

## BILD2 MULTICELLULAR LIFE

Summer Session I 2020

Study Sections: 1 Mon. 9:00-10:50  
2 Tues. 9:00-10:50  
3 Wed. 9:00-10:50

All times PDT

### Course Information

**Instructor:** Kate McCulloch (She/Her), PhD (email: [k1mcculloch@ucsd.edu](mailto:k1mcculloch@ucsd.edu), please include "BILD2" in the subject line of emails.)

**Office Hours:** MTWTh 11:00a-12:20p PDT, or by appointment via Zoom

**IA:** Carolynne Vo, (email: [cmv002@ucsd.edu](mailto:cmv002@ucsd.edu))

**Office Hours:** Mondays, 7-8pm via Zoom

**IA:** Letitia Yang, (email: [ley017@ucsd.edu](mailto:ley017@ucsd.edu))

**Office Hours:** Fridays, 4-5pm via Zoom

### Course Description

Welcome to BILD2 for Summer Session I 2020! In this course, we will build on what you have learned in BILD1 to understand how multicellular life is organized and functions. We will cover a variety of topics including metabolism, development, neurobiology, and more. We will also work to develop scientific and critical thinking skills in this course, tackling problems that involve interpretation of scientific data. A goal is to not just memorize facts, but be able to think deeply about scientific concepts and apply critical thinking.

This class will be held completely online (see below, Course Format). The pandemic has forced us all to upend and disrupt our lives. This includes education. Although we will not be physically meeting, we hope to provide many opportunities for you to interact with myself and the IAs virtually, as well as with each other.

### About the Instructor

I am a biologist who has studied everything from genetics to neurobiology over 15 years. I am very excited to help you continue your journey in biological sciences in BILD2. I am a Midwesterner, born and raised in Chicago and I attended graduate school at the University of Minnesota. My hobbies include reading, yoga, pets, and science-fiction.

**About the IAs**

Carolynne Vo:

“Hey everyone! I am a recent graduate with a B.S Human Biology & Chemistry minor. I love to go on hikes with my dog and explore new cafes! I really enjoy meeting new people and hope to see you all of this summer! :)”

Letitia Yang:

“I’m a Master’s student studying the role of dual receptor T cells in transplant diseases. I was born in Singapore, grew up in Taiwan and Canada, and moved to California for college. I enjoy drawing, playing tennis and re-watching The Office :) I’m looking forward to meeting all of you!”

**Overall Course Expectations**

What I expect of you	What you can expect of me
<b>Be informed.</b> Read this syllabus carefully and completely so you understand the course structure and expectations.	<b>Enthusiasm.</b> To be prepared for each class and to bring my enthusiasm for teaching to each lecture and office hour meeting.
<b>Be attuned.</b> Keep up with lectures and assignments, as each one builds on the previous one.	<b>Responsiveness.</b> I will do my best to respond to emails within 24 hours. Emails received on weekends may take longer.
<b>Ethical.</b> A good attitude and maintenance of honest and ethical principles towards me, your classmates, and the execution of the course. Please read UC San Diego’s <a href="#">Principles of Community</a> and <a href="#">Conduct Code</a> .	<b>Timely feedback.</b> To make every effort to return graded assignments in a timely manner and to post solutions as soon as is reasonably possible after the submission date.
<b>Integrity.</b> An honest, fair, responsible, respectful, trustworthy, and courageous effort on all academic work and collaboration. Please read UC San Diego’s Policy on <a href="#">Integrity of Scholarship</a> . Then, take the <a href="#">integrity pledge</a> !	<b>Integrity.</b> To uphold integrity standards and create an atmosphere that fosters active learning, creativity, critical thinking, and honest collaboration.
<b>Be flexible.</b> Sometimes my schedule gets affected by unavoidable emergencies, necessitating some office hour rescheduling at the last minute.	<b>Reasonable</b> accommodation and understanding for student situations that arise; however, I will not make exceptions for one person that are not available to every other person in the course.

## Course Learning Outcomes

Upon completion of this course, learners will be able to:

1. To describe and explain the organization of multicellular life and how that relates to function.
2. To describe and explain general principles of how multicellular organisms maintain homeostasis and respond to their environment, and their reproduction and development.
3. Predict how disruption of development, structure, and function of a multicellular organism can lead to disease.
3. To communicate and apply scientific thinking through exam questions and other assessments.

## Course Materials and Tools

All class lectures, assessments, and other interactions will be online. Therefore, an internet connection in order to access Canvas and Zoom is required.

Most material for this course will be based on Campbell's Biology (page numbers based on the 11<sup>th</sup> edition). This textbook is not required, but is recommended. Materials in lectures and problem sets will prepare you for exams and quizzes. However, the textbook can serve as a useful context and reference.

## Course Format

Due to COVID19, summer sessions for 2020 are being held exclusively online through Canvas. Through virtual office hours, study sections, and other tools we will provide opportunities for you as a student to engage with myself, the IAs, and each other in your learning. Let's try to make the best of these circumstances together!

This course will contain a combination of **synchronous** (or live activities where you will interact with others) and **asynchronous** (or activities you can complete with a more flexible schedule) activities. At the start and end of the course, I will post a **survey for you to answer for participation credit**. This survey will help me get to know you, and learn more about what you expect from this class. There will be a second survey to complete at the end of the session.

### Lectures

The lecture material will consist of **pre-recorded lectures** posted to Canvas. Lectures will be posted early in the week they are supposed to be watched (see schedule below). These lectures will be broken up into sections (i.e. 1.1, 1.2, 1.3, etc.) and will include **integrated questions that will be graded for completion** and allow you to think about the concepts covered. **You must complete all videos to receive participation credit.**

Each “day’s” lectures will be worth a total of 10pts. During scheduled class-times, I will be available to answer questions in virtual office hours. Please do not hesitate to drop in anytime during office hours. In addition, feel free to email me if you’d like to chat outside office hours.

### Quizzes

There will be **weekly quizzes which will usually be due by Friday evening** (although see exceptions below) **and graded** (you will be able to drop your lowest scoring quiz). Therefore, although you will be able to view the lectures on your own schedule, you should complete the lectures (and homework, see below) in a timely fashion to be prepared for the quizzes. The quizzes will be a combination of multiple choice, matching, true/false, and fill-in-the-blank.

### Homework and Sections

You will be assigned **one or two sets of homework problems each week** (covering material for that week’s quiz and for the upcoming exams). The homework sets for the week will be posted by each Sunday. **These will be only be graded for completion but you must complete the entire homework set for credit.** Although you will not lose points for incorrect answers, you must make a good faith effort to answer the questions to receive full credit. If questions were clearly not answered seriously, 10 points will be taken off your score. **THE HOMEWORK WILL BE PREPARATION FOR QUIZZES AND EXAMS! Study sections** will provide opportunities to work on homework sets with the assistance of your classmates and IAs. I highly encourage you to attend at least one study section per week. Your IAs are here to help you!

Weeks 1 and 3 will have one homework set due that Thursday (due to Independence Day and the Midterm). Weeks 2,4, and 5 will have two homework sets (see schedule below for details).

### Office Hours, Discussion Boards, Muddiest Points.

In addition to study sections, there will also be office hours and a class discussion board for you to ask questions and discuss any other issues. Also, I will post a weekly ungraded survey where you will be free to ask questions anonymously. I will address key questions from the discussion boards, quizzes, office hours, etc. in a weekly video posted over the weekend that will be accessible to all students.

### Exams

Due to the compressed schedule of this course, there will be just two exams: a midterm and a final. The Midterm will cover material from weeks 1-2 and is scheduled for July 13. The Final will cover materials from the entire class, and is scheduled for July 31. The exam will consist of questions similar to both the quiz and homework questions. We will also offer a practice Exam before the midterm that will be worth 5pts extra credit. I highly recommend you take this practice, as it will help you know what to expect on the graded exams. There will be more details about the exams as they approach.

You must let me know as soon as possible if you cannot take an exam at the scheduled time (because of a sudden illness or other emergency). Absences for any sincerely held

religious belief, observance, or practice will be accommodated where reasonable. (See Academic Regulations and Policies)

**Canvas**

UC San Diego’s Learning Management System: <https://canvas.ucsd.edu>  
 Login: UC San Diego Active Directory credentials  
 For help with online learning tools, go to: <https://keeplearning.ucsd.edu/>

**Where is everything on Canvas?**

Lectures: All lecture videos will also appear in each weekly module as an assignment.

Other materials: PDFs of lectures, Quizzes, homework assignments, and any other materials can be found in the “modules” on the left or the course homepage in Canvas.

Discussion Sections and Office Hours: Go to “Zoom LTI Pro” tab on the left in Canvas. There you will find a list of scheduled meetings. Discussion Sections and regular office hours can be accessed through here in the “Upcoming meetings” section.

Grading Information

**Summary of Grade Criteria**

Assignment	Points	Weight
Homework x 8	20ea	~20%
Quizzes x 3	50ea	18.5%
Pre and post reflections x 2	10 ea	2.5%
Participation X 18	10 ea	22%
Midterm	150	18.5%
Final	150	18.5%
	810	<b>100%</b>

**Grading Scale**

**A+**=100%-97%    **B+**=<90%-87%    **C+**=<80%-77%    **D** = <70%-60%    **F** = 60%-0  
**A** =<97%-94%    **B** =<87%-84%    **C** =<77%-74%  
**A-** =<94%-90%    **B-** =<84%-80%    **C-** =<74%-70%

**Grading Procedure and Feedback**

Grades will be posted in a timely fashion. There will NOT be a curve.

### **Attendance and Participation**

Concepts for exams and quizzes will be covered in the lectures. Each lecture will include participation questions that will give you time to think about the topics covered (10pts/lecture).

We highly encourage you to attend at least one study section per week. Please feel free to attend more than one study section! This is an opportunity to work through problems with IAs and classmates that will aide in preparing for exams. Think of it as scheduled study time! As with exams, if there is some reason you cannot complete an assignment (i.e. unexpected, severe, illness), please let me know as soon as possible.

### **Late or Missing Assignments**

Due to the fast pace of this course and to help you prepare for deadlines in your career, late homework, quizzes, and exams will not be accepted. However, to help mitigate this policy your lowest scoring quiz score will be dropped. You will receive zero credit for late and/or incomplete assignments or missed quizzes (if you have a legitimate reason for additional missed deadlines, such as an unexpected illness, please contact me directly). In addition, if there is an unexpected emergency and you cannot take an exam on time (illness, internet problem, etc.) **you must email me before** the exam deadline.

### **Extra Credit**

You will receive extra credit (10pts) for going to at least one office hour session (either with myself or the IAs). There will also be a practice exam that you can take for up to 5pts extra credit. This will be a great deal shorter than the actual exams, but will help familiarize you with the interface and the types of questions you can expect. **It is highly recommended that you take this practice exam.**

You can also receive extra credit after the midterm by picking one question from the midterm that you got wrong, and writing a ½-pg statement explaining the correct answer. You will then receive full credit for that question up to 5 points. You must email me within one day of receiving your midterm grade saying you want this extra credit to be able to use this opportunity.

**A Typical Week in This Course**

	<b>Synchronous activities and asynchronous lectures</b>	<b>Other asynchronous activities</b>	<b>Assignments/Quizzes</b>
<b>Sunday</b>		Watch review video	
<b>Monday</b>	Watch lecture		Start on hw1 for the week
<b>Tuesday</b>	Watch lecture, attend study section		
<b>Wednesday</b>	Watch lecture	Ask questions on discussion board	Turn in hw1 Start hw2
<b>Thursday</b>	Watch lecture, attend office hours		Turn in hw2
<b>Friday</b>			Take Quiz
<b>Saturday</b>			

Course Schedule

Week	Topics and relevant text chapters	Activities and Assessments	Due Date (by 11:59PM PDT)
1	6/29 Introduction to plant and animal structure and function (Ch.35,40) 6/30 Animal nutrition (Ch. 41) 7/1 Circulation (Ch. 42) 7/2 Respiration (Ch. 42)	Lecture questions: Quiz 1*: Homework 1: Intro Survey:  *Quiz1 will cover material from 6/29-7/1 due to Independence Day Observance	7/02* 7/02* 7/02* 7/01 *Due Th for Independence Day observance on July 3
2	7/6 Homeostasis (CH. 44) 7/7 Chemical signaling I (Ch. 39,45) 7/8 Immunity I (Ch. 43) 7/9 Immunity II (Ch. 43)	Lecture questions: Quiz 2*: Homework 2: Homework 3:  *Quiz 2 will cover material from 7/2-7/9	7/10 7/10 7/08 7/10
3	7/13 Midterm 7/14: Reproduction in plants (Ch. 38) 7/15: Reproduction in animals I (Ch. 46) 7/16: Animal Development I (Ch. 47)	Lecture questions: Quiz 3*: Homework 4:  *Quiz 3 will cover material from 7/14-7/16	7/17 7/17 7/17
4	7/20: Animals Development II (Ch. 47) 7/21: Animal Development and Cancer III (Ch. 47) 7/22: Neurobiology I (Ch. 48) 7/23: Neurobiology II (Ch. 48)	Lecture questions: Quiz 4*: Homework 5: Homework 6:  Quiz 4 will cover material from 7/20-7/23.	7/24 7/24 7/22 7/24
5	7/27: Sensory (Ch. 50) 7/28: Motor (Ch. 50) 7/29: Open for review session 7/30: Open for review session 7/31: FINAL EXAM	Lecture questions: Homework 7: Homework 8:	7/30* 7/29 7/30* *Homework and lectures due no later than Thursday due to the Final Exam.

## Student Resources for Support and Learning

### Library Help

For questions about eReserves and research tools:

<https://library.ucsd.edu/ask-us/triton-ed.html>

### Learning Resources

[Writing Hub I](#)

[Supplemental Instruction](#)

[Content Tutoring](#)

[Learning Strategies Tutoring](#)

### Accessibility

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD) which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison in the department in advance so that accommodations may be arranged.

Contact the OSD for further information: <https://disabilities.ucsd.edu/>.  
osd@ucsd.edu | 858. 534.4382

### Inclusion

I strive to foster an inclusive environment where all students are excited, engaged, and able to succeed. If you have any concerns please do not hesitate to reach out to me, or use the anonymous survey tool on canvas if that would be more comfortable.

Office of Equity, Diversity, and Inclusion:  
858.822.3542 | [diversity@ucsd.edu](mailto:diversity@ucsd.edu) | <https://diversity.ucsd.edu/>  
<https://students.ucsd.edu/student-life/diversity/index.html>  
<https://regents.universityofcalifornia.edu/governance/policies/4400.html>

### [Mental Health Services](#)

Counseling and Psychological Services (CAPS) provides individual, group, couples, and family psychotherapy to registered undergraduate and graduate students. Instructors can contact the **Triton Concern**

**Line** for consultation or concerns about a student. They can also request a training to help identify and work with distressed students.

Office 858-534-3755 | Phone & Crisis: 858-534-3755 | Emergencies: 911

#### Basic Needs

Any student who has difficulty accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in this course, is encouraged to contact:

[foodpantry@ucsd.edu](mailto:foodpantry@ucsd.edu) | [basicneeds@ucsd.edu](mailto:basicneeds@ucsd.edu) | (858)246-2632

#### Technical Support

For help with accounts, network, and technical issues:

<https://acms.ucsd.edu/contact/index.html>

For help connecting to electronic library resources such as eReserves and e-journals:

<https://library.ucsd.edu/computing-and-technology/connect-from-off-campus/>

For help installing Zoom for video conferencing, virtual office hours, synchronous lectures:

<https://blink.ucsd.edu/technology/file-sharing/zoom/index.html>

## UC San Diego Academic Policies

#### Academic Integrity

Academic Integrity is expected of everyone at UC San Diego. This means that you must be honest, fair, responsible, respectful, and trustworthy in all of your actions. Lying, cheating, or any other forms of dishonesty will not be tolerated because they undermine learning and the University's ability to certify students' knowledge and abilities. Thus, any attempt to get, or help another get, a grade by cheating, lying or dishonesty will be reported to the Academic Integrity Office and will result in sanctions. Sanctions can include an F in the class and suspension or dismissal from the University. So, think carefully before you act. Before you act, ask yourself the following questions: a) is my action honest, fair, respectful, responsible, and trustworthy, and b) is my action authorized by the instructor? If you are unsure, don't ask a friend, ask your instructor, instructional assistant, or the Academic Integrity Office. You can learn more about academic integrity at [academicintegrity.ucsd.edu](https://academicintegrity.ucsd.edu).

(Source: Bertram Gallant, T. (2017). Teaching for integrity. UC San Diego Academic Integrity Office.)

#### Classroom Behavior Policy

Although we will be conducting instruction online, we expect all students to be respectful of each other and the instructors.

Refer to:

[UCSD Student Conduct Code](https://students.ucsd.edu/_files/student-conduct/ucsandiego-student-conduct-code_interim-revisions1-16-18.pdf)

([https://students.ucsd.edu/\\_files/student-conduct/ucsandiego-student-conduct-code\\_interim-revisions1-16-18.pdf](https://students.ucsd.edu/_files/student-conduct/ucsandiego-student-conduct-code_interim-revisions1-16-18.pdf))

[Principles of Community](https://ucsd.edu/about/principles.html)

(<https://ucsd.edu/about/principles.html>)

### Religious Accommodation

It is the policy of the university to make reasonable efforts to accommodate students having bona fide religious conflicts with scheduled examinations by providing alternative times or methods to take such examinations. If a student anticipates that a scheduled examination will occur at a time at which his or her religious beliefs prohibit participation in the examination, the student must submit to the instructor a statement describing the nature of the religious conflict and specifying the days and times of conflict.

For final examinations, the statement must be submitted no later than the end of the second week of instruction of the quarter.

For all other examinations, the statement must be submitted to the instructor as soon as possible after a particular examination date is scheduled.

If a conflict with the student's religious beliefs does exist, the instructor will attempt to provide an alternative, equitable examination that does not create undue hardship for the instructor or for the other students in the class.

### Discrimination and harassment

The University of California, in accordance with applicable federal and state laws and university policies, does not discriminate on the basis of race, color, national origin, religion, sex, gender, gender identity, gender expression, pregnancy (including pregnancy, childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition, genetic information, ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (including membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services). The university also prohibits harassment based on these protected categories, including sexual harassment, as well as sexual

assault, domestic violence, dating violence, and stalking. The nondiscrimination policy covers admission, access, and treatment in university programs and activities.

If students have questions about student-related nondiscrimination policies or concerns about possible discrimination or harassment, they should contact the Office for the Prevention of Harassment & Discrimination (OPHD) at (858) 534-8298, [ophd@ucsd.edu](mailto:ophd@ucsd.edu), or [reportbias.ucsd.edu](http://reportbias.ucsd.edu).

Campus policies provide for a prompt and effective response to student complaints. This response may include alternative resolution procedures or formal investigation. Students will be informed about complaint resolution options.

A student who chooses not to report may still contact CARE at the Sexual Assault Resource Center for more information, emotional support, individual and group counseling, and/or assistance with obtaining a medical exam. For off-campus support services, a student may contact the Center for Community Solutions. Other confidential resources on campus include Counseling and Psychological Services, Office of the Ombuds, and Student Health Services.

CARE at the Sexual Assault Resource Center  
858.534.5793 | [sarc@ucsd.edu](mailto:sarc@ucsd.edu) | <https://care.ucsd.edu>

Counseling and Psychological Services (CAPS)  
858.534.3755 | <https://caps.ucsd.edu>

## Subject to Change Policy

Information contained in this course syllabus, other than the grade and absence policies, may be – under certain circumstances such as mutual agreement to enhance student learning – subject to change with reasonable advance notice, as deemed appropriate by the instructor.

