Spring 2022

BIO9 Human Biology

4 Credit Units

Instructor: Ying Liu, Ph.D.

Email: yliu@ccsf.edu

Office: S-312B, Ocean Campus

Location: Live Online

Time: Tue Thu 9:10 am – 12:00 pm

Webpage: https://ccsf.instructure.com/courses/47855 **(Canvas: Human Biology Spring 2022, 34534-004)**

Office Hours: Available by email (checked frequently and best point of contact); through zoom

COURSE DESCRIPTION

Prerequisites:

There are no prerequisites. However, there is a STRONG advisory of ESL 62 or placement in ESL 72 or 150, OR completion of or concurrent enrollment in ENGL 90; MATH E1 or E3 or placement into MATH 840 or higher.

Course description:

This course provides students with a broad overview of scientific and biological principles. Using human beings as model organisms, this course guides students through a variety of biological topics including environmental biology, evolution, biotechnology, nutrition, anatomy and physiology. A key goal of Bio 9 is to provide students with the analytical and critical-thinking skills to understand scientific data in the context of everyday life and current events. Bio 9 is a 4 unit course, and is scheduled for approximately 3 hours of lecture and 3 hours of laboratory work per week. This course is CSU and UC transferable.

Student Learning Outcomes:

CCSF Major Learning Outcomes: Area C Natural Sciences
Upon completion of this course, a student will be able to:

1. Apply scientific inquiry and investigation of evidence to critically evaluate scientific arguments.

2. Communicate scientific ideas and theories effectively.
3. Apply scientific principles, theories, or models to explain the behavior of natural phenomena.
4. Apply scientific knowledge and reasoning to human interaction with the natural world and issues impacting society.

BIO9 Course Specific Major Learning Outcomes
Upon completion of this course, a student will be able to:

1. Critique scientific information in the media for accuracy and reliability.
2. Apply scientific methods to laboratory investigations including designing experiments and interpreting quantitative information using graphs.
3. Relate the structure and function of the building blocks of life from microscopic to macroscopic levels.
4. Integrate the effects of genetic and environmental influences on health and evolution.
5. Explain the flow of chemicals and energy through living and non-living systems.
6. Evaluate the impact of humans on the environment.

COURSE MATERIALS

Required Textbook:

Textbook Title: Human Biology
Publisher: LibreTexts
Author: Wakim & Grewal

The LibreTexts Human Biology textbook is free to read online. The book can also be downloaded as PDF file(s), either the full book, or individual sections.
Hard copy of the textbook can be purchased from LibreTexts: $29.92 (+ $5.93 shipping)

** Online Access to **CCSF Canvas** is REQUIRED.

Important Dates:

- Class Begins: Tuesday, January 18, 2022
- Class Ends: Tuesday, May 24, 2022
- Last Day to Drop with 100% Refund: Friday, January 28, 2022
- Last Day to Drop without a 'W': Friday, February 4, 2022
- Last Day to Drop with 50% Refund: Wednesday, February 9, 2022
- Last Day to Opt for Pass/No Pass: Thursday, February 17, 2022
- Last Day to Withdraw: Thursday, April 21, 2022

Zoom Conference:
Join Zoom Meeting
https://ccsf-edu.zoom.us/j/98425378199?pwd=dm44d0NOdjBSbmlpYmE4ZlBQK0JnUT09

Meeting ID: 984 2537 8199
Passcode: biology

COURSE POLICIES AND CONDUCT

Attendance: You are responsible for the information in the CCSF catalog concerning class attendance and tardiness: Students are required to attend all classes and participate in all activities. If a student is absent for more than six (6) hours of class, the instructor may drop/withdraw the student from the class. Excessive tardiness (amount of time or frequency) may be considered equivalent to absence. If a student is absent from any class for any reason, the student is responsible for the content covered during the absence and obtaining any handouts from the course website or library.

Students who are "no-shows" on the first two scheduled class meetings will be dropped.

If you stop coming to class, YOU are responsible for dropping yourself from the class on Web4. If you do not remove yourself from the course, you will receive an F at the end of the term.

Your Time Commitment: *In addition to attending class, most students find that they need to spend about 5-7 hours per week studying and completing assignments. You will be most successful if you devote an hour each day to staying 'on-top' of the material we are covering. If you have any questions about ways to improve your study habits or what it takes to be a successful college student, check out the resources available at the Learning Assistance Center! From online assessments to short workshops and even semester length classes – you can develop skills that will benefit you in college and beyond.*

Student Conducts: Students enrolled in this course are expected to comply with the City College of San Francisco Student Code of Conduct. For your reference, you can view a copy of this code here: CCSF St Code of Conduct. The Code of Conduct is also printed in the CCSF College Catalog.

The information in the CCSF College Catalog entitled "College Rules and Regulations" and "Academic Policies and Procedures" applies to this course. Note specifically:

- Consumption of food or beverages during class time is NOT permitted. Please leave any food or beverages, including chewing gum, outside the classroom. Violations of the food policies will result in disciplinary action.
- Please be respectful of others, especially when using electronic devices. Cell phones must be turned off during class and exam. It is NEVER acceptable to send text messages during class time. Additionally, if a student's cell phone is visible during a quiz or exam, the instructor will assume the worst and the student will receive zero (0) points for the quiz or exam.

Safety and Respect: Students at City College of San Francisco have the right to an environment in which there is freedom to learn. The College believes that each student has an earnest purpose and that he/she will adhere to acceptable standards of personal conduct. We believe students deserve a safe, civil, and respectful environment that will enable them to reach their full potential. To this end, we expect students to assist us in this mission. Promptly report any concerns or observations you have to our instructor or appropriate authorities. We value your assistance and take your concerns seriously. We will treat such matters as confidential to the fullest extent possible. Campus police: 239-3200; Student Health: 239-3110.

Academic Integrity: It is the expectation that all students will conduct themselves with integrity, both academically, and in their interactions with their fellow classmates. Students are required to be courteous and respectful of fellow students and conduct themselves in such a way that is conducive to a positive educational environment. This includes turning off cell phones and pagers during lecture, arriving to class and laboratory on time, and participation in lecture discussions/laboratory activities.

Academic Dishonesty: The most common types of academic dishonesty are cheating, and plagiarism. Academic dishonesty will, at a minimum, result in a "zero" on the assignment or exam in question. The following lists some of the most common forms of academic dishonesty:

Cheating:
1. Copying classwork of any kind from someone else (this includes allowing another student to copy your work).
2. Altering or interfering with grading; resubmitting an altered answer for review once an exam has been returned.
3. Using electronic equipment (including cell phones and PDA's) and/or materials not authorized by the instructor during a quiz/exam/final.
4. Collaboration (such as on lab reports) where it is specifically stated that students must work individually.

Plagiarism:
Using the work of another person and claiming it as your own is considered plagiarism, which is a form of cheating (see below for more information). Any form of cheating will not be tolerated and will lead to zero points for that assignment or exam. The student may also be withdrawn from the course or subject to disciplinary action from the college. Copying phrases and sentences off the internet without proper citation is one form of plagiarism! If you are turning in a paper, it is a good practice to run your paper through one of the many free plagiarism checkers available online. This will inform you if any portion of your paper appears to have been plagiarized. I am very serious about this, and you will not be given a chance to make up an assignment that has been plagiarized!

DSPS: Students with disabilities who need academic accommodations should request them from the Disabled Students Programs and Services (DSPS) located in the Rosenberg Library, Room 323 on the Ocean Campus. Telephone: 415-452-5481 (V) 415-452-5451 (TDD). DSPS is the campus office responsible for verifying disability-related need for academic accommodations, assessing that need, and for planning accommodations in cooperation with students and instructors as needed and consistent with course requirements.

GRADING IN THE CLASSROOM

Your grade in Biology 9 will be based on your performance on exams/quizzes as well as on your laboratory work and performance on assignments and laboratory exercises over the course of the semester. All assignments in BIO9 are submitted online using CANVAS. This is the school's portal for all of your tech-enhanced classes.

Exams (500 pts): Unit Exams, each worth 100 points, will be given during lecture time on Canvas. In BIO9, exams are based on both lecture and laboratory concepts. Unit Exams are not cumulative, and will consist of materials covered since the previous exam.

Chapter Quizzes (140 pts): Each day's reading is followed by a chapter quiz.. The quizzes are due on the day the lecture for that topic is given. You will have 3 attempts, and the highest score will be kept.

Unit Quizzes (100 pts): There will be a quiz per unit on Canvas and will be worth 20 points. For the unit quizzes, you have an unlimited amount of time and three chances to take the quiz. The Unit Quiz is due on the day of the Unit Exam that it corresponds to.

Class Participation (100 pts): Active participation in the class is highly encouraged. It is an effective way for you to learn the materials covered. This will be monitored by participation of Kahoot questions, breakout room activities, concept maps, as well as Daily Reflection discussion forum. Participation grade will also include assignments such as Check-in discussion, Class introduction slide show, Student survey and contract, Student exit survey, etc.

Labs (160 points): Lab assignments are submitted online. These include Labster simulations, H5P activities and other at home lab activities.

Discussion Forum Extra Credit: Each day of class, you have an opportunity to receive extra credit! To receive this, all you must do is find an article that is relevant to the topic we are discussing that day/week, write a SHORT summary (1 short paragraph is fine), and share what you found with the class in a Discussion Forum on CANVAS. These EC assignments are designed to help you connect what you learn in the class to what's happening in the real world. Total EC points for the semester do not exceed 2% of your total grade.

Grade Breakdown and Weighting by Category:

Category	Points	Percentage
Exams	500	50%
Chapter Quizzes	140	14%
Unit Quizzes	100	10%
Class participation	100	10%
Labs	160	16%
Total	**1000**	**100%**

Grades are assigned based on the percentage of total points that you have earned over the course of the semester. Total final points may vary from the 1000 points estimate.

For an "A" - a minimum of 90% of the total points are required.
For a "B" - a minimum of 80% of the total points are required.
For a "C" - a minimum of 70% of the total points are required.
For a "D" - a minimum of 60% of the total points are required.

LAB SAFETY GUIDELINES

1. Read all laboratory material before coming to class. The most important thing you can do to be safe in the lab is to be prepared and know in advance what you will be doing and why!
2. Familiarize yourself with emergency exits, eyewash station, fire blanket and extinguisher, first aid kit and broken glass container.
3. You must wear closed-toed shoes in the lab at all times - even if lab work is not scheduled on that day. Glassware is routinely broken in labs, and laboratory floors are not a safe place for flip-flops or strappy sandals. For your safety, the instructor will ask you to go home and return with appropriate footwear if necessary.
4. Notify the instructor if you are pregnant, or become pregnant or have any other medical conditions that might necessitate special precautions.
5. Long hair should be tied back when working in the laboratory.
6. No “horseplay” in the laboratory.
7. No optional or original experiments are to be conducted without prior approval.
8. Do not taste any chemicals.
9. Do not pour unused chemicals back into the stock bottle.
10. Broken glass should be reported to the instructor who will assist you in immediate clean up. Broken glass is to be discarded only in a “broken glass” container.
11. Place glassware and plastic contaminated by blood or body fluids in a disposable autoclave bag for decontamination by autoclaving or place them directly into a 10% bleach solution before reuse or disposal.
12. Wash the laboratory table surface after you have finished the activity when applicable.
13. Dispose of any trash or chemicals properly.
14. Clean all equipment and return it to the storage area before leaving the laboratory work area.
15. Report any spill, accident, or injury to the instructor immediately, and follow emergency procedures as necessary.
16. If you are not sure of anything.....ask for help or clarification before you start!!

SCHEDULE

Below is a tentative class schedule. This schedule is subject to change at any time. The instructor will give you advance warning should the need for rescheduling occur.

Week	Date	Day	Topic	Lab	Reading
1	18-Jan	T	The Nature and Process of Science	Scientific Method (H5P)	Chapter 1
	20-Jan	R	Introduction to Human Biology	Introduction to the Human Body (H5P)	Chapter 2
2	25-Jan	T	Chemistry of Life	Food Macromolecules (Labster)	Chapter 3
	27-Jan	R	Nutrition	Nutrition	Chapter 4
3	1-Feb	T	Cells	Cell Structure (Labster)	Chapter 5
	3-Feb	R	Cells	Cells and Tissues (H5P)	Chapter 5
4	8-Feb	T	**Exam 1**		
	10-Feb	R	DNA and Protein Synthesis	DNA Structure and Replication (H5P)	Chapter 6
5	15-Feb	T	Cell Reproduction	Mitosis and Meiosis (H5P)	Chapter 7
	17-Feb	R	Cell Reproduction	Meiosis and Karyotyping	Chapter 7
6	22-Feb	T	Genetic Inheritance	Mendelian Inheritance (Labster)	Chapter 8
	24-Feb	R	Biological Evolution	Evolution Game	Chapter 9
7	1-Mar	T	**FLEX DAY - NO CLASS**		
	3-Mar	R	**Exam 2**		
8	8-Mar	T	Introduction to the Human Body	Introduction to the Human Body (H5P)	Chapter 10
	10-Mar	R	Nervous System	Homeostatic Control (Labster)	Chapter 11
9	15-Mar	T	PNS and Senses	Action Potential (Labster)	Chapter 11
	17-Mar	R	Endocrine System	Endocrinology (Labster)	Chapter 12
10	22-Mar	T	Integumentary System	Endocrinology (Labster)	Chapter 13
	24-Mar	R	Skeletal System	Bones Lab	Chapter 14
	29-Mar	T	**SPRING RECESS**		
	31-Mar	R	**SPRING RECESS**		
11	5-Apr	T	Muscular System	Muscular System Lab	Chapter 15
	7-Apr	R	**Exam 3**		
12	12-Apr	T	Respiratory System	Respiratory System Lab	Chapter 16
	14-Apr	R	Cardiovascular System	Cardiovascular System Lab	Chapter 17
13	19-Apr	T	Digestive System	Digestive System Lab	Chapter 18
	21-Apr	R	Urinary System	Urinary System Lab	Chapter 19
14	26-Apr	T	Immune System	Cell of the Immune System	Chapter 20
	28-Apr	R	Diseases		Chapter 21
15	2-May	T	**Exam 4**		
	5-May	R	**HOLIDAY – NO CLASS**		
16	10-May	T	Reproductive System	Reproductive System Lab	Chapter 22
	12-May	R	Human Growth and Development	Regeneration Biology (Labster)	Chapter 23

17	17-May	T	Ecology	Ecology Lab	Chapter 24
	19-May	R	Ecology	Ecological Footprint	Chapter 24
18	24-May	T	**Exam 5 (10:30 am)**		
	26-May	R			