

**BICD 100 WINTER 2021
J00/K00/L00
GENERAL COURSE INFORMATION**

****** Be sure to watch the "Course Logistics" video BEFORE reading this document! ******

The video provides an overview of the plan for our course, so it will be the most helpful place to begin. This document is a detailed description of our course's operations and will serve as a useful resource once you are aware of the general plan.

Instructors: Professor Deborah Yelon (she/her); dyelon@ucsd.edu
Professor Laurie Smith (she/her); lsmith@ucsd.edu

Instructional Assistants: Rhea-Comfort Addo; raddo@ucsd.edu
Lindsey Griffin; lgriffi@ucsd.edu
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LE in-person classes: J00: M 4:00-4:50 pm, Revelle North tent
K00: W 4:00-4:50 pm, Revelle North tent
L00: F 4:00-4:50 pm, Revelle North tent
(See below for more details on in-person classes, including J00 make-up sessions.)

DI discussion sections: J01/K01/L01: Th 5:00-5:50 pm (Rhea-Comfort Addo)
J02/K02/L02: Th 6:00-6:50 pm (Rhea-Comfort Addo)
J03/K03/L03: F 10:00-10:50 am (Amy Kung)
J04/K04/L04: F 11:00-11:50 am (Lindsey Griffin)
J05/K05/L05: F 12:00-12:50 pm (Thisha Thiagarajan)
(See below for more details on discussion sections.)

Midterm exams: Tuesday, January 26, 6:30-8:00 pm, on Canvas
Tuesday, February 9, 6:30-8:00 pm, on Canvas
Tuesday, February 23, 6:30-8:00 pm, on Canvas
(See below for more details on midterm exams.)

Final exam: Friday, March 19, 3:00-5:59 pm, may be held in person
(See below for more details on the final exam.)

Prerequisites: BILD1 and BILD3 are prerequisites for this course. You will find it beneficial to review genetics material from BILD1, BILD3, or an equivalent course (e.g. AP Biology).

Textbook: Our textbook is *Essentials of Genetics* by Klug, Cummings, Spencer, Palladino, and Killian, 10th edition. New and used copies of this textbook are available for sale and rental in bound and loose-leaf versions at the UCSD bookstore. An

electronic version of the textbook is also available. You may use the 9th edition of this textbook if you'd like; there are only a few differences between the 9th and 10th editions. An optional resource for this course is the *Study Guide and Solutions Manual for Essentials of Genetics*, 10th edition. New and used copies of this optional book are available for sale and rental at the UCSD bookstore.

Course website: Announcements, information, and materials for this course will be posted on our course website (<http://canvas.ucsd.edu>). Use your UCSD student email account login and password to access the website.

Course goals: Our course provides an introduction to the principles of heredity, with a particular emphasis on the types of experiments and data that geneticists use to analyze the basis for inheritance of specific traits. Topics include Mendelian inheritance, pedigree analysis, deviations from classical Mendelian inheritance, gene mapping, regulation of gene expression, quantitative genetics, population genetics, genomics, and genome manipulation in model organisms. For a list of topics that will be covered each week, see the "Topic Schedule" document on our course website. In addition to learning about principles of genetics, you will also develop your skills in data analysis and interpretation by applying key concepts through active problem solving. For a list of concepts that you will learn and apply through problem solving, see the "Concept List" document on our course website.

Weekly workflow: Our course activities are organized into a unique weekly workflow that is probably unlike other courses that you have taken, even in this very unusual year. The video "Course Logistics", located in the "General Course Information" module on our course website, provides an overview of the workflow logistics; hopefully, you have already watched this video. To summarize the workflow, you will begin each week by reading assigned portions of the textbook and viewing a series of recorded videos. Once you have completed the reading and watched the videos, you will take a "Familiarity Quiz" in Canvas. You will then attend discussion section, where you will practice applying concepts through problem solving. Weekly homework assignments will provide additional opportunities to solve relevant problems. Finally, each week will wrap up with an in-person class, where you will apply your knowledge to problems and data analysis at a level comparable to what would be expected on an exam. Each in-person class will end with an "Exit Quiz". Details on each component of the workflow are provided below. For a customized, week-by-week visualization of the workflow schedule, see the "J00 Calendar", "K00 Calendar", or "L00 Calendar" documents in the "General Course Information" module on our course website. Be sure to refer to the calendar that corresponds to your J00, K00, or L00 enrollment.

Reading: Each week, you will begin by reading assigned sections of our textbook. Specific reading assignments will be indicated in each week's Canvas module. Weekly readings will introduce you to new concepts that will be discussed in more depth during that week's videos. Keeping up with the reading will help you to get the most value out of watching the videos; it is therefore recommended to complete the reading before viewing the corresponding videos.

Videos: After completing the appropriate reading, you will watch a series of pre-recorded videos. The videos for each week will be posted in that week's Canvas module, and each week's videos will be paired with an "Illustrations" pdf that may be helpful for your notetaking. Videos will build on readings by providing additional explanation and information, as well as an introduction to how concepts could be applied to solving problems. These problem solving strategies will be demonstrated further in discussion sections. It is therefore important for you to watch each week's videos before attending your discussion section.

Familiarity quizzes: After watching the week's videos, you will take a "Familiarity Quiz" on Canvas. These short and simple open-book quizzes are designed to incentivize timely completion of the reading and videos and will evaluate your familiarity with the week's material, ensuring that you are ready to benefit from discussion section. Each familiarity quiz is worth 5 points, and one familiarity quiz will be administered during each of the 10 weeks of our course. Your lowest familiarity quiz score will automatically be dropped. Cumulatively, after dropping the lowest score, familiarity quizzes will be worth 9% of your grade. To receive credit for a familiarity quiz, you must complete that quiz by 5:00 pm on Thursday of the appropriate week. For example, all students must complete their Week 1 Familiarity Quiz by **5:00 pm on Thursday, January 7**.

Discussion sections: Discussion sections will be held synchronously and will meet weekly, beginning in Week 1. Therefore, your first discussion section will be held either on **Thursday, January 7, or Friday, January 8**. Each discussion section will provide you with experience in solving problems that utilize that week's concepts; your Instructional Assistants (IAs) will present new problems each week. In addition, discussion sections provide an opportunity to ask your IAs questions about other aspects of the course material. Participation in each week's discussion section is worth 5 points, and each discussion section will meet 10 times. Your lowest participation score will automatically be dropped. Cumulatively, after dropping the lowest score, participation in discussion section quizzes will be worth 9% of your grade. To receive credit for participation, you must attend the discussion section in which you are enrolled. Waitlisted students should attend the discussion section for which they are waitlisted.

Initially, all discussion sections will meet via Zoom; Zoom links will be available through Zoom LTI Pro on our course website. In future weeks, some discussion sections may begin meeting in-person, if tent space becomes available. If a discussion section moves to an in-person format, there will still be an option to continue attending discussion section via Zoom.

Homework: A set of homework problems will be posted in each week's module on our course website. Working on these problems will further promote comprehension of course topics and build your problem solving skills. It is recommended that you complete each week's homework before attending the corresponding in-person class, since this will optimize your preparation for the session and exit quiz. However, if you have class on Fridays and don't have time to complete the homework before class, you can finish it up over the weekend or the beginning of the following week. The answer

key for each homework will be posted at the same time as the homework, also in that week's Canvas module. It is strongly recommended that you attempt to complete homework problems before consulting with the answer key, as this will provide the best learning experience. By posting the homework problems and key simultaneously, we are aiming to make it easy for you to check your answers whenever you're ready. Homework will not be submitted or graded, and no points are earned for completing the homework, but it is vital for exam preparation.

In-person classes: Synchronous in-person LE classes will focus on applying the concepts from readings and videos to problem solving and data analysis on a level comparable to what is expected on the most challenging exam questions. These will take the place of exam review sessions and practice exams. These classes will meet in the Revelle North tent, in Revelle Plaza, from 4:00-4:50 pm. You must wear a face mask for these sessions and all participants will remain 6' apart, but we will still be able to interact. You can only attend the in-person session in which you are enrolled: J00 students attend on Mondays, K00 students on Wednesdays, and L00 students on Fridays. MWF 4pm sessions each week will be the same, but each week's cycle begins on Friday. Thus, L00 students will have their first in-person class on **Friday, January 8**; J00 students will have their first in-person class on **Monday, January 11**; and K00 students will have their first in-person class on **Wednesday, January 13**. Each of these first in-person classes will utilize the concepts covered during Week 1 of our course.

For a customized, week-by-week visualization of how in-person sessions fit into each week's workflow, see the "J00 Calendar", "K00 Calendar", or "L00 Calendar" documents in the "General Course Information" module on our course website. Be sure to refer to the calendar that corresponds to your J00, K00, or L00 enrollment. Note that all students (J00, K00, and L00) will have their week 10 session together on Zoom (not in-person) on Friday, March 12, from 4:00-4:50 pm. Also, J00 students should be aware of their two scheduled make-up classes: since there will be no class on January 18 or February 15 (due to Monday holidays), make-up classes will be held the following day (Tuesday, January 19, and Tuesday, February 16) from 6:30-7:20 pm on Zoom only, due to the late hour.

Although the MWF 4pm sessions will be optimized for in-person participation, they will also be available synchronously via Zoom; Zoom links will be available through Zoom LTI Pro on our course website. On Zoom, you can observe in-person classes in which you are not enrolled; however, you will still need to take your exit quiz on the day of your own in-person class (see below). Zoom sessions of in-person classes will not be recorded for later viewing; however, video podcasts of Wednesday in-person classes (the last one in each weekly cycle) will be available at podcast.ucsd.edu and will remain available as a resource throughout the end of the quarter (all UCSD students can access these regardless of enrollment in a particular class or section). Attendance will not be taken in MWF 4pm classes.

Exit quizzes: At the end of each in-person class, you will take an "Exit Quiz" on Canvas. Exit quiz questions will be chosen at random by Canvas from the pool of questions covered in that day's in-person class (in slightly modified form). You can take your exit quiz while you are in class or shortly afterwards; the exit quiz will be due within

1 hour of the end time of the in-person LE class in which you are enrolled. If you plan to take your exit quiz in the tent, please be sure to bring an appropriate device to class. Each exit quiz will be worth 5 points, and your lowest score will automatically be dropped. Cumulatively, after dropping the lowest score, exit quizzes will be worth 9% of your grade. At least one exit quiz question will be included on each midterm and the final exam (again, in slightly modified form).

Students who cannot take an exit quiz on their scheduled class day will need to contact Prof. Smith to request rescheduling. Rescheduling should only be requested due to significant, unforeseen problems that arose for reasons beyond your control. Something you chose to do during your weekly class/quiz time, even a non-emergency doctor appointment, will not qualify as an excused absence.

Student groups: You will be assigned to a group of 5 students who have in-person classes and discussion sections together. You will be asked to sit with your group during in-person classes for collaborative work (which is possible in the tent even with masking and distancing requirements). To introduce you to each other and the instructors, you will have an appointment, via Zoom, with Professors Yelon and Smith and your group during Week 1. Your group assignment and instructions for setting your appointment will be sent via email.

Exams:

- **Midterms:** As stated on page 1, you will take three remote midterm exams on Tuesday evenings. Each midterm exam will take place synchronously on Canvas. Midterm #1 will cover material from Weeks 1 and 2, Midterm #2 will cover material from Weeks 3 and 4 (but may also incorporate earlier material), and Midterm #3 will cover material from Weeks 5 and 6 (but may also incorporate earlier material). Each midterm exam will be worth 16% of your grade.
- **Final exam:** As stated on page 1, your final exam will take place on Friday, March 19. This exam may be held in person (probably in tents), so you should plan on being present on campus for this event. The final exam will cover material from Weeks 7, 8, 9, and 10 (but may also incorporate earlier material), and it will be worth 25% of your grade.
- If you have an illness, injury or personal emergency that you believe will prevent you from taking an exam or performing adequately on an exam, contact Professor Smith before the exam to discuss your options, or as soon afterwards as your emergency permits. Once you submit an exam, the score will apply to your grade as outlined below under "Grading"; this is non-negotiable.

Discussions in Canvas: Our course website features a "Discussions" section where you can post questions, receive answers, read other students' questions and answers, and even answer other students' questions (please identify yourself as a student if posting an answer). Since questions and responses can be posted to Discussions at any time, this is an excellent venue for getting your questions answered in a timely fashion. Questions about course material and logistics should be posted here rather than emailed to the instructors or IAs, unless they are of a personal nature.

Office hours: Office hours provide another excellent opportunity to ask questions about course material and logistics. All office hours will be held via Zoom, and office hours will begin during Week 2. The schedule and Zoom links for instructor and IA office hours will be posted in the "Office Hours" document in the "General Course Information" module on our course website. You are welcome to attend the office hours held by any IA or instructor, and no appointment is necessary.

Grading: Your final grade will be determined by what percentage of the total available points (500 points) you earn. Points are available as follows:

80 points for Midterm #1
80 points for Midterm #2
80 points for Midterm #3
125 points for Final Exam
45 points for Familiarity Quizzes
45 points for Exit Quizzes
45 points for Discussion Section Participation
500 points total

These guidelines will be used to assign grades:

>425 points (85%) A (A-, A or A+)

>375 points (75%) B (B-, B or B+)

>300 points (60%) C (C-, C or C+)

>250 points (50%) D

If necessary, these cutoffs will be adjusted downward so that at least 50% of students in the class receive an A or a B, but they will not be adjusted upward for any reason.

Academic integrity: Academic dishonesty will not be tolerated in this course.

According to UCSD policy, academic dishonesty includes:

- taking a quiz or exam for another student
- allowing another student to take a quiz or exam for you
- copying another student's work on a quiz or exam
- allowing another student to copy your work on a quiz or exam
- using input from students or other individuals during an exam

Any student caught cheating or suspected of cheating will be reported to the UCSD Academic Integrity Coordinator and the Dean of the student's college. Confirmed cases of cheating will result in the student receiving an F as their final grade and other disciplinary actions determined appropriate by the Academic Integrity Coordinator.