

**COURSE SCHEDULE**

**A00 Section**

**TuTh 3:30p-4:50p**

**WLH 2001**

Week	Lecture Topic	Assignment Due
1	Introduction; DNA structure and Central Dogma	
2	Mutations; Biotech	Quiz 1 due Monday @9am
3	Genomics; Genetic engineering	Quiz 2 due M @9am
4	<b>MIDTERM #1 - A00 Tuesday</b> Gene Regulation; Cancer	Quiz 3 due M @9am
5	Mendelian Genetics	Quiz 4 due M @9am
6	Pedigrees and Probability; Modification of Mendelian Ratios	Quiz 5 due M @9am
7	<b>MIDTERM #2 - A00 Tuesday</b> Sex determination; sex-linked inheritance	Quiz 6 due M @9am
8	Chromosome Aberrations; Mapping genes in eukaryotes	Quiz 7 due M @9am
9	<b>Monday - Holiday;</b> Quantitative traits and measuring heritability	Quiz 8 due M @9am
10	Population genetics and evolutionary genetics; the future of genetics	Quiz 9 due M @9am

**Final Exams**

**A00 6/10/2019 Monday 3-6pm**

Week	SECTION SCHEDULE
1	<b>NO SECTION</b>
2	Biotech activity (For Credit)
3	Midterm 1 prep (For Credit)
4	Cancer Activity (For Credit)
5	Mendelian inheritance practice (For Credit)
6	Midterm 2 Prep (For Credit)
7	Advanced inheritance practice (For Credit)
8	Heritability and mapping practice (For Credit)
9	<b>No Monday section; all other sections optional review</b>
10	Final Exam Prep (For Credit)

**INSTRUCTOR:**

Dr. Keefe Reuther,  
Office: HSS (Humanities and Social Sciences Building) 1145D  
Office hours: **Wed 2pm-3:30pm and Thurs 1:30p-3:00p Location HSS 1145L**  
Email address: [kdreuther@ucsd.edu](mailto:kdreuther@ucsd.edu) (**please put BICD 100 in the subject line**)

**INSTRUCTIONAL ASSISTANTS:**

Name	Section	Email Address
Jessica	A01 & A02	<a href="mailto:jrbloom@ucsd.edu">jrbloom@ucsd.edu</a>
Jinhao	A04 & A05	<a href="mailto:jix254@ucsd.edu">jix254@ucsd.edu</a>
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**PREREQUISITES:** BILD 1 is a required prerequisite for this course. You may find it beneficial to review relevant BILD 1 material.

**COURSE OBJECTIVES:** An introduction to the principles of heredity emphasizing diploid organisms. Topics include Mendelian inheritance and deviations from classical Mendelian ratios, pedigree analysis, gene interactions, gene mutation, linkage and gene mapping, reverse genetics, population genetics, and quantitative genetics

**CONTACT:** The best way to contact me is by email: [kdreuther@ucsd.edu](mailto:kdreuther@ucsd.edu). On all emails PLEASE put BICD 100 in the subject line to indicate that the email pertains to this course. If you email about anything regarding your status in the course, please include your UCSD username, and PID. If you have questions about course content, it is often faster to email your IA directly.

**TEXTBOOK:** Our textbook is **Essentials of Genetics** by Klug, Cummings, Spencer, and Palladino. It is **OPTIONAL**. **PLEASE SEE THE SECTION ON THE TEXTBOOK AT THE END OF THE SYLLABUS!!!!!!!!!!!!!!**

**LECTURE 'NOTES':** A pdf of figures and pictures from the lecture PowerPoints will be posted on TritonEd.

**iCLICKERS: Required.** You must register your clicker on TritonEd during week 1. Beginning lecture 2 of Week 1, you must answer at least 50% of the questions in a single lecture to receive participation points for that lecture. You may miss one week's worth of lecture during the session and still receive full participation credit. **Forgotten**

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**remotes or dead batteries or any other similar issue will not be considered excuses for missed participation. It is the student's responsibility to make sure they have a working iClicker remote for all classes.**

**VIDEOCASTING:** Class lectures are videocast and are available for download soon after lecture. Download videocasts at <http://podcast.ucsd.edu/>

**TECHNOLOGY POLICY: Bring your phones/tablets/laptops to section!** We will use the internet for in-class activities and it is a great resource for taking notes. None of these may be used during quizzes or exams in class. **Respect other students!** Keep in mind technology can be extremely distracting. Please silence all devices and do not play videos that are not directly tied to what we are doing in class.

**WEBSITE:** Everything related to the class is kept on the TritonEd site (<https://tritoned.ucsd.edu/webapps/login/> ). **Announcements** of exam room changes and many other important matters will be posted on the TritonEd site. Check the site often! **All grades will be posted on TritonED.**

**SECTIONS AND SECTION MEETINGS: You must attend the section you registered for and there is no official switching of sections, since registration for each individual section is completely independent (i.e. you would need to drop the course and then register for the waitlist of another section.)**

The section meetings provide for:

1. Academic review. Each week the IA will provide an opportunity to review the previous week's lectures and readings. This review may take the form of answering your specific and general questions, clarifying something important presented quickly in lectures, expanding on something important described in the textbook, or working through a numerical problem of the type found on the exams.
2. Specific and separate activities, for credit, that must be completed in section. Check TritonEd at least a couple of days before your section to make sure you have completed all necessary preparation.

**GRADING:**

Midterm 1	50 points
Midterm 2 (cumulative)	75 points
Final Exam (cumulative)	200 points
Quizzes(15 points each; lowest score dropped)	120 points
Syllabus Quiz	5 points
Section Activities (10 points each; 2 lowest scores dropped)	60 points
iClicker Participation	40 points
<b>TOTAL</b>	<b>550 points</b>
80% of the class fills out a CAPE (EXTRA CREDIT)	5 points

These guidelines will be used to assign grades:

- > (85%) A (A-, A or A+)
- > (75%) B (B-, B or B+)
- > (65%) C (C-, C or C+)
- > (55%) D

If necessary, these cutoffs will be adjusted downward, but they will not be adjusted upward for any reason. There is NO rounding of grades. The ONLY recourse to receive a higher grade is to successfully submit a regrade request on an exam.

**QUIZZES:** Course assignments will be administered through TritonEd. You will have 45-60 minutes to answer 20 multiple choice questions. The quiz will cover the lecture material from the previous week. **Your lowest quiz grade will be dropped.** See the course calendar for due dates.

**MIDTERM AND FINAL EXAMS:** There will be two midterms, held during lecture time. **MAKE-UP EXAMS ARE NOT AVAILABLE.** EXAMS ARE OFFERED AT THE SCHEDULED TIME ONLY. Advise your coaches, teammates, traveling companions, significant others, and families accordingly. The exam will consist of multiple choice, short essay, short answer, and quantitative or graphical material designed to test your ability to synthesize information presented in class and in discussion section. **Each exam will be cumulative with a focus on material presented since the previous**

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**exams.** I cannot change your final exam time, even if you have three exams scheduled on the same day.

**You must have a photo ID to turn in your exam.**

**MISSED EXAMS:** There are no make-up exams, so unexcused absences from scheduled exams will be recorded as zeroes. Unusual and serious problems that affect your ability to take a scheduled exam (e.g., death or serious illness in the family or personal tragedy/health issue) must be communicated to me directly. You will be required to provide documentation of an unavoidable emergency (e.g., serious illness, etc.). For a missed midterm exam with valid documentation, you will not make up the exam, but everything else in the course will be graded proportionally higher. For a missed final with valid documentation, you will be issued an incomplete grade, which can then be made up with the instructor after the end of the quarter.

**RE-GRADES:** It is your responsibility to check your exam for clerical errors in grading. If a grading error has been made, you should submit a re-grade request to me at the end of a lecture within one week of return of the exam. Download and fill out the reexam regrade form found on TritonEd and staple it to the front of your exam. No re-grades are possible for exams written in pencil or non-permanent ink. Students who submit exams for re-grading understand that we may (1) re-grade the entire exam, and (2) compare the submitted paper to a scanned copy of the original exam. Since course grades are due with the Division of Biology 72 hours after the final exam is given, re-grades of the final will be handled as follows: Graded final exams will be available for pickup one week after the final is given. Re-grade requests are to be placed under my office door within one week after graded exams are made available. If the re-grade request is valid and it affects the letter grade of the student in the course, then me will change your course grade accordingly.

**Writing and Critical Expression Hub:**

<http://commons.ucsd.edu/students/writing/index.html>

The Writing and Critical Expression Hub provides support for undergraduates working on course papers, i.e. laboratory reports and the research proposal, as well as other independent writing projects. Writing mentors can help at any stage of the writing process, from brainstorming to final polishing. The Writing and Critical Expression Hub offers: one-on-one writing tutoring by appointment; supportive and in-depth conversations about writing, the writing process, and writing skills; help with every stage in the writing process, walk-in tutoring; and workshops on writing.

**Accessibility and inclusion:**

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<http://disabilities.ucsd.edu> | [osd@ucsd.edu](mailto:osd@ucsd.edu) | 858-534-4382

Any student with a disability is welcome to contact us early in the quarter to work out reasonable accommodations to support their success in this course. Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD). Students are required to present their AFA letters to faculty and to the OSD Liaison in the Division of Biological Sciences in advance so that accommodations may be arranged.

Whenever possible, we will use universal designs that are inclusive. For example, colors used in this syllabus are distinguishable by most colorblind and non-colorblind people, and this font is designed to be dyslexic friendly. If you have feedback on how to make the class more accessible and inclusive, please get in touch!

**Discrimination and harassment:** The Office for the Prevention of Harassment & Discrimination (OPHD) provides assistance to students, faculty, and staff regarding reports of bias, harassment, and discrimination. OPHD is the UC San Diego Title IX office. Title IX of the Education Amendments of 1972 is the federal law that prohibits sex discrimination in educational institutions that are recipients of federal funds. Students have the right to an educational environment that is free from harassment and discrimination.

Students have options for reporting incidents of sexual violence and sexual harassment. Sexual violence includes sexual assault, dating violence, domestic violence, and stalking. Information about reporting options may be obtained at OPHD at 858-534-8298, [ophd@ucsd.edu](mailto:ophd@ucsd.edu), or <http://ophd.ucsd.edu>. Students may receive confidential assistance at CARE at the Sexual Assault Resource Center at 858-534-5793, [sarc@ucsd.edu](mailto:sarc@ucsd.edu), or <http://care.ucsd.edu>, or Counseling and Psychological Services (CAPS) at 858-534-3755 or <http://caps.ucsd.edu>.

Students may feel more comfortable discussing their particular concern with a trusted employee. This may be a student affairs staff member, a faculty member, a department chair, or other university official. These individuals have an obligation to report incidents of sexual violence and sexual harassment to OPHD. This does not necessarily mean that a formal complaint will be filed.

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.

### **Academic integrity:**

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<https://students.ucsd.edu/academics/academic-integrity/index.html>

Integrity of scholarship is essential for an academic learning community. In this course and at the university, we expect that both students and the instructional team 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 to whom it is assigned, without unauthorized aid of any kind. Instructors, for their part, will exercise care in planning and collaborating with students on academic work, so that academic integrity is upheld.

When people collaborate to work toward a common goal, shared values must be established so that everyone understands the acceptable ways for working together. In organizations, these are commonly called codes of conduct or ethics. In this course, we are using a statement of values<sup>4</sup> in support of codes of ethics, like the Policy on Integrity of Scholarship, to state explicitly our values and describe the behaviors for maintaining and protecting those values.

The following values are fundamental to academic integrity and are adapted from the International Center for Academic Integrity. In our course, these values are open to discussions and possible alterations based on mutual agreements among all students and the instructional team. In collaborative work, each group should discuss these values and must articulate the expectations for how they are made manifest within the group's work together.

	As students, we will ...	As the instructional team, we will ...
Honesty	<ul style="list-style-type: none"> <li>● Honestly demonstrate your knowledge and abilities according to expectations listed in the syllabus or in relation to specific assignments and exams</li> <li>● Communicate openly without using deception, including citing appropriate sources</li> </ul>	<ul style="list-style-type: none"> <li>● Give you honest feedback on your demonstration of knowledge and abilities on assignments and exams</li> <li>● Communicate openly and honestly about the expectations and standards of the course through the syllabus and in relation to assignments and exams</li> </ul>



Responsibility	<ul style="list-style-type: none"> <li>● Complete assignments on time and in full preparation for class</li> <li>● Show up to class on time and be mentally physically present</li> <li>● Participate fully and contribute to team learning and activities</li> </ul>	<ul style="list-style-type: none"> <li>● Give you timely feedback on your assignments and exams</li> <li>● Show up to class on time and be mentally and physically present</li> <li>● Create relevant assessments and class activities</li> </ul>
Respect	<ul style="list-style-type: none"> <li>● Speak openly with one another while respecting diverse viewpoints and perspectives</li> <li>● Provide sufficient space for others to voice their ideas</li> </ul>	<ul style="list-style-type: none"> <li>● Respect your perspectives even while we challenge you to think more deeply and critically</li> <li>● Help facilitate respectful exchange of ideas</li> </ul>
Fairness	<ul style="list-style-type: none"> <li>● Contribute fully and equally to collaborative work, so that we are not freeloading off of others on our teams</li> <li>● Not seek unfair advantage over fellow students in the course</li> </ul>	<ul style="list-style-type: none"> <li>● Create fair assignments and exams and grade them in a fair and timely manner</li> <li>● Treat all students and collaborative teams equally</li> </ul>
Trustworthiness	<ul style="list-style-type: none"> <li>● Not engage in personal affairs while on class time</li> <li>● Be open and transparent about what we are doing in class</li> <li>● Not distribute course materials to others in an unauthorized fashion</li> </ul>	<ul style="list-style-type: none"> <li>● Be available to all students when we say we will be</li> <li>● Follow through on our promises</li> <li>● Not modify the expectations or standards without communicating with everyone in the course</li> </ul>

Courage	<ul style="list-style-type: none"> <li>● Say or do something when we see actions that undermine any of the above values</li> <li>● Accept a lower or failing grade or other consequences of upholding and protecting the above values</li> </ul>	<ul style="list-style-type: none"> <li>● Say or do something when we see actions that undermine any of the above values</li> <li>● Accept the consequences (e.g. lower teaching evaluations) of upholding and protecting the above values</li> </ul>
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All course materials are the property of the instructor, the course, and 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.

<sup>4</sup> This class statement of values is adapted from Tricia Bertram Gallant Ph.D.

**Note: Syllabus and lecture schedule are subject to modification at my discretion.**

**TIPS ON HOW TO DO WELL:**

1. Print out or download lecture slides before each lecture. DON'T DO THIS MORE THAN 48 HOURS BEFORE CLASS! I often make last minute changes to the PowerPoint to incorporate recent research.
2. Be present and take good notes during lectures (I will often use the board for explanation, which slows down the pace and allows you to take notes on the lecture slides).
3. Use the textbook and internet resources (see the Links Section of the course TritonEd page) as reference material to help you better understand lecture material. It's rarely beneficial to read a textbook like a novel from front to back. Use the index and table of contents to find material covered in class. If textbooks don't generally help you or you don't find them worth the cost, then there are plenty of online resources. See the Course Links section of TritonEd.
4. Attend discussion section and prepare well for them. Go through the previous week's material and come up with specific topics or questions for the IA to clarify.
5. Take all the material from lecture, the videocast, the textbook, and the PowerPoints and consolidate it in a fashion that makes sense. The key to understanding and

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remembering so much complex concepts and terminology is to ORGANIZE, ORGANIZE, ORGANIZE!

6. Assess yourself frequently and accurately! Just looking at flashcards is rarely enough. Try and teach a topic to a friend or draw out an important figure from memory.
7. When you study, keep a running list of questions and issues you are having with the material. Bring those questions to office hours or a study group.
8. It's better to study for short bursts often than in massive cramming sessions.

Watch these videos linked below for even more effective study tips:

<https://www.youtube.com/watch?v=FyBdA61GmJ0>

<https://www.youtube.com/watch?v=p60rN9JEapq>

Since your grade will be decided entirely from your final score and not based on how you do compared to other students in the class, it will never hurt you to help fellow students. In fact, research on learning has shown that whether you are on top of the material or are having a hard time understanding the concepts, you will improve your learning by discussing the material with other students. Participation in study groups and in peer discussion of clicker questions is therefore, highly recommended.