

Syllabus Stats 141XP Winter 2025 L3&4

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Some of the content has been provided/authored by Professor Esfandiari.

Statistics Consulting

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Lecture 3: MWF, Noon-12:50pm, MS 5128

Lecture 4: MWF, 1:00-1:50pm, MS 5128

Note that Mondays and Wednesdays are Lecture, Fridays are Discussion with TA

Office Hours: Wednesday 5:15pm, and also by appointment

Most Importantly

Everything is subject to change — all natural phenomenon is a function of time. Details concerning Assignments, Projects, etc., and their due dates, can be found on our Canvas (BruinLearn) course website. Please make a habit of checking BruinLearn → Modules and Campuswire regularly.

This is especially true with this course. Our lecture content is subject to (sometimes last minute) change, depending on availability of guest speakers, client projects, and general pace of our course.

General

The first 1-6 weeks will be dedicated to reviewing/introducing some important statistical techniques, teaming, and literature review. The second half of the quarter will be mostly dedicated to working on your final projects.

Goals

The overall goal of this capstone course is to help graduating seniors in statistics . . .

- 1) Discuss communication skills needed by a statistical consultant as well as ethics of statistical consulting.
- 2) Review, analyze, and synthesize the statistical knowledge and data analysis strategies that will be used in your final projects.
- 3) Develop the expertise needed for using statistics to solve real world problems and reporting the results to clients.

Some Learning Outcomes

- Describe the consequences of Type I & Type II errors
- Calculate statistical test power
- Apply and interpret statistical test power to real world problems & simulations
- Formulate statistical models
- Apply software to solve statistical models
- Appraise statistical models
- Collaborate with team
- Interface with real clients
- Interpret & explain research results
- Present results

Technology

You are free to select whatever software you like for your projects; however, R is preferred.

During week 1, we will be playing a little with G*Power. You can access the software here: <https://stats.idre.ucla.edu/other/gpower/> Please have this installed by the start of this quarter.

Textbooks

Required:

None.

Campuswire

We will be using Campuswire as our course forum

Website

Our class business will be conducted through the BruinLearn learning management system. I recommend you log in immediately. All homework and announcements will be made through this site, so you should check it at least twice daily.

Homework

You will upload your homework to BruinLearn Here are some formatting requirements:

- 1) Documents must be PDF. Word files not accepted. You should make sure you can convert your word processor documents to pdf. Video files should be in a common format, e.g., .mov, .mp4, .avi, . . .
- 2) Documents **must** include your names and student IDs in the very first line (at the top of the first page). For any homework assignment, your grade may be determined on only a subset of problems.

No-Excuse Policy

Homework and labs must be submitted on time in readable format.

Assessment of Statistical Literacy

Friday, Week 6, in Section. Closed everything. One page of notes.

Final Exam

Team Project. Details TBA

Asynchronous Video Content

Required:

- Online, either via BruinLearn or YouTube.

Be prepared to be quizzed in class on video content.

Students are responsible for watching all A/V Series content for the course.

Grading

The grading for the capstone course (140XP and 141XP) is cumulative and depends on the performance in both courses. The breakdown of points is as follows:

- Stats 140XP – 35%
- Reflection Paper on ASA Ethical Guidelines – 3%
- Assessment of Statistical Literacy – 21%
- Team Ethics Video – 3%
- Attendance & Collaboration – 2%
- Three Team Teaching Videos – 6%
- Final Project – 30%

Classroom Environment

In this class, I want each of you to feel welcome to contribute to class discussions. Doing so requires a thoughtful environment in which each of us participates both as listener and speaker. By attending class, you are agreeing to listen with respect to the speaker, and choose your words so that they reflect respect for your classmates. As listeners, we agree to give the speaker the benefit of the doubt by assuming that their words are not meant to cause insult.

Please feel free to send emails about your concerns any time and visit during office hours. If you need help badly, please email me to set up an appointment. Remember, questions about content should be sent to our Campuswire site.

Academic Integrity

As a student and member of the University community, you are here to get an education and are, therefore, expected to demonstrate integrity in your academic endeavors. All students must uphold University of California Standards of Student Conduct as administered by the Office of the Dean of Students. Students are subject to disciplinary action for several types of misconduct, including but not limited to: cheating, multiple submissions, plagiarism, prohibited collaboration, facilitating academic dishonesty, or knowingly furnishing false information. You may have assignments or projects in which you work with a partner or with a group. For example, you are welcome, and even encouraged, to work with others to solve homework problems. Even though you are working together, the assignment you submit for a grade must be **IN YOUR OWN WORDS**, unless you receive specific instructions to the contrary. For more information about academic integrity, please consult

- <https://www.deanofstudents.ucla.edu/Student-Conduct#>
- <https://www.senate.ucla.edu/regulations/chapter1#bootstrap-fieldgroup-accordion-item--section-4-grades-3>

Collaboration Policy For Homework, read and adhere to Level 1: <https://turing.bowdoin.edu/dept/collab.php>

Medical and Other Issues

There are no “make-up” opportunities in this class unless you are able to demonstrate a legitimate and verifiable medical emergency (i.e., doctor’s note with a signature from a California Licensed Medical Professional, no exceptions whatsoever) or legal excuse (e.g., a signed letter from your employer, local police report, athletic department). Please contact me directly and we will do our best to accommodate.

Disabilities

Students with disabilities are welcome and encouraged to seek accommodation. Students needing academic accommodations based on a disability should contact the Center for Accessible Education (CAE) at (310)825-1501 or in person at Murphy Hall A255. In order to ensure accommodations, students need to contact the CAE within the first two weeks of the term.

Other student resources

Title IX Resources UCLA prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, there are a variety of resources to assist you.

- **CONFIDENTIAL RESOURCES:** You can receive confidential support and advocacy at the CARE Advocacy Office for Sexual and Gender-Based Violence, 1st Floor Wooden Center West, CAREadvocate@careprogram.ucla.edu, (310) 206-2465. Counseling and Psychological Services (CAPS) also provides confidential counseling to all students and can be reached 24/7 at (310) 825-0768.
- **NON-CONFIDENTIAL RESOURCES:** You can also report sexual violence or sexual harassment directly to the University’s Title IX Coordinator, 2241 Murphy Hall, titleix@conet.ucla.edu, (310) 206-3417. Reports to law enforcement can be made to UCPD at (310) 825-1491. These offices may be required to pursue an official investigation.

Psychological Health, Well-Being and Resilience UCLA is renowned for academic excellence, and yet we know that many students feel overwhelmed at times by demands to succeed academically, socially and personally. Our campus community is committed to helping all students thrive, learn to cope with stress, and build resilience. Remember, self-care is a skill that is critical to your long-term success. Here are some of the many resources available at UCLA to support you:

- Counseling and Psychological Services (CAPS): <https://www.counseling.ucla.edu/> Provides counseling and other psychological/mental health services to students. Walk-in hours are Monday-Thursday 8am-4:30pm and Friday 9am-4:30pm in John Wooden Center West. Crisis counseling is also available 24 hours/day at (310) 825-0768.
- Ashe Student Health and Wellness Center: <http://www.studenthealth.ucla.edu> Provides high quality and accessible ambulatory healthcare and education by caring professionals to support the academic success and personal development of all UCLA students.
- Healthy Campus Initiative (HCI): <https://healthy.ucla.edu> Provides links to a wide variety of resources for enhancing physical and psychological well-being, positive social interactions, healthy sleep, healthy eating, healthy physical activity and more.
- Campus and Student Resilience: <https://www.resilience.ucla.edu/> Provides programs to promote resilience and trains students to help support their peers.
- UCLA Recreation: <https://www.recreation.ucla.edu/> Offers a broad array of services and programs including fitness, yoga, dance, martial arts, meditation, sports, and much more.
- Equity, Diversity and Inclusion: <https://equity.ucla.edu/> Committed to providing an equal learning, working and living environment at UCLA and supports a range of programs to promote these goals campus-wide.
- UCLA GRIT Coaching Program: <https://www.grit.ucla.edu/> GRIT stands for Guidance, Resilience, Integrity and Transformation. In this program, UCLA students receive individualized support from trained peer coaches to manage stress, fostering positive social connections, set goals, and navigate campus resources.

Resources for Students Dealing with Financial Stress Life is unpredictable and can create financial emergencies. If you find yourself in this situation, please seek assistance:

- Bruin Shelter: <http://www.bruinshelter.org/> Provides a safe, supportive environment for fellow college students experiencing homelessness by fostering a collaborative effort between universities, community-based organizations, and service providers.
- The CPO Food Shelter: <http://www.cpo.ucla.edu/cpo/foodcloset/> Provides free food for any UCLA student who may be experiencing hunger and/or struggling to attain food due to financial hardships.

Course Content – Subject to Change

There will be a test at the end of week five. This test will be given in section and the objective is to ascertain that you have developed the expertise to interpret statistical results that are presented in the forms of tables or plots within context for a statistical and non-statistical audience. This will count for 16% of your final grade.

Week 1	Topics: Ethics – Readings
Week 2	Topics: Power Analysis, logistic regression. – Readings
Week 3	Topics: Multinomial regression, Ordinal Regression. – Readings
Week 4	Topics: Random intercepts / effects. – Readings

Week 5	Topics: Review
Week 6	Final Projects Assigned. Friday, Assessment of Statistical Literacy
Week 7	Final Project
Week 8	Final Project
Week 9	Final Project
Week 10	Final Project. Client Presentations.

Schedule

Week 0	2025-01-02	Thursday	NO CLASS
	2025-01-03	Friday	NO CLASS
Week 1	2025-01-06	Monday	Lecture
	2025-01-07	Tuesday	
	2025-01-08	Wednesday	Lecture
	2025-01-09	Thursday	
	2025-01-10	Friday	Discussion
Week 2	2025-01-13	Monday	Lecture
	2025-01-14	Tuesday	
	2025-01-15	Wednesday	Lecture
	2025-01-16	Thursday	
	2025-01-17	Friday	Discussion
Week 3	2025-01-20	Monday	NO CLASS — Dr. MLK Day
	2025-01-21	Tuesday	
	2025-01-22	Wednesday	Lecture
	2025-01-23	Thursday	
	2025-01-24	Friday	Discussion
Week 4	2025-01-27	Monday	Lecture
	2025-01-28	Tuesday	
	2025-01-29	Wednesday	Lecture
	2025-01-30	Thursday	
	2025-01-31	Friday	Discussion
Week 5	2025-02-03	Monday	Lecture
	2025-02-04	Tuesday	
	2025-02-05	Wednesday	Lecture
	2025-02-06	Thursday	
	2025-02-07	Friday	Discussion
Week 6	2025-02-10	Monday	Lecture
	2025-02-11	Tuesday	
	2025-02-12	Wednesday	Lecture
	2025-02-13	Thursday	
	2025-02-14	Friday	Discussion — TBD
Week 7	2025-02-17	Monday	NO CLASS — Presidents' Day
	2025-02-18	Tuesday	
	2025-02-19	Wednesday	Lecture
	2025-02-20	Thursday	

	2025-02-21	Friday	Discussion — TBD
Week 8	2025-02-24	Monday	Lecture
	2025-02-25	Tuesday	
	2025-02-26	Wednesday	Lecture
	2025-02-27	Thursday	
	2025-02-28	Friday	Discussion — TBD
Week 9	2025-03-03	Monday	Lecture
	2025-03-04	Tuesday	
	2025-03-05	Wednesday	Lecture
	2025-03-06	Thursday	
	2025-03-07	Friday	Discussion — TBD
Week 10	2025-03-10	Monday	Lecture
	2025-03-11	Tuesday	
	2025-03-12	Wednesday	Lecture
	2025-03-13	Thursday	
	2025-03-14	Friday	Discussion — TBD
Finals — TBD			
