 14 | Evolution | Mechanisms of Natural Selection |
| 17 | Tue. Oct 19 | Evolution | Intro to Speciation | Homework #6  Due Mon 10/25 | 8 – Diffusion and Water Balance |
| 18 | Thu. Oct 21 | Evolution | Real Life Examples of Speciation |
| 19 | Tue. Oct 26 | Evolution | Evidence for Evolution in Fossils and Artificial Selection | Homework #7  Due Mon 11/1 | 9 – Adaptations and Natural Selection; Draft report #2 due |
| 20 | Thu. Oct 28 | Evolution | Evidence for Evolution in DNA and Vestigial Traits |
| 21 | Tue. Nov 2 | Evolution | Evolution Evidence Wrap Up | **Quiz #3**  **Open 11/5-11/8** | 10 – Ecological Interactions |
| 22 | Thu. Nov 4 | Evolution | Evolution Myth Busting |
| **Unit 4. Ecology** | | | | | |
| 23 | Tue. Nov 9 | Ecology | Natural Resources and the Carbon Cycle | Homework #8 Due Mon 11/15 | Lab Writing Assignment #2 is Due! |
| -- | Thu. Nov 11 | Ecology | Holiday – Veteran’s Day |
| **--** | **Tue. Nov 16** | **--** | **--** | **Quest #3 Due –** Submit on both Canvas and on Google Forms | |
| 24 | Tue. Nov 16 | Ecology | Greenhouse Effect and Intro to Climate Change Climate | Homework #9  Due Mon 11/22 | Check Lab Syllabus |
| 25 | Thu. Nov 18 | Ecology | Climate, Weather, and Effects of Climate Change |
| 26 | Tue. Nov 23 | Ecology | Free Icon | Leaf Ecotherapy Sit Spot Activity | No Homework -Enjoy your Fall Break ☺ | No Lab  Fall Break |
| -- | Thu. Nov 25 | -- | Holiday – Thanksgiving |
| 27 | Tue. Nov 30 | Ecology | Climate Change Action Plan | **Quiz #4**  **Open 12/3-12/6** | Check Lab Syllabus |
| **Day** | **Date** | **Unit** | **Topic** | **Assignments** | **Lab** |
| 28 | Thu. Dec 2 | Ecology | How to Respond to Climate Change Denial | **Quiz #4**  **Open 12/3-12/6** | Check Lab Syllabus |
| 29 | Tue. Dec 7 | Ecology | Last Day of Instruction; Course Wrap Up and Bonus Points Day | No Homework.  Study for Finals. |

Q. Why is Unit 3 so long? A. Evolution is considered the central theme of biology. Nothing in biology makes sense except in light of evolution. Sadly, many people misunderstand the topic. For this reason, we have a long and comprehensive evolution unit.

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| **Finals Week** | **Days** | **Dates** |
| Final Exam Preparation & Faculty Consultation Days | Thursday and Friday | Dec 9 - 10 |
| Final Semester Examinations | Monday – Thursday | Dec 13 - 16 |
| Comprehensive Final Exam | Monday Dec 13 – Thursday Dec 16 | Open All Week, Closes 11:59 PM Pacific Time on Thurs, Dec 16. Timed at 2 hours. |

**Homework Due Dates**

Homework assignments open on Fridays and close on Mondays at 11:59 PM. Homework assignments are not timed and can be opened and worked on anytime the assignment is open on Canvas. You can only complete each homework assignment once.

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| **Item** | **Topic** | **Due Date (by 11:59 PM)** |
| HW 1 | Course Expectations & Nature of Science | Monday, August 30 |
| HW 2 | Diets and Calories | Monday, September 13 |
| HW 3 | Diabetes and Photosynthesis | Monday, September 20 |
| HW 4 | Science Denial + Immune System Basics | Monday, September 27 |
| HW 5 | Flu and Vaccines | Monday, October 4 |
| HW 6 | Speciation | Monday, October 25 |
| HW 7 | Making of North America | Monday, November 1 |
| HW 8 | Earth the Operator’s Manual + Eco-Friendly Actions | Monday, November 15 |
| HW 9 | Science Denial Review + Applications of Biology 10 | Monday, November 22 |