

# PSTAT 120A Syllabus

## Winter 2025

**Note: All times are listed in Pacific Time (local Santa Barbara time).**

	Class Meetings	Office Hours
Brian Wainwright wainwright@pstat.ucsb.edu	M/W 2:00 PM-3:15 PM    CHEM 1179	Mondays (and by appt.) 9:00 AM-10:15 AM    SH 5607F

**COURSE WEBSITE:**    <https://ucsb.instructure.com/courses/21577>.

It is the student's responsibility to keep current with updates to the course website and check on a weekly basis that the posted grades are correct.

### MATERIALS:

- **Textbook:** *Introduction to Probability* by David F. Anderson, Timo Seppalainen, and Benedek Valko, 2018 edition, ISBN: 9781108415859y
- **Course Notes:** Lectures will be conducted in-person, at the prescribed lecture day and time. In addition, the accompanying lecture slides will also be posted on Canvas, available for download for the purposes of note taking and reference.

**COURSE DESCRIPTION:** PSTAT 120A is an intensive course intended for students starting to learn probability and statistics. The course will cover introductory topics as described in the course catalog. If you have not completed the prerequisites, please complete those first before attempting PSTAT 120A.

**Course Catalog Description:** Concepts of probability; random variables; combinatorial probability; discrete and continuous distributions; joint distributions, expected values; moment generating functions; law of large numbers and central limit theorem.

**PREREQUISITES:** Linear Algebra (at UCSB it is Math 4A or 4AI) or multivariable calculus (at UCSB it is Math 6A or 6AI) completed with a minimum grade of C or better. There will be a fair bit of integration (mostly of polynomial and exponential functions) and double integrals in this course. I highly recommend that Math 6A be completed prior to attempting this course.

### ASSESSMENT:

Section	15%
Homework	25%
Midterm	25%
Final Exam	35%

- **Curve or No Curve?** There will not be a curve and your final score will not be rounded. The cutoffs between letter grades, which is based on the percentage of the total weighted points accumulated in the class will follow a standard letter grade brake down (seen below). Remember, these percentages are based on the **weighted** point totals.

Letter Grade	Percentage
A+	100
A	99.99 – 93.00
A–	92.99 – 90.00
B+	89.99 – 87.00
B	86.99 – 83.00
B–	82.99 – 80.00
C+	79.99 – 77.00
C	76.99 – 73.00
C–	72.99 – 70.00
D+	69.99 – 67.00
D	66.99 – 63.00
D–	62.99 – 60.00
F	59.99 – 0

\* Note: As the instructor I reserve the right to adjust the cutoff points, under a no-harm structure, if necessary.

## SECTION

- Each week there will be one discussion section supervised by a TA and conducted in-person (unless otherwise directed by the University). In these sections, your TA will review recent material along with homework questions (so bring questions!). The discussion sections are for the benefit of the student, and are intended to facilitate students acquiring additional practice, examples, and explication of the material.
- Section attendance and participation are required. A student must be present for the entire section period in order to receive credit for the section.
- These discussion sections are key to making sure you are keeping up with the course material and provide an opportunity to engage with your TA in a constructive problem solving dialog. Furthermore, section attendance and participation will make up 15% of your overall grade, so it is also important to your grade that you attend and do well. There are no make-up sections, barring absences that would qualify as University protected events: e.g., you test positive for COVID, or perhaps you are traveling for the University as a student athlete. Otherwise, you must be present for the entire section to receive credit for that day.

### Assignments and Homework Workflow:

- i Given the weekly topic schedule, a reading suggestion based on the book chapters is given for that week on Canvas. It's important to understand the concepts well before attempting the homework.
- ii Homework will be released on Monday mornings, starting in week 2. You have until Sunday 11:59pm to submit the first attempt on Gradescope. This initial attempt won't count toward your homework point total, but is required. It is important to attempt with your honest level of understanding. **Do not expect the instruction team to go over a homework problem for you on that first "pass". You can bring in your work and we can tell you if you are on the right track or not. The solution is coming in the next step.**
- iii After the submission deadline, a solution will be posted. There is a standard rubric where you award yourself 2 points for each part of a question you got correct, 1 point for minor errors, and 0 points for major pitfalls or incomplete work. You have one week to correct your answers.

To help with this, during sections TAs will solve selected problems (or portions of problems) from the homework and the quizzes, and you are strongly encouraged to visit office hours to get explanation for the parts of the homework problems that you failed to do. You are expected to self-grade your first attempt and correct/re-attempt the homework problems for up to 100%. Redo any problem in its entirety for which you missed more than half the points and just answer the parts of question(s) you missed if your score on that problem is above 50%). The deadline for the revision is the following Sunday at 11:59pm (after the solution is released). It is in your best interest to have a structure and not drag your work until it overlaps with other material.

- iv The attempts should be detailed and show you are connecting the problems to the lectures.
- v Remember! Sunday is the deadline for the new homework and the old one (don't let everything to the last minute!).

**Late Assignments** For the homework assignments, you get two *free* late initial submission and two *free* late revisions without penalty. This policy applies only to homework assignments, and not to quizzes, exams, or any other potential assignments. There is no need to notify the instructor or TAs to use these late allowances; simply submit the late assignment within 48 Hours of the original deadline.

**EXAMS: Exams are in-person, synchronous events.** The midterm and final exam dates are listed below. Note: the final exam **will** be administered on the scheduled final exam date, as designated on GOLD. It is your responsibility to ensure that you are available on the designated days and times for the midterm and final exam.

**Exam Schedule** The midterm date is tentative and based on course progression; slight changes to the exam schedule may be necessary.

- The midterm exam will take place on **Wednesday, February 12<sup>th</sup> (Week 6)**
- The final exam will take place on **Saturday, March 15<sup>th</sup>, 12-3PM**, Location : **TBD**

**Exam Makeup Policy.** Any foreseeable reason for missing an exam must be reported to the instructor as soon as possible. In the case that you must miss an exam for a (documented) University protected reason, the instructor must be notified at least a week in advance.

### **Schedule changes**

The Instructor reserves the right to make policy and course changes to the syllabus at any time with advance notice to students.

The schedule is subject to change depending on the progress of the course.

**Academic Dishonesty** This will be dealt with severely. Among the prohibited activities are:

- Collaborating or cheating on exams. Students shown to have cheated on an exam will receive a grade of "0" for that exam and an 'F' for the class.
- Attempting to misuse any course-related computer system or tampering with another student's coursework.
- Fabricating an excuse for absence.

**Academic Integrity.** Cheating, plagiarism, and collusion in dishonest activities will not be tolerated. All work you submit to fulfill course requirements must represent your own efforts. Labs are individual assignments. It is your responsibility to know the campus rules about academic misconduct. Please be familiar with Academic Integrity at UCSB.

**Plagiarism:** Plagiarism is the act of presenting someone else's work as one's own. Examples include: Copying and pasting text from websites and presenting it as your own original work. Copying and pasting text from printed sources (including books, encyclopedias or newspapers) and presenting it as your own original work. Using another student's work and claiming it as your own original work. Cheating: Cheating is the act of pretending (or helping others to pretend) to have mastered course material through misrepresentation. Examples include: Copying in whole or in part from another student's test or paper. Allowing another student to copy from your test or assignment. Stealing, buying or otherwise obtaining all or part of a test before it is administered. Selling or giving away all or part of a test before it is administered.

**Intellectual Property – Course Materials** All course materials (class lectures and discussions, handouts, examinations, web materials) and the intellectual content of the course itself are protected by United States Federal Copyright Law and the California Civil Code. UC Policy 102.23 expressly prohibits students (and all other persons) from recording lectures or discussions and from distributing or selling course materials without the prior written permission of the instructor. (See <http://policy.ucop.edu/doc/2710530/PACAOS-100>). Students are permitted to make notes solely for their own private educational use. Exceptions to accommodate students with disabilities may be granted with appropriate documentation.

### **Accommodation for Students with Learning & Physical Differences**

I am dedicated to facilitating students with learning and physical differences. Please see me for support for this and other classes. Providing academic accommodations to students with disabilities is a shared responsibility of the campus. Students with disabilities are responsible for ensuring that the Disabled Students Program (DSP) (<http://dsp.sa.ucsb.edu>) is aware of their disabilities and for providing DSP with appropriate documentation. DSP is located at 2120 Student Resource Building and serves as the campus liaison regarding issues and regulations related to students with disabilities. The DSP staff works in an advisory capacity with a variety of campus departments to ensure that equal access is provided to all disabled students.

### **LGBTQ+ Syllabus Statement**

Gender and Sex Discrimination Policy and Student Support: Under Title IX, university students are protected from harassment and discrimination based on gender and sex. If a student feels uncomfortable or in need of support at any time related to their gender, sex, and/or sexual orientation, please contact your TA and/or course instructor immediately. If a student would like to disclose information related to pronouns, name changes, or identities, we encourage you to do so. UCSB's Resource Center for Sexual and Gender Diversity on the 3rd floor of the Student Resource Building is also available to advocate and be of and support to students.

### **Non-discrimination Policy**

All students have the right to learn and participate in a classroom environment free of intimidation, harassment, and discrimination based on characteristics such as gender, race, age, sexual orientation, disability, religious or political beliefs and affiliations. I will address any related issues that surface immediately; please help me to cultivate a positive classroom environment by communicating any concerns that you have.

**Managing Stress.** Personal concerns such as stress, anxiety, relationships, depression, cultural differences, can interfere with the ability of students to succeed and thrive. For resources, contact UCSB Counseling & Psychological Services (CAPS).

### **MENTAL HEALTH SERVICES**

If you are experiencing any difficulties meeting class requirements, or any difficulties in your personal life, please contact Counseling and Psychological Services. For information, please call (805-893-4411) or visit their web site ([www.counseling.ucsb.edu](http://www.counseling.ucsb.edu)).

### **STATEMENT ON SEXUAL HARASSMENT**

“UCSB does not tolerate sexual harassment/sexual violence, which is prohibited by University policy and state and federal law. The Title IX Compliance and Sexual Harassment Policy Compliance Office (TIX/SHPC) provides assistance in preventing and resolving and investigating complaints of sexual harassment/sexual violence and gender discrimination.” (<https://oeosh.ucsb.edu/titleix/>)