Biology 1: General Biology

Sections: 13464, 13466, 13467

Fall 2020

Lecture and Lab are both asynchronous online.

# Course Description

Introduction to the major themes and principles in Biology through lecture, laboratory and field experiences. Students investigate topics ranging from molecules to the ecosystem. Meets general education requirements.

# Student Learning Outcomes

1. Distinguish questions that can be addressed scientifically from those that cannot, and identify basic components of the scientific method as it pertains to biological systems ranging from molecules to the biosphere.
2. Identify basic components of the scientific method in laboratory setting.
3. Recognize unifying theories and concepts in biology (e.g. structure & function, ecological relationships, organismal diversity, & inheritance) within an evolutionary context.
4. Demonstrate the ability to comprehend current events related to a broad range of biological topics.
5. Experience the sense of discovery achievable through science and demonstrate a motivation to continue learning about a broad range of biological topics outside the classroom.

# Instructor Information

Dr. Emily Avila-Teeguarden

[Emily.avila@chaffey.edu](mailto:Emily.avila@chaffey.edu)

(909) 652-6417

Available via Zoom Tuesdays 10am – 12pm, Wednesdays 5-7pm, Thursdays 3-4pm

# Required Materials

1. Concepts of Biology from Open Stax.  This book is available for free online, on your mobile device, and as a pdf.  A print version is also available for purchase through their website.  A paper copy of the book is available through the Chaffey Campus Store.
2. Lab Materials such as:
   1. Pens/Pencils
   2. Computer with internet access
   3. Printer
   4. Scissors
   5. Glue or tape
   6. Access to Microsoft or Google Suite of software such as Word, Excel, PowerPoint, Google Docs, or Google Sheets
   7. Calculator
   8. Basic kitchen supplies
   9. Potatoes
   10. Fresh pineapple (I’ll let you know the best week to buy it)
   11. Canned pineapple
   12. Milk (I’ll let you know the best week to buy it)

# Grading

The final grade in the class is calculated as a percentage of the total possible points from the assignments listed below:

* 4 Exams X 100 points each = 400 points
* 20 Quizzes X 10 points each = 200 points
* Lecture Assignments = 200 points
* Lab Assignments = 200 points

A+ = 98 – 100% B+ = 88 – 89% C+ = 78 – 79% D = 63 – 67%

A = 93 – 97% B = 83 – 87% C = 70 – 77% D- = 60 – 62%

A -= 90 – 92% B- = 80 – 82% D+ = 68 – 69% F = 0 – 59%

# Drop Policy

Students who do not login to Canvas during the first week of class are dropped from the course. After the first week of class, I will not drop any students from the course. I respect that circumstances may arise that cause you to consider dropping the course, and I only ask that you talk with me first to consider all your options before making that choice.

# Attendance

Well, this is awkward, right? It’s an online course, so we don’t have set days or times that we will meet. Please set up a routine schedule of specific days and times that you plan to complete activities for class. You know what works best for you. I recommend that you block out 9-12 hours per week to complete lecture and lab activities, as well as another 3 hours to devote to reading and studying the material.

# Assignments

**Quizzes & Lecture Assignments will be assigned on Mondays and due on the following Mondays.**

There are assignments and a quiz associated with each topic covered. Please make every attempt to complete the assignments on time as late assignments are not accepted.

**Discussion Assignments will be assigned on Mondays and due on the following Wednesdays and Mondays.**

Many discussion posts will have two components – the original post and the response to a post. The original post will be due on Wednesdays and the response to a post will be due on Sundays. Please make every attempt to complete the assignments on time as late assignments are not accepted.

**Lab assignments are assigned on Mondays and due on the following Mondays.**

Lab activities are completed at home since this is a 100% online class. Instructions to complete the lab activities will be given in Canvas. There will be materials for you to pick up from Chaffey College at the beginning of the semester. The details of pick up will be shared on Canvas. Please make every attempt to complete the assignments on time as late assignments are not accepted.

**Exams will be assigned on Mondays and due on Wednesdays.**

You will have an unlimited time to complete them but will only be allowed to complete one question at a time without returning to any questions once completed. Please make every attempt to complete the exams on time as late assignments are not accepted.

# Academic Integrity

I have never taken an online class, but I’ve heard that the temptation for cheating increases in this environment. Examples that I’ve learned about include copying/pasting text from the internet directly into your assignment, using unauthorized materials during exams and quizzes, or submitting someone’s else’s work as your own for an assignment. Please don’t do any of these. My policy is that when caught, the student will earn a grade of 0% for the assignment.

# Student Behavior

Nobody likes an internet troll – the person who wants to hurt others through callous words. Please don’t be that person by respecting the dignity, values, belief systems, biology, and life circumstances of each person you encounter in our class, especially in Zoom meetings and discussion boards. Thank you.

# Weekly Schedule

It is possible that small changes may be made to the schedule during the semester. I will notify you of any changes on Canvas.

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| Week | Module/Topic/Lab Activity |
| 1 (August 17-21) | Introduction to Biology – Chapter 1  The Scientific Method Lab |
| 2 (August 24-28) | Chemistry of Life – Chapter 2  Macromolecules in Food Lab (Milk needed) |
| 3 (August 31-September 4) | Cell Structure & Function – Chapter 3  Cells Online Activity Lab |
| 4 (September 7-11) | How Cells Obtain Energy – Chapter 4  Diffusion & Osmosis Lab (Potato needed) |
| 5 (September 14-18) | **Exam 1 (Due Wednesday)**  Photosynthesis – Chapter 5  Enzymes Lab (canned & fresh pineapple needed) |
| 6 (September 21-25) | Reproduction at the Cellular Level – Chapter 6  Fermentation Lab |
| 7 (September 28-October 2) | The Cellular Basis of inheritance – Chapter 7  Cell Division Lab |
| 8 (October 5-9) | Patterns of Inheritance – Chapter 8  Genetics Lab |
| 9 (October 12-16) | **Exam 2 (Due Wednesday)**  Molecular Biology – Chapter 9 |
| 10 (October 19-23) | Biotechnology – Chapter 10  Gene Expression Lab |
| 11 (October 26-30) | Evolution & Its Processes – Chapter 11  Natural Selection Online Lab |
| 12 (November 2-6) | Diversity of Life – Chapter 12  Phylogenetics Lab |
| 13 (November 9-13) | **Exam 3 (Due Wednesday)**  More Diversity of Life – Chapters 13-16  Citizen Science Lab |
| 14 (November 16-20) | The Immune System & Disease – Chapter 17  Pandemics Lab |
| 15 (November 23-27) | Population & Community Ecology – Chapter 19  Predator Prey Interactions Lab |
| 16 (November 30-December 4) | Ecosystems & The Biosphere – Chapter 20  Biomagnification Lab |
| 17 (December 7-11) | Conservation & Biodiversity – Chapter 21  Ecological Footprint Lab  **Exam 4 (Due FRIDAY)** |