BICD100 Course Information
Fall 2017

Overview of the Curriculum
The science of genetics, launched with the rediscovery of Mendel's Laws in 1900, is very much in the news. Within the subject of Genetics there are more areas than can be covered in a semester. We've picked out many of the basic concepts that we think are important in a broad introductory survey course.

1) Transmission genetics in higher organisms, using classical analysis of crosses.
2) Molecular genetics in the DNA age, the molecular nature of the gene and gene expression. This includes the biochemical nature, function and organization of the genetic material using the approaches of molecular genetics.
3) Population genetics and the distribution of genes in real populations.

Interspersed will be topics from the modern era: Genetic engineering, forensic techniques, recombinant DNA technology and genomics.

Scheduling and Enrollment
BICD100 (A00) meets at 6:30 - 7:50 PM TR in Room 2722 York Hall. Associated 50 min. discussions sections are listed by section below. It is very important that you attend the section for which you are registered. Part of your grade will be based on your participation and assignments in discussion section. Discussion sections will commence on **Monday in Week 1**.

Section	Time	Place	IA	Office Hours
A01	M 12pm	CENTR 217A	Teva Bracha	TBA
A02	M 1pm	CENTR 217A	Kirstin Barr	TBA
A03	M 2pm	CENTR 217A	Brandon Doan	TBA
A04	M 3pm	CENTR 217A	Maria Go	TBA
A05	W 5pm	WLH 2113	Tianzhi Tang	TBA
A06	W 6pm	WLH 2113	Nandu Prakash	TBA
A07	W 7pm	WLH 2113	Nandu Prakash	TBA
A08	W 8pm	WLH 2113	Andrew Ahumada	TBA
A09	F 2pm	Solis 109	Victor Yuan	TBA
A10	F 3pm	Solis 109	Evan Tanuwidjaja	TBA
A11	F 4pm	Solis 109	Alice Moylan	TBA

Blackboard Learning Management System
We will be using Blackboard to deliver our course materials over the Internet. You will be able to use this course site to download copies of course materials and view your grades. You can log-on at TritonEd (https://tritoned.ucsd.edu)

Staff Directory

Lecturer

Chris Day	cdday@ucsd.edu
Office hours:	Thurs 2-3pm,
Office:	HSS 1145LA

IAs

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Evan Tanuwidjaja	ertanuwi@ucsd.edu
Victor Yuan	jiy290@ucsd.edu

Grade Scale:
We do not curve. Consequently, you are not in competition with anyone for a grade.

Grades will be based on your percentage in the course:

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

Text and other materials for self-guided study

One textbook is recommended for the course:
Klug et al. Essentials of Genetics, 9th edition. But any general genetics text, even older additions, will be OK. Further online resources will be posted on Blackboard.

Practice Problems:
You will have access to old problem sets and exams that I have written in the past. These will be posted on the Blackboard website. Answers will be posted a few days before each exam BUT it is important that you attempt the questions before reviewing the answers. In addition, there are many good questions in the book that are helpful towards mastering our learning goals.

Online quizzes:
A total of three points are available for each multi-choice quiz. 1pt for completing the quiz and 3pt for getting above 75%. There will be nine quizzes, approximately one a week.

The quizzes and problem sets are primarily for you to get practice with concepts as we progress through the learning objectives. For quiz questions that appear to be stumping the whole class I will review those concepts in class, or you can work on the material during discussion.

Grades: Exams, Assignments and Participation
Your grade for BICD100 will be based on your performance on assignments and three exams. The assignments will give you opportunities to work with the material and to practice the kinds of problem-solving skills you will need for the exams. Each of the exams will cover material from the lectures listed below.

Course Component	**Date**	**Time**	**Emphasis**	**Points**
Mid-term	Nov 7th	In class	Unit 1 - Unit 5	100
Final Exam	Dec 12th	7 pm	Comprehensive	200
Problem Sets	Oct 12th Oct 26th Nov 2nd Nov 16th Nov 30th	Turnitin	Lowest grade of the five can be dropped. 15 pt assigned to each problem set.	60
Online quizzes	Ad Hoc	Triton Ed	9 online quizzes	27
Participation		In Discussion		14
Participation	Ad Hoc	In Lecture	In the form of case studies	24
Genetics in the News	First Discussion	In Discussion	Online assignment and Discussion	10
			Total	435

Exam format:
Each exam will have both multi-choice questions and short answer questions. You will be able to bring one US letter size review sheet into the exam for reference (two sided).

Problem sets:
The five take-home problem sets count for over 10% of your course grade (15 points each, total 60 points out of the 435 total). Note that the lowest score will be dropped.

All late problem sets will be assigned a zero grade.

We encourage you to work together in study groups to discuss the questions and help you understand the material. Use office hours as needed too. If you do choose to work in groups on the problem sets, please list the names of your collaborators on your assignment. Each student must write her/his own answers, in his/her own words, after working with the group. Try not to make the mistake of simply accepting another student's answer and thinking you understand it. You have a better understanding by going through the problem-solving process.

Participation:
We will do several case studies as part of the lectures. They will be sprinkled throughout the course. You will receive an e-mail notice of when these particular case studies will be done in class. You should have thought about answers for the questions before arriving to class. In class you will compare and discuss your answers with your peers and we will discuss the best answers as a group.

Screen Podcasts
Class lectures are videocast and are available for review at any time during the semester. Be aware that we make use the chalk board too, and these visuals will not be available on the podcast. If you miss a lecture it is your responsibility to find a peer who will lend you their notes.

Course Administration
Dr. Day is the first person to contact for all questions of course enrollment, section changes, grade records, signing up for early make-up exams (allowed only exceptional reasons), and any special needs.

To minimize the amount of class time taken up with administrative details, all announcements and information of general interest will be sent to you by email (normally on Monday mornings) and also posted on the blackboard notice board for the course. It will be your responsibility to consult one of these sources routinely, since most announcements posted there will not be reiterated in class.

Special Needs and Religious Holidays:
Please let Dr. Day know as soon as possible if you have any special needs that we should accommodate or a religious holiday that will conflict with a course activity.

Students' Questions and Feedback:
The staff of this course, lecturer and IAs alike, welcome your questions, suggestions, and comments. We want to get to know you, and we appreciate your feedback.

Board of Directors:
In addition, we would like to have about four volunteers from the class to serve as class representatives and meet after lecture each Monday. This is valuable for all of us since it allows students to make constructive suggestions if there are logistical problems or other concerns. In short, student concerns can be aired in a way that real changes can be made. In our experience this open communication helps teaching staff and students alike.

Course success strategies

This course covers a fair amount of challenging material in a relatively short amount of time. You will need to commit what you learn to your long-term memory in order to be successful in this course. This involves many repetitions of the material over an extended period of time- no cramming the night before exams. Since genetics is a problem oriented discipline, you will need to do as many practice problems as you can as we move through the course. It is highly recommended that you form a study group to work through the material and the problems at the end of the chapters. If you can teach the material to others, you will be very confident that you understand the material, and you will perform well on exams. WE WANT YOU TO SUCCEED!

How to use the learning objectives, textbook (or online resources) and powerpoints.

• Exams will be based on material in powerpoints and lecture only.
• Shortly after lecture, you should spend some time reviewing your notes. Try the low stake quizzes, as well as the short answer practice problems.
• Read all the learning objectives and review the ones that you do not understand by referring to the powerpoints. Correlate these with your notes.
• You should use a textbook or online resources to reinforce the topics we cover in lecture. Use the index and table of contents to find the appropriate material. These outside resources should be considered as a tool to help you get information and understand the material.

Note taking tips

• Print or download the powerpoints before class and take notes right on these pages. While using an electronic device (computer or tablet) is acceptable, research has been shown that the act of hand-writing your notes is more effective than typing them.
• Review and rewrite your rough notes more neatly each week. Think about what 'facts' might be useful for the notecard that you can use in the exam.
• Ask questions: in lecture, right after lecture, in discussion section, in office hours. You should get to know your classmates, the IA(s), and the instructors.

Studying for exams

• Attend your discussion section. Here you will get more practice with problems. This is a good place to meet people and form study groups.
• Form a study group and meet regularly to go over material and problems.
• Be sure you can teach the material to others and show them how to solve the assigned problems.
• Do not wait until the day before the exam to begin reviewing your notes and the material in the textbook. This should occur day to day.
• Ask questions! And sleep!

Academic integrity (https://students.ucsd.edu/academics/academic-integrity/index.html)
Integrity of scholarship is essential for an academic community. The University expects that both faculty and students 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(s) to whom it is assigned, without unauthorized aid of any kind. Anyone caught cheating (includes plagiarizing lab reports, cheating on a test, or changing an answer for a re-grade) will be reported to the Academic Integrity Office.

Inclusion and accessibility (http://disabilities.ucsd.edu)
Any student with a disability is welcome to contact us early in the quarter to work out reasonable accommodations to support your 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), which is located in University Center 202 behind Center Hall. 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. For further information, contact the OSD at 858-534-4382 or osd@ucsd.edu

Week	Lab Dates	Lab Exercises	Assignments
0	**28-Sep**	Introduction/Genetic Variation	
1	**3-Oct**	Unit1: Mendelian Genetics and how it relates to the cell cycle	**Genetics in the News**
	5-Oct	continued	
2	**10-Oct**	Unit 2: Sex determination and dosage compensation (X-inactivation)	
	12-Oct	Unit 3: Pedigree Analysis	**Homework 1 Due**
3	**17-Oct**	Unit 4: Deviations from Mendel's Ratios	
	19-Oct	Unit 5: Linkage and Mapping	
4	**24-Oct**	continued	
	26-Oct	Unit 6: Quantitative traits	**Homework 2 Due**
5	**31-Oct**	continued	
	2-Nov	Unit 7: The Genetic Material	**Homework 3 Due**
6	**7-Nov**	**In Class Midterm**	No Discussions
	9-Nov	Unit 8: Mutations	No Discussions
7	**14-Nov**	continued	
	16-Nov	Unit 9: Chromosomal variation	**Homework 4 Due**
8	**21-Nov**	continued	No Discussions
	23-Nov	Thanksgiving Holiday	No Discussions
9	**28-Nov**	Unit 10: Gene regulation	
	30-Nov	continued	**Homework 5 Due**
10	**5-Dec**	Unit 11: Overview of population genetics	
	7-Dec	continued	
	Exam week	**Final**	