

BILD 10 - Fundamental Concepts of Modern Biology *Pandemic edition*

Course Syllabus*

Instructor: Giorgia Pirino, Ph.D.

Email: gpirino@ucsd.edu

Please include BILD 10, your full name, ID, and IA name in all emails to Dr. Pirino.

Office hours: Thursdays 9-10AM (starting week 2)

Instructional Assistants:

Samuel Song- mys003@ucsd.edu

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Discussion Sections/Office Hours - Time & IA - as in the Schedule of Classes

Discussion A01: Wednesday, 12:00 PM-12:50 PM - Kay

Discussion A02: Wednesday, 1:00 PM-1:50 PM - Jeffrey

Discussion A03: Wednesday, 3:00 PM-3:50 PM - Jeffrey

Discussion A04: Wednesdays, 4:00 PM-4:50 PM - Lindsay

Discussion A05: Tuesdays, 2:00 PM-2:50 PM - Caitlin

Discussion A06: Tuesdays, 3:00 PM-3:50 PM - Jonathan

Discussion A07: Tuesdays, 4:00 PM-4:50 PM - Amy

Discussion A08: Tuesdays, 5:00 PM-5:50 PM - Samuel

Discussion Sections will start in week 2, they will be live and available asynchronously on Canvas after section.

COURSE DESCRIPTION: This course provides an introduction to the molecular and cellular biology of microbes, plants, and animals. We will analyze the structures and functions of the smallest unit of life (the cell); we will dive into the diversity of organisms and microorganisms on earth, and we will discuss evolution and natural selection, as well as biotechnology and epidemiology; illustrations are drawn from microbiology and human biology. This course is designed for non-biology students and does not satisfy a lower-division requirement for any biology major. Open to non-biology majors only.

Due to the current pandemic, all lectures will be available on Canvas *asynchronously*.

Discussion Sections: You are encouraged to take advantage of discussion sections; they represent a great opportunity to ask for clarification and discuss course content. IAs will review class material, answer questions, review for quizzes and exam. Discussion sections will be live and available asynchronously on Canvas after section. Although discussion sections are not mandatory, students can receive extra 2 credit points (1%) if they *actively* participate to 5 of them. *We appreciate it if you keep your video on during the discussion sections, as it is better to interact with a live person, than a black screen or a photo! Your IA would like to get to know you!*

If you have a reasonable conflict with the discussion section you enrolled into, you can switch discussion section during the first week (weeks 0 and 1 only!). To do so, email the IA of the discussion you would like to join by Friday of week 1.

Textbook: “Biology: science for life with physiology, 6th edition” Belk & Maier, is optional, but highly recommended. If you have the 5th or 4th edition, it is **ok**. Just make sure that the readings correspond, since I will refer to the 6th edition during lectures. If you are using a different textbook, it is perfectly fine, but make sure that the course topics are covered. Articles and videos to complement the textbook readings will be provided.

You may choose one of the following options:

- Purchase access to the eBook for \$39.99 at <https://www.pearson.com/store/p/biology-science-for-life-with-physiology/P100000890943>
- Purchase via Red Shelf at UCSD Bookstore: <https://ucsandiegobookstore.redshelf.com/book/838310/biology-838310-9780134819075-colleen-belk-virginia-borden-maier>
- Purchase/rent the textbook via Amazon or other websites/bookstores.

Final grade: Your final grade will be determined by the following assignments:

- Participation: 15% (30 points) divided as following:
 - Discussion via Piazza: 10% (20 points; 2 points per week).
 - Actively watching the lecture: 5% (10 points)
- Homework: 10% of final grade (20 points)
- Quizzes: 35% of final grade (2 quizzes, 35 points each (17.5%), for total of 70 points)
- Take - Home Exam: 40 % of final grade (80 points)

Total points available: 200 points (100%)

Extra credit opportunities will be available throughout the course.

Grading scale: Please assume this class is NOT curved and use the raw score (rounded up to nearest 0.01%) that you receive to calculate your grades.

For example, <60/100 is a F; <68.5/100 is a D; 68.5/100 is a 68.5 or C-; 70/100 is a 70 or C; 75/100 is a 75 or a C+; 78.5/100 is an 78.5 or B-; 80/100 is an 80 or a B; 85/100 is an 85 or B+; 88.5/100 is a 88.5 or A-; 90/100 is a 90 or A.

Quizzes: Two quizzes (see course schedule) will be turned into Canvas > Assignments by the deadline for credit. After the deadline, IAs will go over them at the discussion section right after the deadline. Each quiz will be open for one week. Quizzes represent an excellent opportunity to practice for the take home exam. They will have the same format of the take home exam: true/false, multiple choice, short answer, and short essay questions. Questions will cover material covered in lecture, readings, and films (see section related to films). Since they mimic the take home exam, you will not be able to ask your classmates or instructors for the answers. Deadlines for all of the assignments for this class are in considered as Pacific Time (PT). **All quizzes submitted after the deadline will receive a penalty. Any submission within the first hour past the deadline is automatically late and loses 5% of the points. Any submission submitted after the first hour past the deadline loses 20% of the points. No homework will be accepted after 24 hours past the deadline. There are no make-up quizzes.**

Exam: We will have 1 take - home exam administered in final week. The take - home exam, which will be accessible to students on December 15th, 2020, at 7PM PT, will consist in questions related to a film (provided before the exam) and questions on course material. This exam is cumulative. Students will have 24 hours to complete and submit the exam through Canvas > Assignments for credit. Independently of the time a student open/start the take home final, she/he will have until December 16th at 7PM PT to submit it. More details will be provided during the course. Students will practice for it during lecture, discussion, and quizzes.

Review Section for take home Exam (live): Thursday, December 10, from 6:30PM to 7:30PM via Zoom.

Make-up Exam: *There is no make-up exam. No exceptions! The final take - home exam cannot be rescheduled or its grade substituted with a different assignment for any reason. In case of a dare emergency, please contact the instructor within 24 hours. After review by the instructor, the student may take a different exam as a substitution; most likely it will consist in an oral exam administered live via Zoom.*

Homework: Students enrolled in BILD 10 will complete homework assigned one week in advance by the instructor. Homework will be completed via the course website on Canvas (more information will be provided later). The answers will be used for class discussion. These assignments are designed to provide opportunities to expand students' knowledge on the topics covered in class. Deadlines for all of the assignments for this class are in considered as Pacific Time (PT). **All homework submitted after the deadline will receive a penalty. Any submission within the first hour past the deadline is automatically late and loses 5% of the points. Any submission submitted after the first hour past the deadline loses 20% of the points. No homework will be accepted after 24 hours past the deadline.**

Note on quizzes, homework, and exam : *The quizzes, homework, and final exam will be open-book, open-notes. You canNOT collaborate with anyone else, in ANY way. You must do your OWN work.*

Further, your answers (that are more than a few words) must be uniquely composed in your OWN words. You may NOT copy and paste answers from any source, do not use quotation marks. Otherwise, it would be considered plagiarism. If you cannot explain a concept in your own words, then you do not really understand it. This does not apply to fill-in-the-blank or very short answers.

Films

There are three required films, each one hour long. You will be responsible for watching them on your own time. All three are available for viewing online, streaming from the publisher's web site or from UCSD library reserves. If you are outside of the country or off campus, you need to connect via VPN to be able to watch the films. To connect via VPN, follow the instructions at <https://blink.ucsd.edu/technology/network/connections/off-campus/VPN/index.html> to download and install the **VPN AnyConnect client** - the EasyConnect Web interface will NOT work. Once you are ready to connect, you must select '2-Step Secured - allthruucsd' option from the drop down menu.

First film: Nature: what plants talk about (2013)

<https://roger.ucsd.edu/record=b10436130~S3>

A journey into the world of plants where you will learn how plants communicate to each others, to predators, to microorganisms around them, and have evolved ways to defend themselves. This film is only available via the Geisel library. *You need to connect via VPN AnyConnect (see above).*

This film will be covered on quiz 1.

Second film: Decoding COVID-19 (2020)

<https://www.pbs.org/wgbh/nova/video/decoding-covid-19/>

PBS cannot be watched outside the US, thus, you need to connect via VPN AnyConnect (see above).

The coronavirus SARS-CoV-2 has upended life as we know it in a matter of mere months. But at the same time, an unprecedented global effort to understand and contain the virus—and find a treatment for the disease it causes—is underway. Join the doctors on the front lines of the fight against COVID-19 as they strategize to stop the spread, and meet the researchers racing to develop treatments and vaccines. Along the way, discover how this devastating disease emerged, what it does to the human body, and why it exploded into a pandemic.

This film will be covered on quiz 2.

Third film: Vaccines, Calling the Shots (2014)

<https://www.pbs.org/wgbh/nova/video/vaccinescalling-the-shots/>

PBS cannot be watched outside the US, thus, you need to connect via VPN AnyConnect (see above).

Diseases that were largely eradicated in the United States a generation ago—whooping cough, measles, mumps—are returning, in part because nervous parents are skipping their children's shots. NOVA's "Vaccines—Calling the Shots" takes viewers around the world to track epidemics, explore the science behind vaccinations, hear from parents wrestling with vaccine-related questions, and shed light on the risks of opting out.

This film will be covered on the final exam.

How to study the films: The quizzes and final exam will test you on material from the films. You should take notes when you watch them, and review your notes before the exams. Do NOT worry about exact dates, numbers statistics, or names of characters in the films. Instead, focus on the stories, history (major events and general time frame), arguments of different stakeholders, policy issues, causes of controversies, impact of the situations described on individuals and society, appropriate and inappropriate responses, biological bases for understanding the situations, etc. *Do NOT wait to the last minute to watch the films, in case there is a technical glitch.*

Class Participation in an Inclusive Learning Environment during an emergency online course: This quarter BILD 10 is an emergency course, created online to stop the spread of COVID- 19 in our community. Thus, it will not be able to reproduce the experience that you would have had in person. To create community, we will use a discussion forum called Piazza so everybody can share her/his opinions, pertinent information regarding topics covered in class, from things that students have read, and examples from their experience as well as incorporate responses of their peers. At the same time, students who take BILD 10 are non-biology majors, thus, mastering of biology topics might be hard. For this reason, we will have two ways to help students confidence and provide help through the course: Piazza and lecture participation.

Piazza page: Our Piazza page should work as a message board: students may post/ask/answer questions on that page. Students who have a specific question about the course/course material are encouraged to post it on the Piazza page. Other students may wonder the same and the answers will provide an instant clarification to the entire class without misunderstandings. This discussion forum should be a tool for everyone to participate: the IAs and myself will post, answer and ask questions, and students will do the same. Students who participate **actively** to the class' discussion page receive points that will count toward the final grade. *I suggest you to download the Piazza app on your phone so you can be more engaged and receive participation points easily. To enroll into Piazza: piazza.com/ucsd/fall2020/bild10*

For instance, these are the dates to post and receive credit per each week:

Week 1: a student must post between Thursday, October 1 and 11:59PM of Saturday, October 10 to receive credit for week 1.

Week 2: a student must post between 0:00AM of Sunday, October 11, and 11:59PM of Saturday, October 17 to receive credit for week 2.

Week 3: a student must post between 0:00AM of Sunday, October 18, and 11:59PM of Saturday, October 24 to receive credit for week 3.

Week 4: a student must post between 0:00AM of Sunday, October 25, and 11:59PM of Saturday, October 31 to receive credit for week 4.

Week 5: a student must post between 0:00AM of Sunday, November 1, and 11:59PM of Saturday, November 7 to receive credit for week 5.

Week 6: a student must post between 0:00AM of Sunday, November 8, and 11:59PM of Saturday, November 14 to receive credit for week 6.

Week 7: a student must post between 0:00AM of Sunday, November 15, and 11:59PM of Saturday, November 21 to receive credit for week 7.

Week 8: a student must post between 0:00AM of Sunday, November 22, and 11:59PM of Saturday, November 28 to receive credit for week 8.

Week 9: a student must post between 0:00AM of Sunday, November 29, and 11:59PM of Saturday, December 5 to receive credit for week 9.

Week 10: a student must post between 0:00AM of Sunday, December 6, and 11:59PM of Saturday, December 12 to receive credit for week 10.

If you don't participate for one week, you can still receive participation points for all the other weeks (no exceptions). *Students who participate for at least eight of the ten weeks will receive 100% of Piazza's participation points.*

Actively watching the lectures: even though the lecture will be asynchronous, there are embedded quizzes in each of them (similar to the use of iClickers). Students will answer questions while they watch the lectures. Students will receive participation points (maximum of 5%) for answering, NOT for giving a correct answer.

We will start recording quiz participation in week 1 (second meeting of the course). However, we will practice with it during the first lecture (Thursday, October 1st). Ignore the points that will be displaced in the Canvas gradebook for each quiz/lecture. Students who will watch the lectures and complete the quiz for each lecture will receive participation points. For instance, there is a total of 10 points available. If a student watches all the lectures and answers the quiz, that student will receive full participation points. If a student watches 80% of the lectures, that student will receive 80% of the participation points (8 points).

Regrade Requests: All regrade requests should be submitted in writing (by email to Dr. Pirino or IAs) *within 5 days* of receiving the graded material (aka, the day that scores are posted on Canvas). More details will be provided.

Articles: We will read few articles throughout the course and they are fair game for the exam and homework, unless otherwise instructed. These articles are not scientific publications and are taken from divulgative magazines. As you read them, focus on the big picture and look for the following points:

1. What were the main goals this article? What did the authors try to communicate?
2. What was the take-home message?
3. If they perform experiments, what experiments did they do/what results did they obtain?
4. What were the main conclusions of the article?

If there is something that you do not understand, skip it temporarily, you can return to it later.

Statement on Office for Students with Disabilities (OSD): To receive accommodation, students must present or email their “Authorization for Accommodation” (AFA) form provided by the Office for Students with Disabilities (OSD) to the instructor. Considering that students will have 24 hours to complete the final take-home exam and one week for each quiz or homework, no extra time will be given to students .

Statement on Academic Integrity: Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind. The consequences of being caught cheating can be severe. Information can be found here: <http://www.ucsd.edu/current-students/academics/academic-integrity/index.html>

Students are expected to do their own work, as outlined in the UCSD Policy on Integrity of Scholarship: <http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>

Academic misconduct will NOT be tolerated. Students suspected of Academic Integrity (AI) violations on exams and/or homework will be invited to Zoom follow-up meetings where they will be asked to (in real time, on video) justify their answers (before the graded exams or solutions are released). If the instructor isn't convinced during the meeting, or the student refuses to participate, they're submitted for AI violations. Cheaters will receive a failing grade on the exam or assignment, and/or in the course. They may also be suspended from UCSD pursuant to University guidelines.

All class material, such as syllabus, readings, homework, scientific articles, lecture slides, etc. are copyrighted and cannot be posted to websites and/or distributed without instructor's approval for any reason. Students that sell and distribute course materials not only violates the student code of conduct, but also violates UC's 2005 policy on the Use of Recordings of Course Presentations: <http://copyright.universityofcalifornia.edu/resources/recorded-presentations.html> .

Academic misconduct includes but is not limited to:

1. **Cheating**, such as using "crib notes", copying answers from another student, or forge assignments.
2. **Plagiarism**, such as using the writings or ideas of another person, either in whole or in part, without proper attribution to the author or the source. Copying anything from any source is plagiarism if the source is not clearly cited (quotations constitute plagiarism). Plagiarism is stealing someone else's ideas and presenting them as your own.
3. **Collusion**, such as engaging in unauthorized collaboration on exams or assignments, completing for another student any part or the whole of an exam or assignment, or procuring, providing or accepting materials that contain questions or answers to an exam or assignment to be given at a subsequent time.

You will be required to sign this pledge on each quiz and exam:

On this test, students are permitted to use their BILD 10 book and notes.

I will complete this test in a fair, honest, respectful, responsible and trustworthy manner. This means that I will complete the test as if the professor was watching my every action. I understand that I am supposed to work on this test completely by myself, without ANY help from other people. Therefore I will not collaborate with anyone else in ANY way. I will act according to the professor's instructions and will neither give nor receive any aid or assistance.

I have read and understand the UCSD Policy on Integrity of Scholarship

(<http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>)

and will abide by those rules. I know that the integrity of this test and this class is up to me, and I pledge to not take any action that would break the trust of my classmates or professor, or undermine the fairness of this class.

*tentative. Changes to the course syllabus will be announced in lecture and by email.