

Genetics (BICD 100, B00)

General Information

Lecture time and location:

Tuesday and Thursday 3:30-4:50 pm. PETER 110.

Professor:

Liam O'Connor Mueller, Ph.D. (he, him, his)

Professor contact:

lomueller@ucsd.edu (Please put "BICD 100" somewhere in the subject line!)

Professor office hours:

Tuesday: 12:30-2:30 pm, and 5:00-6:00 pm

Thursday: 12:30-2:30 pm, and 5:00-6:00 pm

Office hours before lecture (12:30-2:30) will be held over Zoom. Find the link on your Canvas calendar.

Office hours after lecture (5:00-6:00) will be held in person. Location TBD, for now, just come up to me after class.

Additional office hours can always be made by appointment. E-mail me your schedule and we can find a time to meet.

Your IA will schedule a weekly office hour as well.

Textbook:

Essentials of Genetics. Klug, W. S., M. R. Cummings, C. A. Spencer, M. A. Palladino, D. J. Killian, (10th Edition). Pearson.

Prerequisites:

BILD 1 and BILD 3 are prerequisites for this course and I strongly recommend reviewing that material before the start of this course.

Section Activity information:

Section	Time	Location	IA	IA contact
B01	M: 5-5:50pm	HSS 1315	Charles Wang	chw085@ucsd.edu
B02	M: 6-6:50pm	HSS 1315	Isabella Teona Zaragoza	izaragoza@ucsd.edu
B03	M: 7-7:50pm	HSS 1315	Henry Li	xil109@ucsd.edu
B04	W: 8-8:50am	HSS 1315	Christina Yangsheng	ccyangsheng@ucsd.edu
B05	W: 9-9:50am	HSS 1315	Michelle Chiew	mhchiew@ucsd.edu
B06	W: 10-10:50am	HSS 1315	Rishika Murthy	rimurthy@ucsd.edu
B07	W: 1-1:50pm	HSS 1315	Andrew Kapinos	akapinos@ucsd.edu
B08	W: 2-2:50pm	HSS 1315	Andrew Kapinos	akapinos@ucsd.edu

Technology Requirements:

You will need an iClicker (any version will work) for this course. A physical clicker can be purchased from the campus bookstore if you do not have access to one. The mobile app will also be enabled for this course if you choose to use that. Once you have an iClicker, be sure to register the device on the course canvas page.

You will need access to a device that can access a web browser (e.g. Chrome, Safari, Firefox). This will be to access Canvas, podcast lectures, and submitting section assignments. Any connected device can typically accomplish this (smart phone, tablet, laptop).

You are allowed to bring your laptops, tablets, and phones into lecture - however it is not necessary. In class assignments are turned in physically. Section activities, on the other hand, are based around assignments turned in electronically, so it is recommended that you bring a laptop to your section if you are able. If you are unable to bring one, we will be working in small groups during section meetings and so can work with others (however you will ultimately be responsible for turning in your own assignment).

There are resources on campus available if you have tech needs. Please visit: <https://libraries.ucsd.edu/computing-and-technology/computers-and-laptop-stations/index.html>

Tentative Schedule (Quiz days will not change)

Each week we will have in-person lectures on Tuesday and Thursday starting at 3:30pm and ending at 4:50pm. Clicker questions and in-class assignments will assume that you are familiar with the textbook readings before coming to class that day.

Week	Date	Day	Topic	Readings
0	22 Sept.	1	Introduction to Genetics/ Probability	Ch. 1
1	27 Sept.	2	Mitosis and Meiosis	Ch. 2
1	29 Sept.	3	Mendel's Model	Ch. 3
2	4 Oct.	4	Modifications to Mendel's Model	Ch. 4
2	6 Oct.	5	Sex Chromosomes	Ch. 5
3	11 Oct.	6	Chromosome Variation and Mutation	Ch. 6
3	13 Oct.	7	Linkage	Ch. 7
4	18 Oct.	8	Quiz 1	
4	20 Oct.	9	DNA Structure	Ch. 9 & 11
4	21 Oct.	NA	<i>Deadline to drop without a "W" grade</i>	
5	25 Oct.	10	DNA Replication	Ch. 10
5	27 Oct.	11	Transcription	Ch. 12
6	1 Nov.	12	Translation	Ch. 13
6	3 Nov.	13	Quiz 2	
6	4 Nov.	NA	<i>Deadline to drop with a "W" grade</i>	
7	8 Nov.	14	Mutation	Ch. 14
7	10 Nov.	15	Regulation	Ch. 15 & 16
8	15 Nov.	16	Cancer	Ch. 19
8	17 Nov.	17	Quiz 3	
9	22 Nov.	18	Quantitative Genetics	Ch. 20
9	24 Nov.	NA	<i>Thanksgiving Holiday. No lecture or section meeting. SA for week 9 still due!</i>	
10	29 Nov.	19	Population Genetics	Ch. 21
10	1 Dec.	20	-Omics	Ch. 18
11	5 Dec.	NA	Final Exam 3:00pm – 6:00pm	

Assignments

Your learning in this course will be assessed in four primary ways: section assignments, tests, in-class problem sets, and clicker questions. They are described below. You will also notice, for each type of assignment, your lowest grade is dropped.

Section Assignments:

These weekly assignments test the depth of your understanding on a topic. Each week (starting in week 2) during section you will work in small groups to complete an assignment based on the prior week's material. For this reason, there is no Section Activity in week 1. Section assignments can be worked on in section together, but each

student will need to submit their own assignment (in their own words) via Canvas by the end of the week (Sunday Midnight). The lowest grade from these assignments will be dropped.

Assignment	Due Date	Points per Assignment	Total Points
Section Activity	Each Sunday starting in Week 2	10	90
TOTAL	-	10/ week	90/80 (lowest dropped)

Tests:

Because of the group nature of this course (all of the problem sets can be discussed in one way or another) we need multiple opportunities to determine how well your individual learning is progressing. We will have 4 tests in this course. Three during the course and a Final. The three tests given during the course will cover the most recent material lectured on and are not cumulative. Everything is fair game on the final. The lowest grade of these 4 tests will be dropped.

Assignment	Due Date	Points per Assignment	Total Points
Quizzes	10/18, 11/3, 11/17	20	60
Final Exam	12/5 (3-6 pm)	20	20
TOTAL	-	20/ test	80/60 (lowest dropped)

In-Class Problem Sets:

Each week you will work in small groups during one of the lectures to answer scenario-based problems from that week's lecture material. The lowest grade from these assignments will be dropped.

Assignment	Due Date	Points per Assignment	Total Points
In-class problem set	Once each week	5	50
TOTAL	-	5/ week	50/45 (lowest dropped)

Clickers:

This course uses iClickers for rapid polling of students. Many of the questions asked in class will not be graded for a correct answer, only for participation. Occasionally a clicker question will be graded for a correct answer and this will be made clear to the class at the time of the poll.

Be sure to register your clicker! See the iClicker Registration section of the Canvas board.

Your two lowest clicker points will be dropped.

Assignment	Due Date	Points per Assignment	Total Points
iClicker Questions	In class	1/lecture. Not including quiz days	17
TOTAL	-	2/ week	17/15 (2 classes can be missed)

Summary:

Maximum Class points that can be earned: 237

Points required to earn a 100% grade: 200

You can miss (or do poorly) on the following assignments and still receive a full grade in this course. The lowest score on the following assignments will be dropped:

- 1 Section Activity
- 1 In-class Activity
- 1 Test
- 2 lectures (iClickers)

Missing Assignments:

Things come up! That's fine. This class is designed with plenty of flexibility built in. In each of the above assignment categories lowest scores will be dropped essentially allowing an entire week to be missed without a grade penalty. If an emergency comes up that the above flexibility can't accommodate, e-mail me as soon as you are able, so a backup plan can be initiated. To many students wait too long to work out a plan with me and their grades suffer for it! Please come talk to me if you must prioritize life over coursework.

Grading Scale:

Letter	% Range	Point Cutoff
A+	100 - 97	194
A	96 - 93	186
A-	92 - 90	180
B+	89 - 87	174
B	86 - 83	166
B-	82 - 80	160
C+	79 - 77	154
C	76 - 73	146
C-	72 - 70	140
D	69 - 60	120
F	Below 60	119 or fewer

Campus Health

Keeping our campus healthy takes all of us. You are expected to follow the [campus safety requirements](#) and pursue personal protection practices to protect yourself and the others around you. These include:

Participate in the university's daily screening process.

Everyone must complete a [Daily Symptom Survey](#) to access a university-controlled facility.

Participate in the university's testing program.

All students are required to participate in the [COVID-19 Testing program](#) as required by their vaccination status:

- Unvaccinated students with approved exceptions must complete a COVID-19 test twice a week.
- If you are a student residing in campus-operated housing, you must complete a COVID-19 PCR test no more than 24 hours after returning for fall quarter as well as on Day 5
- All undergraduate and graduate students have access to free symptomatic and asymptomatic COVID-19 testing through Student Health Services or UC San Diego Health, including tests in vending machines distributed across campus.

General Guidelines for Masking Outdoors

Masking is currently optional for all students, faculty and staff while outdoors on campus. Attendees at outdoor campus events must wear a face mask if required by the event organizer. Vaccinated students and campus employees who have been exposed to the SARS-CoV-2 virus must also mask outdoors.

General Guidelines for Masking Indoors

Masking **remains required in all indoor classroom/instructional settings**, clinical areas, and on Triton/university transportation until further notice.

Free Masks for Students:

Students may pick up a free KN95 mask on campus.

Locations include:

Basic Needs Hub, Student Center

Monday and Friday: 11 a.m. to 4:30 p.m.

Tuesday, Wednesday and Thursday: 9 a.m. to 4:30 p.m.

One Stop, Price Center Level 3

Monday through Friday: 9 a.m. to 4 p.m.

Campus Curbside, Gilman Parking Structure

Monday through Friday: 9 a.m. to 6 p.m.

Monitor the daily potential exposure report.

Every day the university will update the potential exposure report with building and some classroom information and the dates of exposure. Download the [CA COVID Notify app](#) to your phone to receive an alert if you have been potentially exposed to COVID-19.

Assist in the contact tracing process.

If you're contacted by a case investigator, it means you have been identified as [close contact](#), please respond promptly. You must assist with identifying other individuals who might have some degree of risk due to close contact with individuals who have been diagnosed with COVID-19.

Contact the instructional team if you are impacted by COVID-19

Please note that due to the ongoing COVID-19 Pandemic, changes may be made in response to new developments and information.

Campus Policies

- [UC San Diego Principles of Community](#)
- [UC San Diego Policy on Integrity of Scholarship](#)
- [Religious Accommodation](#)
- [Nondiscrimination and Harassment](#)
- [UC San Diego Student Conduct Code](#)

Diversity and equity statement

It is important for us to make sure that how we teach this course and how we accommodate different student needs reflects the differences of race, ability, sexual orientation, age, and gender identity that enrich our classroom experience and campus. If you have any concerns related to diversity and equity in the course, please contact the instructor.

If you find yourself in an uncomfortable situation, ask for help. The university is committed to upholding policies regarding nondiscrimination, sexual violence, and sexual harassment.

Learning and Academic Support	
<p>Ask a Librarian: Library Support <i>Chat or make an appointment with a librarian to focus on your research needs</i></p> <p>Course Reserves, Connecting from Off-Campus and Research Support <i>Find supplemental course materials</i></p> <p>First Gen Student Success Coaching Program <i>Peer mentor program that provides students with information, resources, and support in meeting their goals</i></p>	<p>Writing Hub Services in the Teaching + Learning Commons <i>One-on-one online writing tutoring and workshops on key writing topics</i></p> <p>Supplemental Instruction <i>Peer-assisted study sessions through the Academic Achievement Hub to improve success in historically challenging courses</i></p> <p>Tutoring – Content <i>Drop-in and online tutoring through the Academic Achievement Hub</i></p> <p>Tutoring – Learning Strategies</p>

<p>Office of Academic Support & Instructional Services (OASIS) <i>Intellectual and personal development support</i></p>	<p><i>Address learning challenges with a metacognitive approach</i></p>
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<p>Support for Well-being and Inclusion</p>	
<p><u>Basic Needs at UCSD</u> <i>Any student who has difficulty accessing sufficient food to eat every day, or who lacks a safe and stable place to live is encouraged to contact: foodpantry@ucsd.edu basicneeds@ucsd.edu (858) 246-2632</i></p> <p>Counseling and Psychological Services <i>Confidential counseling and consultations for psychiatric service and mental health programming</i></p> <p>Triton Concern Line <i>Report students of concern: (858) 246-1111</i></p> <p><u>Office for Students with Disabilities (OSD)</u> <i>Supports students with disabilities and accessibility across campus</i></p>	<p>Community and Resource Centers Office of Equity, Diversity, and Inclusion As part of the <u>Office of Equity, Diversity, and Inclusion</u> the campus community centers provide programs and resources for students and contribute toward the evolution of a socially just campus</p> <p>diversity@ucsd.edu (858) 822-3542</p> <p>Get Involved <i>Student organizations, clubs, service opportunities, and many other ways to connect with others on campus</i></p> <p>Undocumented Student Services <i>Programs and services are designed to help students overcome obstacles that arise from their immigration status and support them through personal and academic excellence</i></p>