Genetics (BICD 100, A00)

General Information

Lecture time and location:

Tuesday and Thursday 6:30-7:50 pm. Peterson Hall 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!)

Please use email instead of Canvas messaging. Canvas messages do not contain the entire email chain when sent!

Professor office hours:

Wednesday: 12:00-1:00pm

Thursday: 3:30-5:30 pm

Office hours will be held in H&SS 8042

Office Hours are not held on Holidays or during Finals Week

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

Instructional assistant and Instructional Apprentices

Name	Position	e-mail
Ruben Calderon	Graduate Teaching Assistant	ricalder@ucsd.edu
Alyssa Chhor	Undergraduate IA	achhor@ucsd.edu
Maggie Ma	Undergraduate IA	zim001@ucsd.edu
Gavin Simmons	Undergraduate IA	gasimmons@ucsd.edu

IA office hours will be announced during the first section meeting

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. The first few weeks will be Mendel models, so brush up a little on basic probabilities as well (If you can keep track of the chances of 3-coin tosses, you will be fine).

Section Activity information:

There will be grade incentives to attend the weekly discussion section. Due to limited space, you are only invited to attend the section you registered for. Historically, students who attend weekly discussion sections perform better in the class, so please make sure you leave time in your schedule for this important part of class.

Section	Time	Location
A01	Wednesday: 7-7:50pm	MANDE B-150
A02	Wednesday: 8-8:50pm	MANDE B-150
A03	Friday: 3-3:50pm	CENTR 222
A04	Friday: 4-4:50pm	CENTR 222
A05	Friday: 5:-5:50pm	CENTR 222

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 and register for the course on the iClicker Student app/webpage.

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/ with a clicker. 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 6:30pm and ending at 7:50pm. Clicker questions and in-class assignments will assume that you are familiar with the textbook readings **before** coming to class that day. Please prepare by reading chapters and attempting practice problems from the back of the chapter.

Week	Date	Day	Topic	Readings
1	9 Jan.	1	Introduction to Genetics/ Probability	Ch. 1
1	11 Jan.	2	Mitosis and Meiosis	Ch. 2
2	16 Jan.	3	Mendel's Model	Ch. 3
2	18 Jan.	4	Modifications to Mendel's Model	Ch. 4
3	23 Jan.	5	Sex Chromosomes	Ch. 5
3	25 Jan.	6	Chromosome Variation and Mutation	Ch. 6
4	30 Jan.	7	Linkage	Ch. 7
4	1 Feb.	8	**Quiz 1**	
4	2 Feb.	NA	**Last day to withdraw without a "W"**	
5	6 Feb.	9	DNA Structure & DNA Replication	Ch. 9-11
5	8 Feb.	10	Transcription	Ch. 12
6	13 Feb.	11	Translation	Ch. 13
6	15 Feb.	12	**Quiz 2**	
6	16 Feb.	NA	**Last day to withdraw with a "W"**	
7	20 Feb.	13	Mutation	Ch. 14
7	22 Feb.	14	Prokaryote Regulation	Ch. 15
8	27 Feb.	15	Eukaryote Regulation	Ch. 16
8	29 Feb.	16	Cancer	Ch. 19
9	5 Mar.	17	**Quiz 3**	
9	7 Mar.	*18*	Quantitative Genetics	Ch. 20
10	12 Mar.	19	Population Genetics	Ch. 21
10	14 Mar.	20	-Omics	Ch. 18
11	19 Mar.	NA	**Final Exam 7:00pm – 10:00pm**	
12	27 Mar.	NA	**Final grades available on TritonLink**	

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(s) is(are) dropped.

Section Assignments:

These weekly assignments 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 week's material. 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 within one week (Friday Midnight). The lowest two grades from these assignments will be dropped. This means the maximum points you can earn for section assignments is 80 points, despite there being 100 points being assigned to you.

Assignment	Due Date	Points per Assignment	Total Points
Section Activity	Each Friday starting in Week 2	10	100
TOTAL	-	10/ week	100/80 (lowest 2 scores 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
Mid-term tests	Feb 1, Feb 15, Mar 5	20	60
Final Exam	Mar 19 (7-10 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. We are now using iClicker cloud. You will need to register this class to your account there as well. 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 submitted: 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. To encourage turning in assignments on time, a late penalty of 1% per hour will be applied to all assignments turned in late on canvas.

Grading Scale:

There will be no rounding of points.

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	119.9 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.

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 to me to make sure that how I 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 me.

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	
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

Counseling and Psychological Services
Confidential counseling and consultations for psychiatric service and mental health programming

Triton Concern Line
Report students of concern: (858) 246-1111

Office for Students with Disabilities (OSD)
Supports students with disabilities and accessibility across campus

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

Get Involved
Student organizations, clubs, service opportunities, and many other ways to connect with others on 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