

Instructor

Professor Jennifer N. Cha

Office: JSCBB D220

Email: jennifer.cha@colorado.edu

Teaching Assistant: Elizabeth Bennett

Email: Elizabeth.Bennett@colorado.edu

Office Hours

With Prof. Cha: **Thursdays: 10:30-11:30**
 Room: D220 JSCBB (my office)

With Elizabeth: **Wednesdays: 11-12**
 Room: C124 JSCBB

Required Materials:

- **Course Text/ebook/McGraw-Hill Connect:** *Biology*, 13th Edition by Peter H Raven, George B Johnson, Kenneth A. Mason, Jonathan Losos, Tod Duncan; McGraw-Hill. As a student enrolled in CHEN 2810, you will automatically be enrolled in Inclusive Access, which gives you access to the online textbook (ebook) and McGraw-Hill Connect.
- **Clicker:** During each class, several Clicker questions (see below for detailed information) will be asked. Participation during class is mandatory, comprising of 10% of your final grade in the course.

Course Purpose: The purpose of this course is to develop a basic understanding of the science of biology. Particular emphasis will be placed on topics of potential importance and significance to chemical and biological engineers. This basic understanding will provide a solid foundation for subsequent courses related to biological and biomedical engineering.

Course Objectives: Upon completion of this course, you will have an introductory understanding of the following biological areas:

- *Biochemistry: the molecular structure of proteins, carbohydrates, and nucleic acids*
- *Cell organization*
- *Metabolism*
- *Genetics*
- *Molecular Biology*
- *Recombinant DNA Technology*
- *Evolution and Natural Selection*
- *Special Topics (Gene Delivery, viruses, biotechnology)*

Teaching/Learning Methods: Most of what you will learn in this course you will do so through the reading of the textbook. There is not enough time during class meetings to cover everything in the text. *Class meetings should be thought of as supplemental to the text.* During class, I will emphasize the important and/or confusing concepts and expand upon concepts in the book as well as present interesting topics that are not in the book. As such, reading is of utmost importance and class attendance is crucial. You will be expected to have read the assigned reading for each class period prior to coming to class.

Prior to each class, McGraw-Hill Connect Reading Assignments will be recommended to do. Working through these may help you understand the material better as you read through the chapter and answer any Clicker questions asked.

Locations and Times

Lectures will be presented in person during class times (Tues and Thursday 4-5:15 pm, A108)

Communication

Announcements, homework assignments, quizzes, and other communication will be run through Canvas at canvas.colorado.edu. Please feel free to email your instructor or TA **but be sure to include “BIEN 2810” at the beginning of your subject line** so we can find it! If you would like guidance on how to write emails, please see [this](#). Please **do not** send emails through Canvas

Grading

The table below summarizes the grading scheme for the course.

Item	Frequency	Score
Exams	2 exams every ~6 -weeks	20% each for a total of 40% of entire course
Final Exam	End of semester	30% of entire course
Homeworks	Most weeks (~10)	~2% each for a total of 25% of entire course
Class Participation	Every week	Total of 5% of entire course

Homeworks. There will be a total of 9-10 homework problem sets. On weeks that homework is assigned, it will be due on Thursdays by 11:59 PM on Canvas. Homework assignments will be completed individually and submitted on Canvas. Assignments will be comprised of a combination of multiple choice, short answer, and fill in the blank. There will be ~9-10 homework assignments throughout the semester.

IMPORTANT: *Homework assignments are cumulative!* That means that each assignment will cover not only the most recent week's material, but I may pose questions from the entire semester to date. Up to 30-40% of an assignment may be review questions, and this approach will help you on the Final Exam, which is cumulative.

No late submissions will be accepted. The homeworks will be worth a total of 20% of the

total grade. You are encouraged to collaborate with your colleagues to complete the homeworks. However, ***you must submit your own work.***

Exams will be a total of 2 exams. Exams will be administered as stated below. Exams will all be run **in person DURING CLASS TIME FROM 4-5:15 PM**. The dates are listed below. Final exam time is TBD

Exam 1: Tuesday, Oct 14

Exam 2: Tuesday, November 18

Participation and Class Attendance: Class attendance is mandatory and will be enforced by iClicker. You are allowed 3 absences, no questions asked.

Classroom Behavior

Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All

incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to fostering an inclusive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, or protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492- 2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#).

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, dating and domestic violence, stalking, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, students must notify the instructor at least 2 weeks in advance of any religious holiday. If the religious holiday falls on the date of a homework, the student will need to submit the homework one day in advance. If the holiday falls when an exam is due, the student will coordinate with the instructor to take the exam one day before.

See the [campus policy regarding religious observances](#) for full details.