Genetics (BICD 100, E00)

General Information

Lecture time and location:

Tuesday and Thursday 3:30-4:50 pm. York 2622.

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.

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
E01	Tu: 5-5:50pm	CENTR 220	Rishika Murthy	rimurthy@ucsd.edu

E02	Tu: 6-6:50pm	CENTR 220	Marcus Sawamura	msawamur@ucsd.edu
E03	Th: 11-11:50am	CENTR 217A	Ginevra Caswell	gecaswel@ucsd.edu
E04	Th: 2-2:50pm	CENTR 217A	Ginevra Caswell	gecaswel@ucsd.edu
E05	Th: 6-6:50pm	WLH 2209	Anna Mothersole	amothers@ucsd.edu
E06	Th: 5-5:50pm	WLH 2209	Xinrui Li	xil178@ucsd.edu

Technology Requirements:

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 technology into lecture - however it is not necessary. Section activities 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.

Learning Philosophy

This course is designed to be an environment for everyone to learn and construct a shared understanding of the material. Active participation by engaging with the lecture material, asking and answering questions, and contributing to breakout sessions during discussion time is expected. Being able to communicate understanding and confusion, is critical to success in any discipline, and is very useful for learning. To encourage collaboration, problem sets will be done in groups, and grades will not be assigned on a curve. Instead of memorization, we will focus on developing an understanding of fundamental concepts as they apply to different examples. Therefore, assignments and assessments will include questions that are based on solving problems in new contexts.

Tentative Schedule (Quiz days will not change)

Day	Week	Date	Topic	Readings
1	1	3/29	Intro to Genetics / Probability	Ch 1
2	1	3/31	Mitosis and Meiosis?	Ch 2
3	2	4/5	Mendel's Model & Inheritance	Ch 3
4	2	4/7	Modifications to Mendel's Model	Ch 4
5	3	4/12	Sex Chromosomes	Ch 5
6	3	4/14	Variation in Chromosomes	Ch 6
7	4	4/19	Linkage	Ch 7
8	4	4/21	**Quiz Day**	
NA	4	4/22	**Deadline to Withdraw without a W**	
9	5	4/26	DNA Structure	Ch 9, Ch 11
10	5	4/28	DNA Replication	Ch 10
11	6	5/3	Transcription	Ch 12
12	6	5/5	Translation	Ch 13
NA	6	5/6	**Deadline to Withdraw with a W**	
13	7	5/10	**Quiz Day**	
14	7	5/12	Mutation	Ch 14
15	8	5/17	Regulation	Ch 15, Ch 16
16	8	5/19	Cancer	Ch 19
17	9	5/24	**Quiz day**	
18	9	5/26	-Omics	Ch 18
19	10	5/31	Population Genetics	Ch 21
20	10	6/2	Quantitative Genetics	Ch 20
21	Finals	6/6	**Final Exam 3-6 pm**	

Assignments

Your learning in this course will be assessed in three primary ways: problem sets, tests, and clicker questions. They are described below. You will also notice, in each section, your lowest grade is dropped. This includes tests! This means, if you are satisfied with your grade going into finals, you do not need to take the final exam! I do often offer extra credit on the final however...

Problem sets:

Problem sets are weekly assignments that test the depth of your understanding on a topic. Each week 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 will 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). In-class assignments on the other hand will be completed during a lecture time and often turned in as a group.

Assignment	Due Date	Points per Assignment	Total Points
Section Activity	Each Sunday	10	90
In-class group work	End of class	5/ week	50
TOTAL	-	15/ week	140/125 (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 (See schedule) 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.

Assignment	Due Date	Points per Assignment	Total Points
Quizzes	4/21, 5/10, 5/24	15	45
Exam	6/6 (3-6 pm)	15	15
TOTAL	-	15 each	60/45 (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.

Assignment	Due Date	Points per Assignment	Total Points
iClicker Questions	In class	1/lecture	20
TOTAL	-	2/ week	20/16 (4 classes can be missed)

Summary:

Maximum Class points that can be earned: 220

Points required to earn a 100% grade: 186

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

4 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.

Grading Scale:

Letter	% Range	Point Cutoff
A+	100 – 97	163
A	96 - 93	156
A-	92 - 90	151
B+	89 – 87	146
B	86 – 83	139
B-	82 – 80	134
C+	79 – 77	129
C	76 – 73	122

C-	72 – 70	117
D	69 -60	101
F	Below 60	100 or fewer

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.

Student Resources

Learning and Academic Support

Ask a Librarian: Library Support *Chat or make an appointment with a librarian to focus on your research needs*	**Writing Hub Services in the Teaching + Learning Commons** *One-on-one online writing tutoring and workshops on key writing topics*
Course Reserves, Connecting from Off-Campus and Research Support *Find supplemental course materials*	**Supplemental Instruction** *Peer-assisted study sessions through the Academic Achievement Hub to improve success in historically challenging courses*

First Gen Student Success Coaching Program *Peer mentor program that provides students with information, resources, and support in meeting their goals*	**Tutoring – Content** *Drop-in and online tutoring through the Academic Achievement Hub*
Office of Academic Support & Instructional Services (OASIS) *Intellectual and personal development support*	**Tutoring – Learning Strategies** *Address learning challenges with a metacognitive approach*

Support for Well-being and Inclusion

Basic Needs at UCSD *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	**Community and Resource Centers** **Office of Equity, Diversity, and Inclusion** *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* diversity@ucsd.edu (858) 822-3542
Counseling and Psychological Services *Confidential counseling and consultations for psychiatric service and mental health programming*	**Get Involved** *Student organizations, clubs, service opportunities, and many other ways to connect with others on campus*
Triton Concern Line *Report students of concern:* (858) 246-1111	
Office for Students with Disabilities (OSD) *Supports students with disabilities and accessibility across campus*	**Undocumented Student Services** *Programs and services are designed to help students overcome obstacles that arise from their immigration status and support them through personal and academic excellence*

Campus Safety

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 spring 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

Effective March 21, masking is 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

Effective March 21, masking will be optional **except that it will remain required in all indoor classroom/instructional settings,** clinical areas, and on Triton/university transportation until further notice. We encourage anyone who feels more comfortable continuing to wear a mask to do so, as masking remains one of the easiest and most effective ways to reduce the spread of the virus.

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.

Privacy Practices in This Course

This course is a community built on trust; as a learning community, we are collectively responsible for upholding privacy protections. In order to create a community built on trust and the most effective learning experience, our interactions, discussions, and course activities must remain private and free from external intrusion. We have obligations to each other to preserve privacy and cultivate fearless inquiry. We respect the individual dignity of all and will refrain from actions that diminish others' ability to learn.

As your instructor, I am committed to protecting your privacy by only using university-approved course technologies and adhering to the Family Educational Rights and Privacy Act (FERPA):

https://catalog.ucsd.edu/about/policies/notification-of-rights/index.html.

 and Campus Privacy Office guidelines. This includes using your educational data only as allowed by FERPA, for example, for legitimate educational purposes such as submitting your final grades to the registrar's office.

Please note the following privacy practices for our course:

Course platform.

This course uses Canvas, Zoom, and Gradescope, which collects information about your engagement with course materials. I will review this information periodically to ensure students are engaged and look for signs of students falling behind. I will also review this information in case of academic misconduct allegations, if relevant.

Online/video classes.

Regarding video-conferencing, while I ask, to the extent you are comfortable and able, that you keep your videos on during online confrences to aid in the development of our learning community, I also understand that may not always be possible. Know that you will not be penalized for choosing to disable your video during Zoom sessions. You are welcome to use an appropriate virtual background if you do not want to have your surroundings visible. Be mindful of others who may not wish to be visible or recorded in the background.

Using learning materials.

Course materials (videos, assignments, problem sets, etc.) are for use in this course only. You may not upload them to external sites, share with students outside of this course, or post them for public commentary without my written permission. We will not pin or take screenshots of fellow classmates or record sessions during synchronous online sessions or share discussion thread posts from the learning management system unless granted explicit permission to do so. Unauthorized sharing or uploading to exam questions, test answers, or summaries of exams is prohibited.

Using live class recordings.

We are recording class meetings to support remote students and to provide everyone in the class with useful study aids. These recordings will be available for review through our learning management system. Students are prohibited from recording the class themselves unless a student has an approved academic accommodation for such recording. The university strictly prohibits anyone from duplicating, downloading, or sharing live class recordings with anyone outside of this course, for any reason.

Sharing student information.

You may work on group projects with other students or be asked to review or respond to their work. Other materials and activities may provoke debate, argument, or spirited

discussion; some of us may volunteer sensitive personal information. Do not share others' personal information, including class dialogue or performance, on sensitive topics outside of our course community. Student work, discussion posts, and all other forms of student information related to this course should be handled with respect and remain within interactions of this course. You may publicly post your own work, provided it does not violate academic dishonesty policies or show responses to assessments; public posting of group work requires consent from all group members. Research conducted as part of a class is subject to UC research policies and may include sensitive information. Students may not share research information without permission from the instructor.

Sharing course information with others.

Do not post images or identifiable conversations that occur in class to social media or to those beyond our learning community. Sharing private information about our course community (including discussions, activities, presentations, student work, etc.) with others for the purpose of inviting external attention, intrusion, ridicule, or harassment is an egregious breach of trust.

If you have concerns after reviewing these privacy statements, I invite you to reach out to the instructor.

This Document is Subject to Change

Due to unforeseen circumstances, minor aspects of this syllabus may change. This includes changes to scheduling, grading values, and policy. It is the responsibility of the instructor and instructional assistants to announce changes with reasonable notice in multiple formats (e.g. lecture and Canvas announcements, email, etc.). It is the responsibility of the student to make note of these changes and communicate with the instructor if you have questions or concerns about the changes.

"I read part of it all the way through."
-Samuel Goldwyn (Probably)