Dear Students,

Our PH142 Fall 2024 teaching team is looking forward to meeting you all in a few short weeks. Each year, the PH142 cohort of students represents a diverse range of life experiences. Many of you are undergraduates in public health or related disciplines, while others join us from the MPH degree or other graduate programs. In times of stress, I've heard undergrads worry about competing with graduate students since graduate students are often older and bring a multitude of life experiences. Conversely, grad students worry that the undergraduates are more prepared for quizzes and midterms because they've honed their test-taking skills. Let me assure you that the distribution of performances across graduate and undergraduate students has thus far been indistinguishable! Both graduate and undergraduate students have strengths and places for growth and I hope that we can see this as an opportunity to learn from each other.

If this is like previous years, many of you are also nervous about this class and taking it because it is required for your degree. Some of you received messages when you were young that you aren't a "math person" and those messages likely vary based on gender, race and ethnicity, and where you went to school. We've set up this class to offer many opportunities for practicing what you've learned each week, including weekly labs submitted for completion, and quizzes to help you stay on top of the material and to provide a marker if you need to ask for extra help. This is also a plea for you to come to my office hours and the TA hours!! I promise to never shame you for where you are at and to do my best to get you up to speed in the time we have!

I did not create this course, but it is I think a very well-designed and organized course, with the objective that you will become fluent in the concepts of probability and statistics, and have working data science skills. Credit goes to Dr. Corinne Riddell with help from Dr. Mi-Suk Kang-Dufour and others including the many GSI's and head GSI's to make a course that both covers the basics of probability of statistics, but dovetails with campuses goals for data science literacy. It will be challenging, but if you work in public health, I promise these skills can be very valuable to you in the future.

I'm looking forward to meeting you. Please review the attached syllabus that covers policies, the timing of any submitted material, and the course outline. It is essential pre-course reading!

See you soon,

Alan Hubbard
Division Head of Biostatistics

PH142: Introduction to Probability and Statistics in Biology and Public Health

Course Syllabus (Fall 2024)

Contents

24 Hour Crisis Hotlines

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Academic Honesty

Course Information

Course Meeting Dates/Times:

Lecture: MWF 8:10-9:00am

Labs:

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104B W 9am to 11am Wheeler 24
108B W 1pm to 3pm Moffit Library 106
102B W 2pm to 4pm Morgan 109
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106B W 5pm to 7pm Dwinelle 283
107B Th 11am to 1pm Valley Life Sciences 2066
112B Th 12pm to 2pm Barker 110
111B Th 4pm to 6pm Valley Life Sciences 2030
101B Th 5pm to 7pm Dwinelle 246
103B F 9am to 11am Latimer 102

Course Location: Remote/ Online: https://berkeley.zoom.us/j/94717996924

	Alan Hubbard, PhD (he/him/his)	Tomer Altman, PhD (he/him/his)
Instructors:		
Email:	hubbard@berkeley.edu	taltman@berkeley.edu
Instructor Availability:	TBD, BWW 5315 or remotely at https://berkeley.zoom.us/...	TBD, BWW ... or remotely at https://berkeley.zoom.us/...

GSIs:

Head GSI: Julia Piccirillo-Stosser (she/her)

Yilong Hou (he/him)
Qiuran (Rita) Lyu (she/her)
Paula Marquez (she/her)
Xinrui Ruan (he/him)
Sylvia Song (she/her)
Zhongming Xie (he/him)
Sean Yu (he/him)

Email:	ph142fa24@berkeley.edu
Course Canvas/bCourses link:	https://bcourses.berkeley.edu/courses/1537782
Course Website:	https://ph142-ucb.github.io/fa24/
Course Unit:	4
Contributing Instructors:	Corrine Riddell Mi-Suk Kang Dufour

Course Description

This course is an introduction to statistics and data science, primarily for MPH and undergraduate public health majors, and others interested in public health topics. The course can be divided into three parts. In Part I, we will focus on learning to use R to explore and summarize univariate and bivariate distributions. Specifically, we will use the dplyr and ggplot2 packages to manipulate and visualize data sets in R. Part II of the course introduces classical problems in probability and the Normal, binomial, and Poisson distributions. The most important topic we will cover in Part II is the Central Limit Theorem, the basis of most statistical inference. In Part III, we introduce statistical inference, the process of estimating statistics from samples to make inference about populations. During all parts of the course we will use real and simulated data sets to gain experience conducting biostatistical analyses using R. We will follow the PPDAC model, which stands for "Problem, Plan, Data, Analysis, and Conclusion".

Prerequisites

High school algebra. A pre- PH 142 canvas based page with modules that go over the topics in math and computer literacy that we wish incoming students to have a basic understanding is here: https://berkeleyphw.instructure.com/courses/390. Please go through the material to see if there are topics you should review.

Course Learning Objectives

After successfully completing Part I of the course, you will be able to:

- Describe distributions of variables visually and calculate summary statistics for measures of centrality and spread
- Determine the appropriate graphic to plot distributions and provide R code snippets to manipulate and visualize data frames
- Interpret output from a simple linear regression model

After successfully completing Part II of the course, you will be able to:

- Compute probabilities using the general rules
- Identify and describe binomial and Poisson random variables
- Compute probabilities using basic properties of the Normal distribution
- Describe the central limit theorem

- Write R code snippets to compute probabilities for the Normal, binomial, and Poisson distributions

After successfully completing Part III of the course, you will be able to:

- Estimate means, proportions, and differences between means and proportions, compute their confidence intervals and perform statistical tests
- State the assumptions and importance of the assumptions for statistical tests
- Perform a simple chi-squared test
- Perform a matched t-test
- Describe and check the assumptions for simple linear regression. Interpret the confidence interval and statistical test of regression intercept and slope coefficients
- Describe ANOVA, including the null and alternative hypotheses, and interpret output
- Describe when bootstrapping can be used
- Describe a permutation test
- Demonstrate knowledge that has been used throughout the term, in terms of data visualization and data manipulation
- Write R code snippets to perform hypothesis tests and calculate p-values

Methods of Instruction

Lectures are on Monday, Wednesday, and Friday from 8:10 - 9:00am on zoom. Recordings are posted to the course website.

Weekly lab sessions are offered in-person and aren't recorded.

Instructor Information

Prof. Alan Hubbard
Division of Biostatistics
School of Public Health University of California, Berkeley 2121 Berkeley Way West Berkeley, California 94704-7360

Office hours: TBD or remotely at https://berkeley.zoom.us/j/...

Alan Hubbard is a Professor and Head of Biostatistics at the University of California, Berkeley, School of Public Health. He works both in development of new statistical methodology at the intersection of causal inference and machine learning, within the so-called Targeted Learning framework. His applied research has covered a wide variety of topics, but is mainly in infectious and chronic disease epidemiology, environmental health and clinical medicine.

Instructor Information

Dr. Tomer Altman
Co-Lecturer

Office hours: TBD
or remotely at

https://berkeley.zoom.us/....

Course Format

Course Schedule

Date	Topic	Readings	Lab (W, Th, or F)	Problem sets/other info
Wednesday, Aug 28	Introduction to the course, the cloud, and PPDAC	None	**Lab01: Introduction to R and RStudio on Datahub**	Problem set #1 released Lab #1 released
Friday, Aug 30	Working with data in R and RStudio (`dplyr` package)	None		Lab #1 due at 11:59pm
Monday, Sept 2	**Holiday (Labor Day)**	--	**Lab02: Visualization of global Cesarean delivery rates**	Problem set #2 released Lab #2 released
Wednesday, Sept 4	Visualizing data in R and RStudio (`ggplot2` package)	None		
Friday, Sept 6	Visualizing distributions for one variable, numerically summarizing spread and central tendency	Chapter 1 & 2		Lab #2 due at 11:59pm Quiz #1 available for 24 hours beginning Thursday at 5pm
Monday, Sept 9	Exploring relationships between two variables	Chapter 3	**Lab03: Relationship between global**	Problem set #3 released Lab #3 released

Wednesday, Sept 11	Introduction to Regression	Chapter 4	**cesarean delivery rates and GDP**	
Friday, Sept 13	Two-way tables (Relationships between two categorical variables)	Chapter 5		Lab #3 due at 11:59pm Quiz #2 available for 24 hours
Monday, Sept 16	Samples and observational studies	Chapter 6	**Midterm I Review Session**	GSIs to post review problems for Midterm I by 9:30am (will not be graded)
Wednesday, Sept 18	Live exercise: Sampling births from US territories	None		
Friday, Sept 20	Designing Experiments	Chapter 7		Quiz #3 available for 24 hours
Monday, Sept 23	**MIDTERM 1**		**Lab04: Problem set on probability calculations**	Problem set #4 released Lab #4 released
Wednesday, Sept 25	Introduction to probability	Chapter 9		
Friday, Sept 27	General rules of probability	Chapter 10		Lab #4 due at 11:59pm
Monday, Sept 30	General rules of probability continued	Chapter 10	**Lab05: Problem set on sensitivity, specificity, and the Normal distribution**	Problem set #5 released Lab #5 released
Wednesday, Oct 2	The Normal distribution part I	Chapter 11		

Friday, Oct 4	The Normal distribution part II	Chapter 11		Lab #5 due at 11:59pm Quiz #4 available for 24 hours
Monday, Oct 7	The Binomial distribution	Chapter 12	**Lab06: Problem set on Normal, binomial and Poisson distributions**	Problem set #6 released Lab #6 released
Wednesday, Oct 9	The Poisson distribution	Chapter 12		
Friday, Oct 11	Sampling distributions for a mean and proportion and The Central Limit Theorem	Chapter 13		Lab #6 due at 11:59pm Quiz #5 available for 24 hours Data Skills Demonstration Part I Due at 5pm
Monday, Oct 14	Confidence intervals for a mean with known standard deviation	Chapter 14	**Lab07: Classroom simulation on the Central Limit Theorem and confidence intervals**	Lab #7 released
Wednesday, Oct 16	Hypothesis tests for a mean with known standard deviation	Chapter 15		
Friday, Oct 18	Power, type I and type II error, sample size (part I)	Chapter 15		Lab #7 due at 11:59pm Quiz #6 available for 24 hours
Monday, Oct 21	Inference for a population mean with unknown standard deviation	Chapter 17	**Midterm II Review Session: see alternate lab schedule for this**	GSIs to post review problems for Midterm II by 9:30am (will not be graded)

Wednesday, Oct 23	Catchup if we're behind	Chapter 17	**week**	
Friday, Oct 25	**MIDTERM 2**	--		
Monday, Oct 28	Comparing two means	Chapter 18	**Lab08: Paired and two sample t-tests, including classroom "hit the dot" game**	Problem set #7 released Lab #8 released
Wednesday, Oct 30	Matched comparisons	Chapter 17		
Friday,Nov 1	Inference for a population proportion	Chapter 19		Lab #8 due at 11:59pm Quiz #7 available for 24 hours
Monday, Nov 4	Comparing two proportions	Chapter 20	**Lab09: Inference for Proportions**	Problem set #8 released Lab #9 released
Wednesday, Nov 6	Bootstrapping confidence intervals	None		
Friday, Nov 8	The Chi-square test for goodness of fit	Chapter 21		Data Skills Demonstration Part II Due at 5pm Lab #9 due at 11:59pm Quiz #8 available for 24 hours
Monday, Nov 11	**Holiday (Veteran's Day)**	Chapter 22	**Lab 10: Problem set on the Chi-square test**	Problem set #9 released

Wednesday, Nov 13	The Chi-square test for two-way tables	None		
Friday, Nov 15	Permutation tests	None		Friday labs may choose to attend another lab this week*
Monday, Nov 18	Inference for regression I	Chapter 23	**Lab 11: Interpreting a regression model on median household value and distance to employment centers and checking modeling assumptions**	Lab #10 due Monday at 11:59pm this week only Problem set #10 released Lab #11 released
Wednesday, Nov 20	Inference for regression II	Chapter 23		
Friday, Nov 22	Comparison of many means (ANOVA)	Chapter 24		Quiz #9 available for 24 hours Lab Lab #11 due at 11:59pm
Monday, Nov 25	ANOVA II/Tukey's HSD	Chapter 24	**Holiday; No lab**	
Wednesday, Nov 27	**Holiday (Thanksgiving)**	--		
Friday, Nov 29	**Holiday (Thanksgiving)**	--		
Monday, Dec 2	Non-parametric testing alternatives.	None	**Final Exam Review Session**	GSIs to post review problems for Final Exam by 9:30am (will not be graded)
Wednesday, Dec 4	Regression modeling with a categorical exposure	None		

Friday, Dec 6	Final exam review	--		**Data Skills Demonstration Part III Due at 5pm**
Monday, Dec 9	**Reading week**	--	**RRR Week; No lab**	
Wednesday, Dec 11	**Reading week**	--		
Friday, Dec 13	**Reading week**	--		
Monday, Dec 16	**Final Exam (7-10 PM)**	--		

Course Grading

Grading is based on the following:

- **Problem sets** will be distributed as R markdown files on Datahub. They will be released, along with labs, on Sunday evenings unless otherwise noted. **They will not be submitted for grades** and you are encouraged to work on it in groups if that is how you learn best. **Completing the problem sets is your best preparation for the midterms and final examination.** All solutions will be posted on Datahub the Friday after the problem set is made available.

Problem Set	**Release date**	**Task**
1	Aug 25	Manipulate a dataset about mammalian sleep time
2	Sept 1	Summarize global cesarean delivery rates and GDP across 137 countries using histograms, boxplots, and measures of central tendency and spread
3	Sept 8	Predict insurance charges by age and BMI by first summarizing the relationship using a scatter plot and describing the correlation and then running simple regression models
4	Sept 22	Simulate birth defect data to study a random variable, calculate probabilities on HIV/HCV, and screening properties for lung cancer
5	Sept 29	Complete calculations on the Normal and binomial distribution by hand and using R
6	Oct 6	Complete calculations on the Poisson distribution and inference regarding a single mean by hand and using R
7	Oct 13	Estimate and interpret confidence intervals for the difference of two means and conduct a hypothesis test by hand and using R

8	Oct 27	Estimate and interpret confidence intervals for a single proportion or the difference of two proportions and conduct hypothesis tests by hand (large sample, plus four method) and using R (Clopper Pearson, Wilson Score methods)
9	Nov 3	Estimate and interpret the chi-square test for goodness of fit and independence and compare the results to that using a permutation test using R. Answer questions about the bootstrap.
10	Nov 10	Conduct a regression model and interpret the regression output, including the coefficient estimates, their standard errors, and associated p-values. Perform ANOVA calculations and non-parametric tests.

- **Weekly Gradescope quizzes** will be available for 24 hours from 5pm Thursday to 5pm Friday on the 9 weeks as marked in the schedule. Your lowest quiz score will be dropped at the end of the semester. Quizzes will be relatively short and meant to encourage you to keep up with the content. They will cover material beginning Wednesday in the previous week to Monday of the week of the quiz. Once opened, you will have 1 hour to complete the quiz.

- **Lab exercises** are intended to practice concepts from lectures in a practical programming environment. You can complete and submit these during the lab section, or on your own time. Students often find it much more helpful to complete this in the lab rather than independently, but we understand students learn differently, so feel free to do what works best for you. Lab exercises are graded on correct completion, so you must complete the lab fully, passing all tests, in order to receive credit for the assignment. You may miss one lab without penalty. Labs will be released on Sunday evenings and can be submitted for completion marks until Friday at 10:00pm unless otherwise noted in the schedule.

- **Midterms I and II, and Final Exam**. There are two midterms offered on September 18 and October 20. The midterms will be administered in class that day and are approximately 45 mins long. The final exam is on **Monday, December 11th. If you have a conflict with <u>any</u> of the exam dates, please email the instructor by September 1st so that we can discuss possible accommodations.**

Accommodations cannot be made for individuals enrolled in another class at the same time as this one, so please take this class in another semester if doubly enrolled. Appropriate accommodations for the midterm will be made for those with disabilities (please refer to the "Disabilities" section, below). Please note that only in extremely rare circumstances such as illness (with a doctor's note) will the in-class midterm be given to individual students after the scheduled examination date. Exams will cover the material presented in lecture, discussion, and lab sections, including R coding syntax, unless otherwise noted.

- **Exam policies. Exams will be administered in person and on paper.** You may bring one page (front and back) of notes with you to use on the day of the exam. Notes may be hand printed or computer printed with a minimum of 10pt font. You should also bring with you a simple scientific calculator. While you take the exam, you are prohibited from discussing the test with anyone other than the PH142 instructional team. Evidence of cheating may result in a 0 on the test or further disciplinary action. We will strive to return graded examinations within one week of the exam date.

- **Data skills demonstration group project.** The purpose of the group project will be to use public health or biological data that you find or have access to and use it to demonstrate the statistical concepts that you've learned throughout the course. Groups will be assigned to you by lab section. You will have 2 deliverables spread out across the term, covering each section of the course and 1 deliverable due at the end which will cover part 3 and will also synthesize parts 1 and 2 into a cohesive report.

- **Extra credit.** After we return your midterm exams you will have the opportunity to complete an assignment related to a concept for which you lost points on the exam. You may earn extra credit on your overall course grade by showing proof of submitting course evaluations.

Final grades will be assigned according to the following percentages:

Quizzes	15%
Participation	5%
Lab completion	10%
Midterm 1	15%
Midterm 2	15%
Group project (in 3 parts)	20%
Final Exam	20%

S/U (satisfactory/unsatisfactory) grading is permitted for this course. There are no differences in the course requirements or the grading for students who choose this option. "S" will appear on transcripts for grades of "B-" or above.

Course Materials

Course website

To access the course website, go to https://ph142-ucb.github.io/fa24/. Here you will find links to required and optional readings, the syllabus, assignment descriptions and additional course resources. Any changes will be reflected in the assignment section of the site.

Required Materials

We will be using **R**, a statistical programming language, and **RStudio**, an integrated development environment on **Datahub**, a cloud computing environment created at Berkeley. Use of R, RStudio, and Datahub is required for problem sets and lab exercises and requires an internet connection and web browser. You will learn how to use R, RStudio, and Datahub during the first week of classes. You can access Datahub from the links on the course website.

Optional Materials

The course textbook is "The practice of statistics in the life sciences" by Brigitte Baldi and David S. Moore. **The textbook is available at the university library.** The 4th edition of the textbook is the latest one, but previous edition are fine. We rely on it more during Part II and III of the course than we do in Part I.

Other resources

In addition, here are some free online resources available as supplementary material. We link to these specific resources in the lecture slides when applicable:

- Learning statistics with R: https://learningstatisticswithr.com/lsr-0.6.pdf
- OpenIntro Statistics: https://drive.google.com/file/d/0B-DHaDEbiOGkc1RycUtIcUtIelE/view
- A ModernDive into R and the Tidyverse: https://moderndive.com/9-hypothesis-testing.html#ht-infer
- Statistical Thinking for the 21st Century: https://statsthinking21.github.io/statsthinking21-core-site/ci-effect-size-power.html#statistical-power
- R for Data Science: https://r4ds.had.co.nz/data-visualisation.html

Announcements, Questions, and Comments

Course announcements will also be sent out through a once-weekly email blast from Ed. In general, you can expect that GSIs will respond to posted questions within 24 hours. However, GSI's will not respond to questions during holidays and breaks, and weekend responses may be delayed. GSI's are not expected to answer questions 24 hours prior to an exam, but students may continue to post and answer each other's questions during this period.

All questions about course material should be asked on Ed, so that other students may benefit from the questions. Personal and administrative inquiries (e.g. extension requests, scheduling concerns) should be directed to ph142fa24@berkeley.edu. As above, we will strive to answer any questions in 24 hours, but expect longer turnaround time during weekends or during breaks.

Policies

Lab and data project submission grace period

All labs and data projects, unless stated otherwise, are due on the specified day at 10:00pm. Due to the nature of electronic submission, we understand that some students may experience technical difficulties close to the deadline. Therefore, we are offering a grace period of two hours, until 11:59pm, to account for these submission issues. The grace period applies by default, you do not need to notify us to use it. **We will not be accepting requests regarding submission errors after 11:59 on the due date.**

Availability for test dates

If you have a conflict with <u>any</u> of the midterm/exam dates, please email the instructor by September 1st so that we can discuss possible accommodations.

Regrades

Grading for this course is done through Gradescope to allow blinded grading of questions and to provide consistent rubric information for GSIs and students. Gradescope also allows us to use some AI features to speed up the grading turn- around time. We will do our best to return graded submissions within a week of the due date. While we will do our best to ensure timely and consistent grading, we know that there are possibilities for both human and machine-reading errors. Regrades will be allowed on quizzes and midterm exams, requests for regrades will be open for three school days after the grades are released using Gradescope. Note that if you request reconsideration of a graded question, instructors may reconsider grades on the entire assignment.

Late Submissions

We will allow 50% credit for assignments submitted within 24 hours after the due dates. Extensions can be made for DSP students but should be requested ideally before the due date by emailing the GSI email account. Anyone else requesting an exemption for late submission should email the GSI account explaining their situation. If an emergency event prevents submitting an assignment by the deadline, please contact the GSI email account as soon as reasonably possible, including documentation with your request for extension.

Attendance and Recordings

We strongly encourage attendance during lab, lecture, and office hours as there are opportunities to ask question. Attendance, however, is not required. Course capture will be available to rewatch past lectures, but the quality in the past has been mixed. Labs will not be recorded.

Communication and Community

UC Berkeley School of Public Health has a commitment to cultivating a safe, respectful and inclusive community. You can read more about this in the principles of community statement. Part of fostering this type of community is cultivating respectful communication. We as a teaching team will do our best to communicate in a respectful, compassionate, and professional manner. We ask that you as students do your best to hold these values in your communications with each other and with us.

Questions during lecture and lab are strongly encouraged. If something is unclear to you, it is probably unclear to many others in the room. There may be times, however, when the instructor or the GSI decides that a particular question or discussion is not helpful to the entire class or will take too long to address satisfactorily. In these cases, we may defer the question to be answered after class, on Ed or during office hours.

Anti-racist and inclusive learning environment

Faculty at Berkeley Public Health strive to create an anti-racist learning environment. I commit to teaching this course, to the best of our ability, with an antiracist, racial justice, and equity-minded lens. I'm interested in your perspectives and in the value and knowledge you bring to help make this an enriching course environment.

I view this syllabus as a dynamic document oriented toward learning and not just coverage of material; thus, I may add or modify topics covered, assignments, and resources (e.g., required readings/videos) slightly based on the needs and interests of students in the course. I welcome feedback and input at any time and invite careful reflection of any modifications that may help improve the course in the future.

As your professor I agree to the following:

- I will do my best to include course content that include examples relevant to racialized and minoritized communities (e.g., readings, examples, data).
- I will continue to work to understand the issues, concerns and history of racialized and minoritized students. I will listen, learn, and admit mistakes and engage in ongoing cultural humility practices.
- I welcome feedback at any time during the course without fear of reprisal; if a mid-semester evaluation is conducted, there will be specific language about antiracism teaching practices.
- Students are the experts of their own experiences. Your world lens is welcomed; and as students, you are invited to lift up information and/or data that is relevant to

the course material. Everyone is a teacher and everyone is a student.

SPH Course Policies

Descriptions of and relevant campus links to SPH school wide course policies on Disability Support Services, Accommodation of Religions Creed, Course Evaluations, Academic Integrity can be found at:
https://berkeley.box.com/s/knh3rbk9ikgvmca4ymy93msgj9bkebq5

DSP Requests and Accommodations

The mission of the Disabled Students' Program (DSP) is to ensure that all students with disabilities have equal access to educational opportunities at UC Berkeley. The DSP offers a wide range of services, accommodations, and auxiliary services for students with disabilities. These services are individually designed and based on the specific needs of each student as identified by DSP's Specialists.

We will accommodate disabled students' needs according to DSP documentation; please notify the DSP if you require such accommodation (DSP will then contact the instructor). **Note that this may take several weeks, so please initiate this process ASAP so that any accommodations can be implemented in time for the first midterm exam**. Steps to the application process: https://dsp.berkeley.edu/students/new-students.

If you require DSP accommodations for a test, please email the GSI email account at ph142fa24@berkeley.edu with your request and write "DSP accommodation" in the subject heading as soon as you know accommodations are required. If your accommodation allows for extension on take-home assignments, we ask that you discuss your request no later than 24 hours after the assignment is posted.

Mental Health

If you are experiencing stress, anxiety, or other forms of distress during the semester, we hope to be a resource for you–**please don't hesitate to reach out to a GSI or the Professor for support.** You are not alone.

There are also many resources available to you. All registered Berkeley students are eligible to use Counseling Psychological Services. **You do not have to purchase the Student Health Insurance Plan to use these services.** The first five counseling sessions are free for registered Berkeley students. Counselors can provide support in academic success, life management, career and life planning, and personal growth and development.

UC Berkeley, Counseling and Psychological Services

- Please call (510) 642-9494 or stop by the office on the 3rd floor of the Tang Center to make an appointment with a counselor.
- **Drop-in counseling for emergencies:** Monday - Friday, 10:00AM-5:00PM

- **After hours counseling:** In the case of emergencies at night or on weekends, call (855) 817-5667 for free assistance and referrals. Request to speak with a counselor.
- **For emergency support:** Call UCPD 911 or (510) 642-3333

24 Hour Crisis Hotlines

- **Alameda County Crisis Line:** Call 1-800-309-2131 *(offers confidentiality, TDD services for deaf and hearing impaired callers and translation in 140 languages)*
- **National Crisis Help Line:** Call 1-800-273-TALK
- **Crisis Text Line:** Text HOME to 741741
- **National HopeLine Network:** Call 1-800-SUICIDE

We also ask that you look out for your fellow peers. If you see any of the signs below that may indicate your classmate may need assistance, please use the resources above or reach out to any of the GSIs or Professors.

- Withdrawing from other people
- Changes in weight or eating patterns
- Changes in sleeping patterns
- Fatigue or lack of energy
- Increased anxiety or irritability
- Feeling worthless or hopeless

Other Campus Resources:

- **Let's Talk:** *Informal Drop-In Counseling*
- **Self-Help Resources**
- **Be Well at Cal**

Academic Honesty

Learning is hard work–we encourage everyone to work together and support one another. However, while group work is encouraged, with the exception of the group project, **students must submit their own code and answers** for grading. Students can not work together on the quizzes, midterm, or final examinations. **Tests that show evidence of academic misconduct will be immediately flagged and reported to the Center for Student Conduct for review.** This can result in a grade of 0 on an assignment or a harder penalty depending on the degree of the offence. Each term, a few students in

this class are reviewed by the Center for Student Conduct as we take cheating very seriously.

Berkeley's code of conduct is **here**. See Section V and Appendix II for information about how UC Berkeley defines academic misconduct. In particular, the sections on cheating and plagiarism are most relevant for this class.

If you are not clear about the expectations for writing a test or examination, be sure to seek clarification from the instructors or your GSI beforehand.

Harassment Policy

We are all responsible for creating an environment that is welcoming, civil, safe, and tolerant. UC Berkeley does not tolerate harassment of PH142 students, GSIs, or instructors.

- Instructors and GSIs will act to stop acts of harassment in the classroom.
- Students experiencing harassment can contact the office for the prevention of harassment and discrimination. To file a report, you can email ask_ophd@berkeley.edu or call them at (510) 643-7984. For more information, see: https://ophd.berkeley.edu/.
- Please note that Instructors and GSIs are Responsible Employees and must report incidents of sexual violence and harassment to the Office for Prevention of Harassment and Discrimination. Please see this website for confidential reporting resources: http://survivorsupport.berkeley.edu/Confidential-Resources-Anonymous-Reporting-and-Privacy