Course Information

Course Description:

BILD 1 is an introduction to the **structure and function of cells,** both in organisms like bacteria and in organisms like us. We will study the biological molecules present in cells, how cells obtain energy, and how these organisms pass information on to the next generation. In other words, we will deepen our understanding of the essential functions of living things by exploring the physical structures and biological principles that underlie the fundamental unit of all living organisms, the cell. There are no prerequisites, but basic high school knowledge of chemistry is helpful.

This course also aspires to support you in developing basic content knowledge and skills necessary to evaluate new discoveries in the life sciences and to continue to expand your knowledge of biology throughout your life. That requires going **beyond memorization of facts** to acquire an understanding of how and why organisms function as they do, and what happens when the components of organisms do not function properly.

In addition, the teaching strategies in this course will engage all of you as a community of biologists in the classroom to develop leadership and communication skills as well as support each other in understanding biological concepts. You will have the opportunity to practice applying these skills through in-class activities.

As the quarter progresses, we will use your feedback to adjust the course. Any changes will be to increase flexibility, and will be made with your learning in mind.

Where and when

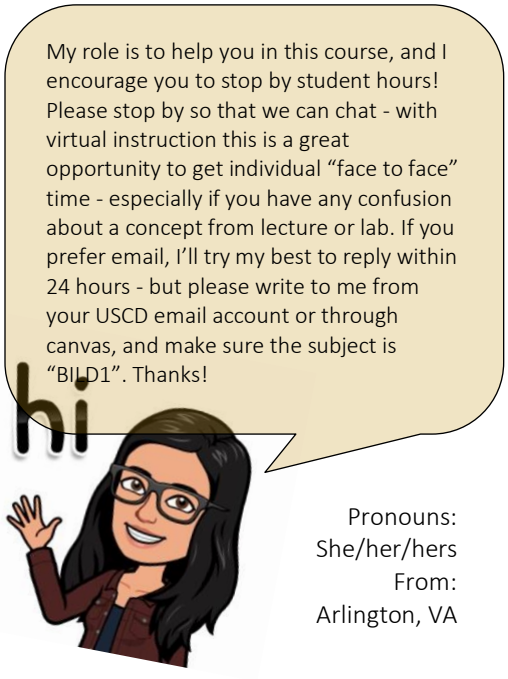
This section of BILD 1 is fully remote, and will have both asynchronous and synchronous elements.

Lectures: MWF 9:00-9:50 AM

- **Mondays and Wednesdays are asynchronous. These lectures will consist of playlists of short videos with questions, and will be released by** by Sunday of the corresponding week at noon PST. Class time will be used as optional student hours (office hours) for questions.
- **Fridays are for either synchronous in-class activities** (Weeks 1,2,4,5,7,8,9,10) **or take home mid-terms** (Weeks 3,6). All synchronous in-class activities can be submitted asynchronously, but we encourage you to attend the sessions live if you can – they are designed to help you practice applying content, but also are an opportunity to get to know the instructional team and your classmates! Zoom links for the synchronous sessions can be found on canvas, in the Zoom Links LTI page.
- Synchronous discussion section information: **See next page for section information, including IA names and emails**

Recommended schedule

Day	Watch	Do
Monday	Monday's lecture: (socialize and learn)	**Go to discussion section** (or go on Wednesday!) and practice with colleagues • Submit your section activity after attending section
Wednesday	Wednesday's lecture: (socialize and learn)	**Attend student hours** and ask questions (or go on Monday!)
Friday	Friday's lecture: Watch Friday's lecture then come to class for an IN CLASS ACTIVITY	**In-class activity** • Submit in-class activity at the end of class **Weekly reflection (complete/incomplete on canvas)** • Reflection about the past week's lectures • Reflection about next week's upcoming lectures
Weekend		Check your understanding questions (~5, for credit but two chances)



Student hours and contact information:

- Zoom links are on Canvas under "Zoom LTI Pro"
- Student hours are a time when you can come ask clarifying questions about the course material or about any other topics! I encourage you to attend Zoom student hours rather than email the Instructor or the IA' s for many reasons:
  1) This is how we can form a richer **community** and get to know each other
  2) Two, we can **better explain the material** with whiteboards and a conversation. Also, maybe other students have a similar question and we can help each other learn.
  3) **You will get a response right away in student hours**, instead of having to wait for emails
- You are encouraged to go to anyone's student hours. As you can see, we have student hours every day at a variety of times! If these times do not work for you, you may also contact us with your availability for a different time.

Name	Role	Email	Student hours
Dr. Claire Meaders	Assistant Teaching Professor, Div. of Biological Sciences	cmeaders@ucsd.edu	MW 8:30-10:00 AM MW 10:00-10:30 by appt.
Alexander De La Cruz	Master's student, Biology Education	aldelacr@ucsd.edu	M 5:00-5:50 PM
Maivi Luu	Senior, General Biology	mluu@ucsd.edu	Tu 10:00-10:50 AM
Stefanie Liane Au	Senior, Human Biology	sau@ucsd.edu	Th 7:00-7:50 PM
Tania Barazande-Pour	Senior, Human Biology	tbarazan@ucsd.edu	W 11:00-11:50 AM
Sankalp Nigam	Senior, Human Biology	sanigam@ucsd.edu	Fri 11:00-11:50 AM

Discussion section times:

Zoom links for each section are under the "Zoom LTI pro" tab in canvas. On there, you can see the discussion section times for all of the IAs. **You may attend any discussion section.** Sections start in Week 1.

Section	Day and Time	IA	IA email
B01	M 12:00-12:50 PM	Alexander De La Cruz	aldelacr@ucsd.edu
B02	M 1:00-1:50 PM	Maivi Luu	mluu@ucsd.edu
B06	M 2:00-2:50 PM	Alexander De La Cruz	aldelacr@ucsd.edu
B03	W 3:00-3:50 PM	Tania Barazande-Pour	tbarazan@ucsd.edu
B04	W 4:00-4:50 PM	Stefanie Liane Au	sau@ucsd.edu
B05	W 5:00-5:50 PM	Sankalp Nigam	sanigam@ucsd.edu

BILD 1 Supplemental Instruction

What is Supplemental Instruction? Supplemental Instruction (SI) provides an opportunity for students to actively and deeply learn course content by engaging in discussion with peers enrolled in BILD 1. These groups are not meant to be tutoring or review sessions. The Leaders prepare session plans to encourage and guide students in teaching and learning with each other. It is offered through the Academic Achievement Hub at UC San Diego, and has a separate canvas link: https://canvas.ucsd.edu/courses/24657.

Study Group (SG) is offered through the Academic Achievement Hub and will be remote **Mondays 11:00AM-12:20 PM (starting 4/5/21)**. The Leader, who has previously taken the course, will provide time and opportunity to work through more complicated concepts and problems that are associated with BILD 1. SG is a peer-led study group program that targets difficult classes. There are several study sessions (per week) outside the lecture. The sessions are designed to help with understanding content and to collaborate with peers who are also taking the course. Studies have shown that 95% of the students who attended four or more sessions earned a higher grade in their courses and overall GPA. SI also involves me in the process. Supplemental Instruction provides you with a session to explain, explore and elaborate what you know. Simultaneously, it allows you to clarify what you might struggle to understand.

Course Materials

Recommended materials: *Campbell Biology* (11th edition)
Lecture slides will be posted on canvas, within each lecture's page in weekly modules.

Learning Goals:

We anticipate that you will learn many things in BILD 1! Our goal is that by the end of the course you should be able to:

- **Demonstrate an understanding of the structure and function of** cells and how information is transmitted from generation to generation.
- **Predict how a change of a molecule, structure, or cell** (like through a disease or experimental manipulation) **will affect its function** and the function of the cell as a whole.
- **Develop critical thinking skills** to be able to think like a biologist and solve biologically-relevant problems.
- **Increase your understanding of your own learning (metacognition),** including recognizing what topics are easy or difficult for you to learn, learning what study strategies work best for you, and seeking help from instructors and colleagues at appropriate times.

All questions on exams, as well as nearly all questions on homework and in-class and in-section activities, will be tied to at least one of these overall learning outcomes. At the beginning of each unit, we will also provide you with specific biology-related learning outcomes to guide your learning of that material. The problems on the exams will be tied to those specific learning outcomes.

Learning in this course

This course is designed to be an environment for everyone to learn and construct a shared understanding of the material. Educational research has shown that consistent active engagement with material through thinking, writing, and discussing helps improve how people learn[1]. In this course, we will encourage engagement in class by providing opportunities to troubleshoot difficult topics and practice problem solving. There will also be short pre- and post- class assignments to help you check your understanding and practice applying what you have learned.

We also want you to be able to apply what you learn about biology in whatever context you find yourself in your future, including in your career and your personal life. Therefore, instead of memorization, we will focus on developing an understanding of fundamental concepts as they apply to different examples. Exams will include questions that are based on solving problems in new contexts.

Research has also shown that people generally learn best in **collaborative environments,** where they learn together and construct a shared understanding of the material[2]. While talking and working with your colleagues, you may identify gaps in your own knowledge, exercise the communication skills that are crucial in any career, and gain skills in working with colleagues as they learn to identify their confusions, ask questions, and think critically and skeptically about biology. Therefore, **active participation** both in class and discussion section is crucial. To encourage collaboration, class and section activities will be done in groups, and grades will never be assigned on a curve.

Course Expectations

What I expect from you	What you can expect from me
Be informed. Read this syllabus carefully and completely so you understand the course structure and expectations.	**Enthusiasm**. To be prepared for each class and to bring my enthusiasm for teaching to each lecture, lab, and office hour meeting.
Be attuned. Keep up with the lecture videos and lab assignments, as each one builds on the previous one.	**Responsiveness.** To respond to emails within 24 hours. For those that know me already, you know that I usually respond faster than this. Emails received on weekends may take longer.
Ethical. 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 Principles of Community and Conduct Code.	**Timely feedback.** To make every effort to return graded assignments within one week of the submission date and to post solutions or code as soon as is reasonably possible after the submission date.
Integrity. An honest, fair, responsible, respectful, trustworthy, and courageous effort on all academic work and collaboration. Please read UC San Diego's Policy on Integrity of Scholarship. Then, take the integrity pledge!	**Integrity.** To uphold integrity standards and create an atmosphere that fosters active learning, creativity, critical thinking, and honest collaboration.
Be flexible. Sometimes my schedule gets affected by unavoidable events, necessitating some office hour rescheduling at the last minute.	**Reasonable** 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.

Grading Information

Assignment	Weight
Lecture participation • More about you survey (1%) • Weekly reflections: Understanding your learning process (8%) • In class activities (completed synchronously or asynchronously) (8%) • Final reflection (1%)	18%
Section participation OR alternate activity (10)	10%
Check your understanding questions (10)	16%
Exams	54%
Professionalism	2%
Total	100%
Extra credit (e.g. surveys)	1%

The following grading scheme will be used. The course is **not** graded on a curve (i.e. 20% of students getting A, B, C, and such). Thus, the ability to do well in this course is not dependent on others doing poorly.

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

Lecture participation

To give you flexibility in your schedule, lectures will be asynchronous. We will record and post lectures early in the week that they are supposed to be watched. During lectures, I will pose questions to you that may be multiple choice or open-ended. While we are not grading your completion of those questions, please pause the videos and work on the problems! The questions are designed to help you engage with the lecture material. Trying to answer the question before you hear the answer will help you check your own knowledge and better remember the material. That is true even if- actually especially if- you realize you do not know the answer.

Weekly reflections: Understanding your learning process

Every week there will be an assignment called **"Understanding your learning process".** For these assignments, you will submit short (1-3 sentence) responses to three prompts. The prompts will be the same each week, and are designed to help you prepare for, monitor, and reflect on your learning. As such, these assignments are graded complete/incomplete (you will get full credit for submitting your responses), and we will drop one incomplete to give flexibility with schedules. Some weeks the prompts will include a short reading and additional short (~350 word) writing assignment, which will also be graded complete/incomplete.

In-class activities

Every "Flipped Friday" (synchronous Friday class), and for some asynchronous class periods there will be activities such as concept maps, worksheets, or other similar assignments that are designed to promote an in-depth understanding of material. After class you will submit the assignments on canvas. You are not expected to have mastery of the material right after class, and as such these assignments are graded complete/incomplete (you will get full credit for submitting your responses). However, we encourage everyone to check in with an IA or your instructor to review the material.

Final reflection

A final reflection on your experiences in this course is due at the end of the quarter on the Sunday night after finals week at 11:50pm. The prompt for this reflection will be: "What did you learn in BILD 1 that will continue to influence you for many years to come? How did you learn these things?"

Section participation and section activities

Weekly discussion sections are online. They are designed to engage you in applying your knowledge and exercising your skills in collaborative problem solving.

To promote collaboration and community, we highly encourage everyone to attend section on Zoom each week. However, we acknowledge that not everyone might be able to attend section in a given week. Therefore, each week, there are two options for getting section participation credit:

- Attend and participate in section: You may attend any section. You are encouraged to show your name and your video, if possible, to facilitate collaboration and taking attendance. In section, you will work with others in breakout rooms and shared Google Docs to collaboratively explain and understand the activities. Because section is about engagement and collaboration, participation credit will only be rewarded if you participate verbally or through writing with your breakout room group.
- Complete an alternate written assignment: If you cannot attend any section, you can request and complete an alternate written assignment that will also take about an hour. Generally, you will not only have to complete the problem set, you will also have to compare your original responses against the answer key and reflect on your learning process. We reserve the right to grade the alternate written assignment for correctness.

Each week, you can decide whether to attend section on Zoom or to complete the alternate written assignment, depending on your schedule that week. If you choose to do the alternate written assignment, it will be due the **Friday night of that week at 11:59pm**. Getting section credit, either through synchronous participation or doing the alternate assignment, at least 85% of the weeks (9/10) will award you full section participation credit, as the lowest score is dropped.

Weekly quizzes

At the beginning of the next week, there will be a post-lecture weekly quiz posted on Canvas that covers the material from that week to help you check your understanding. It will be multiple-choice. Some of the questions on the quiz will be fairly basic to make sure that you understood the basic ideas from the lecture. Other will be exam-level questions that test application of fundamental knowledge. Quizzes will be graded on correctness, but we will allow you 3 attempts to get full credit. After each attempt, we will give feedback on incorrect answers. In addition, we will ask one or two optional ungraded open-ended questions that allow you to give feedback to us about your experiences in the course.

Quizzes will be due every Friday night, no later than 11:59pm.

Completion of at least 85% of quizzes (9/10) can give you full credit, as the lowest quiz score will be dropped

Exams

To facilitate developing useful knowledge and skills for the long term, tests in this course will focus on applying knowledge to assess and solve novel problems. Questions will be multiple choice and short answer. Any material covered in or closely related to each lesson's learning objectives may be tested. For each exam, you will have the opportunity to earn up to 5% of your individual exam score back for filling out a post-exam reflection

Exams will be open-book, open-notes, and open-Internet. That means that the answers to most exam questions will not be found by Googling. Also, you still should study! Most students find that it works best to use their time during the exam to carefully read the questions and use their own understanding to craft responses, with referring to notes or Google only for confirming details.

There will be three exams on Friday of week 3, Friday of week 6, and 1 during Finals week. Exams will be released on gradescope, and can start any time between 8:00 AM and 6:30 PM. Each exam will be cumulative but will focus on the most recent material. We understand that given the nature of this quarter, you might not be able to take the exam during that window. If you need to have alternate timing, please let us know as soon as possible so we can make alternate arrangements.

Professionalism

This portion of the course grade is intended to motivate students to consider the impact of their actions on their own learning and the learning of others in the course. Unprofessional interactions consume time yet have no meaningful benefits to you, your fellow students, and/or the teaching team. Analogously in the workplace, being unprofessional to your colleagues or supervisors will only discount you. When you are discounted, you will not be invited for new opportunities that you may or may not be aware of. Professionalism can be demonstrated through individually demonstrating maturity and professionalism, as well as contributing meaningfully to our lab community (1 point described here). By default, every student is assumed to be professionally mature. Hence, this component is awarded to every student at the beginning of the quarter. During the quarter, based on observations by the teaching team, which includes but is not limited to one-on-one interactions, electronic communication, contributing data to class data sets according to deadlines, and follow-up conversations on grades, your professionalism credit may be deducted.

Example interactions with meaningful benefits:

- Developing deeper insight into course material, concepts, biology, and/or society in general
- Working collaboratively to improve in skill building and future opportunities
- Contributing to an inclusive learning environment
- Learning conceptually and meaningfully why full credit was not awarded for an assignment
- Clarifying course material that facilitates deeper learning
- Reporting errors or problems in class, on assignments, or for other course material
- Arriving on-time to lab video sessions and being prepared to work in lab

Example interactions that have no meaningful benefits and thus should be avoided:

- Contributing inequitably to team work
- Harassing and/or bullying the instructional team or other students, either in person or online
- Asking questions when the information is already available or will eventually be known
- Ignoring the directions or requests from the instructional team

Extra credit

The 1% extra credit can be earned by accumulating points through: attending one 15-minute supplemental student hour session; completing course evaluations and/or completing related surveys which aim to improve the course and the educational experiences of your future peers. There are no other opportunities for extra credit beyond what is assigned by the course instructor.

Late assignments and quizzes

Assignments must be submitted on time to be eligible for full credit. In order to provide some flexibility, you are allowed three late assignments (this does not apply to exams) without late penalties. After three late assignments, late penalties will be applied to subsequent late assignments. Except in the case of medical or family emergencies, late assignments will be subjected to a 10% deduction per day if submitted within 48 hours after the posted due date. Assignments not submitted within 48 hours of the due date will receive a score of 0.

Regrades

If a grading error has been made, you should submit a re-grade request via email to your Instructional Assistant or Dr. Meaders. Students who submit items for re-grading understand that we may re-grade the entire item and the score may go up or down.

Academic Integrity https://students.ucsd.edu/academics/academic-integrity/index.html

Integrity of scholarship is essential for an academic community. The University expects that both students and faculty 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(s) to whom it is assigned, without unauthorized aid of any kind. In this course, we need to establish a set of shared values. Following are values* adopted from the International Center for Academic Integrity, which serves as the foundation for academic integrity.

	As students we will…	As the teaching team we will…
Honesty	• Honestly demonstrate your knowledge and abilities according to expectations listed in the syllabus or in relation to specific assignments and exams • Communicate openly without using deception, including citing appropriate sources	• Give you honest feedback on your demonstration of knowledge and abilities on assignments and exams • Communicate openly and honestly about the expectations and standards of the course through the syllabus and in relation to assignments and exams
Responsibility	• Complete assignments on time and in full preparation for class • Show up to class on time and be mentally and physically present • Participate fully and contribute to team learning and activities	• Give you timely feedback on your assignments and exams • Show up to class on time and be mentally and physically present • Create relevant assessments and class activities
Respect	• Speak openly with one another while respecting diverse viewpoints and perspectives • Provide sufficient space for others to voice their ideas	• Respect your perspectives even while we challenge you to think more deeply and critically • Help facilitate respectful exchange of ideas
Fairness	• Contribute fully and equally to collaborative work, so that we are not freeloading off of others on our teams • Not seek unfair advantage over fellow students in the course	• Create fair assignments and exams and grade them in a fair and timely manner • Treat all students and collaborative teams equally
Trustworthiness	• Not engage in personal affairs while on class time • Be open and transparent about what we are doing in class Not distribute course materials to others in an unauthorized fashion	• Be available to all students when we say we will be • Follow through on our promises • Not modify the expectations or standards without communicating with everyone in the course
Courage	• Say or do something when we see actions that undermine any of the above values • Accept the consequences of upholding and protecting the above values	• Say or do something when we see actions that undermine any of the above values • Accept the consequences of upholding and protecting the above values

** This class statement of values is adapted with permission from Tricia Bertram Gallant Ph.D.*

All course materials are the property of the instructor, the course, and the University of California, San Diego and **may not** be posted online, submitted to private or public repositories, or distributed to unauthorized people outside of the course. Any suspected instances of a breach of academic integrity will be reported to the Academic Integrity Office for review and possibly given a score of 0.

Student Resources for Support and Learning

Academic support

Geisel Library	Research tools and eReserves
Content Tutoring with the Teaching + Learning Commons	Drop-in and online tutoring through the Academic Achievement Hub
Supplemental Instruction with the Teaching + Learning Commons	Peer-assisted study sessions through the Academic Achievement Hub to improve success in historically challenging courses
Writing Hub Services in the Teaching + Learning Commons	Improve writing skills and connect with a peer writing mentor
Learning Strategies Tutoring	Address learning challenges with a metacognitive approach
OASIS	Intellectual and personal development support
Student Success Coaching Program	Peer mentor program that provides students with information, resources, and support in meeting their goals
Academic Integrity	Policy on Academic Integrity of Scholarship and strategies to excel with integrity
Technical Support	Assistance with accounts, network, and technical issues

Student resources

Basic Needs	Provides access to food, housing, and financial resources
Counseling and Psychological Services (CAPS)	Provides services like confidential counseling and consultations for psychiatric services and mental health programming
Community Centers	As part of the Office of Equity, Diversity, and Inclusion the campus community centers provide programs and resources for students and contribute toward the evolution of a socially just campus
Counseling and Psychological Services	Individual, group, couples, and family psychotherapy services for registered undergraduate and graduate students
Office for Students with Disabilities	Documents students disabilities, provides accessibility resources, and reasonable accommodations
Triton Concern Line	Report students of concern at (858) 246-1111

It is also helpful to find support and resources for your specific needs. Some of the resources here at UCSD include: APIMEDA programs and services (apimeda.ucsd.edu), the Black Resource Center (brc.ucsd.edu), the Cross-Cultural Center (ccc.ucsd.edu), the LGBT Resource Center (lgbt.ucsd.edu), the Raza Resource Centro(raza.ucsd.edu), the Student-Parents Resource page (students.ucsd.edu/well-being/wellness-resources/student-parents), the Student Veterans Resource Center (students.ucsd.edu/sponsor/veterans), the Undocumented Student Services Center (uss.ucsd.edu), the Women's Center (women.ucsd.edu), and the Triton Transfer Hub (transferstudents.ucsd.edu/transfer-hub/index.html)

Accessibility

http://disabilities.ucsd.edu | osd@ucsd.edu | 858-534-4382
Any student with a disability is welcome to contact me early in the quarter to work out accommodations to support their success in this course. Students requesting accommodations for this course due to a disability should work through the Office for Students with Disabilities (OSD). Instructors will receive Authorization for Accommodations Letters from the OSD online portal. Students are required to discuss accommodation arrangements with instructors and OSD liaisons in the department in advance of any exams or assignments. Whenever possible, we will use universal designs that are inclusive. If you have feedback on how to make the class more accessible, please get in touch!

Inclusion

https://diversity.ucsd.edu/ | diversity@ucsd.edu | 858.822.3542
https://students.ucsd.edu/student-life/diversity/index.html
https://regents.universityofcalifornia.edu/governance/policies/4400.html
It is our goal to create a learning environment that supports diversity of thought, perspective, experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.). To help accomplish this:

- If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me during office hours or by appointment. I want to be a resource for you.
- You can also submit anonymous feedback at https://forms.gle/B6nrED17XF3Y2oGd7 (which will lead to me making a general announcement to the class, if necessary to address your concerns). If you prefer to speak with someone outside of the course, the Office of Equity, Diversity and Inclusion (diversity@ucsd.edu) is an excellent resource.

I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it. (Again, anonymous feedback is always an option.)

We encourage all of you to participate in discussion and contribute from your perspectives. As a participant in course discussions and as part of a lab team, you should also strive to honor the diversity of your classmates. If you have feedback on how to make the class more inclusive, please get in touch!

Nondiscrimination 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, https://ophd.ucsd.edu/, or http://ophd.ucsd.edu/report-bias/index.html

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

Letters of recommendation

If you think you may want me to write you a letter of recommendation (or any other instructor), please consider what a good letter would contain and how your actions in the course demonstrate the qualities you will want highlighted in a good letter. When students ask me for a letter of recommendation, I ask them to write to me about how they demonstrated critical thinking, leadership, collaboration, and professionalism. I will be specifically looking for examples of these qualities that I could have noticed during lab and office hours. Be sure to actively participate in the discussions, talk to me during the lab and my office hours: ask questions, offer your own ideas and interpretations of your results, bring interesting facts/papers that are connected to the material we are studying. If you don't actively show the qualities that are needed to write a good letter, it will be hard for me to write a letter that is meaningful and useful.

If you would like to request a letter, please fill out the letter request survey at this link: https://forms.gle/JfiutS9CcuQA1rBf7.

Subject to change policy

The information contained in the course syllabus, other than the grade and absence policies, may be – under certain circumstances (e.g. to enhance student learning) – subject to change with reasonable advance notice, as deemed appropriate by the instructor.

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/

Elements of this syllabus were adapted from a Winter 2021 BILD 1 syllabus provided by Dr. Melinda Owens, and from the Teaching and Learning Commons.

Course Schedule

Below is the planned course schedule, although this is subject to some change. I will announce any changes in advance.

Green = synchronous; Yellow = material emphasized on exam 1; Orange = material emphasized on exam 2; Blue = material emphasized on exam 3

All material will be covered on the final exam

	Date	Topic	Weekly assignments	Relevant Textbook Chapters
Week 1	Class 1: March 29 (Mon)	Introduction, themes of biology and scientific inquiry	• **Weekly reflection** due Friday 11:59 PM) • **Discussion section activity** due Fri 11:59 PM • **Weekly quiz questions** due Fri 11:59 PM	1
	Class 2: March 31 (Weds)	Principles of life		1
	Class 3: April 2nd (Fri)	*Before class:* Watch short lecture video on bonds *In class:* Activity for chemical bonds		1,2
Week 2	Class 4: April 5th (Mon)	Water and life, introduction to macromolecules (DNA and RNA)	• **Weekly reflection** due Friday 11:59 PM) • **Discussion section activity** due Fri 11:59 PM • **Weekly quiz questions** due Fri 11:59 PM	3,4,5
	Class 5 April 7th (Weds)	Macromolecules (proteins)		5
	Class 6 April 9th (Fri)	*Before class:* Watch short lecture video on carbohydrates and lipids *In class:* activity for carbohydrates and lipids		5
Week 3	Class 7: April 12th (Monday)	Cell structure and organization	• **Weekly reflection** due Friday 11:59 PM) • **Discussion section activity** due Fri 11:59 PM • **Weekly quiz questions** due Fri 11:59 PM	6
	Class 8: April 14th (Weds)	Membrane structure and function		7
	Class 9: April 16th (Fri)	NO CLASS. Take the exam (classes 1-7) during a 90 min period throughout the day.		
Week 4	Class 10: April 19 (Mon)	Intro to metabolism	• **Weekly reflection** due Friday 11:59 PM) • **Discussion section activity** due Fri 11:59 PM • **Weekly quiz questions** due Fri 11:59 PM	8
	Class 11: April 21 (Weds)	Enzymes		8,9
	Class 12: April 23 (Fri)	*Before class:* Watch short lecture video on photosynthesis *In class:* activity for photosynthesis		10
Week 5	Class 13: April 26 (Mon)	Photosynthesis pt 2	• **Weekly reflection** due Friday 11:59 PM) • **Discussion section activity** due Fri 11:59 PM	10
	Class 14: April 28 (Weds)	Cellular respiration pt 1		9

	Class 15: April 30 (Fri)	*Before class:* Watch short lecture video on cellular respiration *In class:* activity for cellular respiration	• **Weekly quiz questions** due Fri 11:59 PM	9
Week 6	Class 16: May 3 (Mon)	DNA to RNA to Protein	• **Weekly reflection** due Friday 11:59 PM) • **Discussion section activity** due Fri 11:59 PM • **Weekly quiz questions** due Fri 11:59 PM	17
	Class 17 May 5 (Weds)	Gene expression		18
	Class 18: May 7th (Fri)	NO CLASS. Take the exam (classes 8-16) during a 90 min period throughout the day.		
Week 7	Class 19: May 10 (Mon)	Mutations and cancer	• **Weekly reflection** due Friday 11:59 PM) • **Discussion section activity** due Fri 11:59 PM • **Weekly quiz questions** due Fri 11:59 PM	
	Class 20: May 12 (Weds)	Mitosis		12
	Class 21: May 14 (Fri)	*Before class:* Watch short lecture video on meiosis *In class:* activity for meiosis		13
Week 8	Class 22: May 17 (Mon)	Meiosis part 2	• **Weekly reflection** due Friday 11:59 PM • **Discussion activity**: due Fri 11:59 PM • **Weekly quiz questions:** 5 questions to check your understanding	13
	Class 23: May 19(Weds)	Mendel and the gene idea		14
	Class 24: May 21 (Fri)	*Before class:* Watch short lecture video on the chromosomal basis of inheritance *In class:* activity for inheritance		15
Week 9	Class 25: May 24 (Fri)	Molecular basis of inheritance	• **Weekly reflection** due Friday 11:59 PM • **Discussion activity**: due Fri 11:59 PM • **Weekly quiz questions:** 5 questions to check your understanding	16
	Class 26: May 26 (Mon)	Gene interactions		18
	Class 27: May 7th (Fri)	*Before class:* Watch short lecture video on cell signaling *In class:* activity for cell signaling		11
Week 10	NO CLASS Memorial day holiday May 31 (Mon)			
	Class 28: June 2 (Weds)	Viruses		19
	Class 29: June 4 (Fri)	Wrap-up		
		Exam 3: June 9th. Take the exam during a 90 min period throughout the day.		

University of California, San Diego
Consent to Act as a Research Subject

Investigating the Impact of Pedagogical Choices on University Student Learning and Engagement

Who is conducting the study, why you have been asked to participate, how you were selected, and what is the approximate number of participants in the study?
Gabriele Wienhausen, Director of the Teaching and Learning Commons, together with her education research colleagues is conducting a research study to find out more about how pedagogical choices affect student learning and experience in the classroom. You have been asked to participate in this study because you are a student in a class that is being studied or used as a control. There will be approximately 500,000 participants in this study.

Why is this study being done?
The purpose of this study is to create knowledge that has the potential to improve the learning and educational experience of students at UC San Diego and beyond.

What will happen to you in this study and which procedures are standard of care and which are experimental?
If you agree to be in this study, the following will happen:

- Your data from this class including grades, homework and exam submissions, and survey responses will be included in the analysis to determine the effectiveness of the pedagogical techniques used in this course compared to other similar courses.

How much time will each study procedure take, what is your total time commitment, and how long will the study last?
Your participation involves only agreeing to let us use your data in our analysis. It will require no time on your part above the time you put into this course without agreeing to the study.

What risks are associated with this study?
Participation in this study may involve some added risks or discomforts. These include the following:
1. A potential for the loss of confidentiality. We will not share your personally identifying data with people outside our research team. Data will only be kept in anonymized form for research purposes. Course data will not be used for this research study until after final grades have been posted and will be rendered confidential by removing any identifiers before analysis. Your instructor will not know whether or not you are participating in this study until after final grades have been posted. Data from students who opt out of the study will be removed prior to data analysis. Research records will be kept confidential to the extent allowed by law. Research records may be reviewed by the UCSD Institutional Review Board.
Since this is an investigational study, there may be some unknown risks that are currently unforeseeable. You will be informed of any significant new findings.

What are the alternatives to participating in this study?

The alternatives to participation in this study are not to participate. If you choose to opt-out of participating in this research study, we will exclude your data from analysis. Whether you participate will have no impact on your experience or grade in the associated class as the professor will not know who is or is not participating in the study until after final grades are assigned.

What benefits can be reasonably expected?
There is no direct benefit to you for participating in the study. The investigator, however, may learn more about how to improve student learning, and society may benefit from this knowledge.

Can you choose to not participate or withdraw from the study without penalty or loss of benefits?
Participation in research is entirely voluntary. You may refuse to participate or withdraw or refuse to answer specific questions in an interview or on a questionnaire at any time without penalty or loss of benefits to which you are entitled. If you decide that you no longer wish to continue in this study before the end of the quarter, simply respond to the online opt-out form here: https://goo.gl/forms/JSBRjEmkES6W6xYc2. If you decide to opt out after the quarter has ended, you must contact Laurel Nelson (laureln@ucsd.edu) and give the quarter and the course from which you would like your data withdrawn.

You will be told if any important new information is found during the course of this study that may affect your wanting to continue.

Can you be withdrawn from the study without your consent?
The PI may remove you from the study without your consent if the PI feels it is in your best interest or the best interest of the study. You may also be withdrawn from the study if you do not follow the instructions given you by the study personnel.

Will you be compensated for participating in this study?
You will not be compensated for participating in this study.

Are there any costs associated with participating in this study?
There will be no cost to you for participating in this study.

Who can you call if you have questions?
Gabriele Wienhausen and/or her colleague has explained this study to you and answered your questions. If you have other questions or research-related problems, you may reach Gabriele Wienhausen at gwienhausen@ucsd.edu or (858) 534-3958.

You may call the Human Research Protections Program Office at 858-246-HRPP (858-246-4777) to inquire about your rights as a research subject or to report research-related problems.

Your Consent
If you consent to participate in this study, no action is needed. If you DO NOT consent to

participate in this study, or you choose to opt-out at any time during the quarter, please submit this form online at https://docs.google.com/forms/d/e/1FAIpQLScs0Cznypp4SxQJOsFMgP9nFDjJ0zzYPlSBWsiP3_wiWkdjaA/viewform. Your instructor will not have access to the list of students who opted out until after grades are posted. Note that you must separately opt-out of the study for each course involved in this study.

[ ] I am not 18 years or older or I do not consent to anonymized research use of my data from the course specified below.

Course name: _____

Course section number: _____

Term: _____

Name: _____

PID: _____