Econometrics A
Econ 120A, Spring 2022

The information below should be considered extremely tentative, and will likely change depending on our pace and situation through the quarter. I reserve the right to modify this information as needed. Please check the syllabus and Canvas announcements regularly for updates.

Course web page is available at http://canvas.ucsd.edu/. It will include information relevant to the course, such as syllabus, announcement, lecture slides, and more. **You should check this page regularly**.

Prerequisites: 1. Econ1 (Principles of Microeconomics)
and 2. Math 10C (Calculus III) or Math 20C (Calculus & Analyt Geom/Sci& Engnr)
or Math 31BH (Honors Multivariable Calculus)

Lectures: MWF @ Center Hall 109 1) Section A: 1:00 – 1:50 pm
2) Section B: 2:00 – 2:50 pm

Instructor: Dr. Munpyung O

- Office hours: 9:00 – 10:00 am on Wednesdays and by appointment
- Office: Economics building 109
- Zoom link: https://ucsd.zoom.us/j/6571145643.
- e-mail: m1o@ucsd.edu

  Please use your **UCSD email** and include "**Econ 120A-A**" or "**Econ 120A-B**" in the title of your email.

TAs, Readers, and UIAs

Section A (1:00 pm class)

- TAs: Hall, Zackery, z1hall@ucsd.edu and Chartterjee, Ishani, ischatte@ucsd.edu
- Reader: Cantillo Cleves, Santiago
- UIA: Khanna, Amol, a2khanna@ucsd.edu, https://ucsd.zoom.us/j/93950777109

Section B (2:00 pm class)

- TAs: Lee, Youngju, yol006@ucsd.edu and Lin Chen, chl029@ucsd.edu.
- UIA: Wen, Zhaoyi (Gloria), zwen@ucsd.edu, https://ucsd.zoom.us/j/2035335642

TA's discussion sections: The first discussion sessions will take place in the second week.

- Section A: 3:00 – 3:50 pm, 4:00 – 4:50 pm on Wednesdays @Sequoyah Hall 147,
  and 2:00 – 2:50 pm @Center Hall 217B on Friday.
- Section B: 5:00 – 5:50 pm, 6:00 – 6:50 pm on Wednesdays @Sequoyah Hall 147,
  and 3:00 – 3:50 pm @Center Hall 217B on Friday.

Office hours (Section A):

1) Wednesday	9:00 - 10:00 am	Dr. O	@ Economics building (Econ) 109
2) Thursday	10:00 - 11:00 am	Hall, Zackery	@ SH 236
3) Saturday	10:00 - 11:00 am	Khanna, Amol	@ https://ucsd.zoom.us/j/93950777109

Office hours (Section B):

1) Tuesday	4:00 - 5:00 pm	Lee, Youngju	@ SH 233
2) Wednesday	9:00 - 10:00 am	Dr. O	@ Econ 109
3) Thursday	1:30 - 2:30 pm	Lin Chen	@ SH 233
4) Saturday	11:00 - 12:00 am	Wen, Zhaoyi (Gloria)	@ https://ucsd.zoom.us/j/2035335642

Lectures, discussion sections, office hours: You are **strongly** recommended to attend TA's discussion sections since the TA will review material covered in class, and also introduce material not covered in class and go over practice problems, the kind of problems you may encounter on exams.

Use of course materials: Class material includes the video lecture recordings, lecture slides, the problem sets, the problem set solutions. They are all subject to copyright. They are designed for you and for you only. You cannot share them without permission with anyone outside of the course. If you need that permission please email me about it.

Required textbook: Anderson, Sweeney, Williams, Camm, Cochran, Fry, Ohlmann, *Essentials of Statistics for Business & Economics*, Cengage, 9th edition.

- Your digital course materials are provided by the UC San Diego Bookstore through Canvas and are free for the first two weeks of classes. After two weeks, your student account will be charged a special reduced price unless you opt out.

WebAssign: Digital platform for homework assignments.

- I will periodically assign homework throughout the course. You need to create an account or login to your account if you have it already. WebAssign is on Canvas, under "WebAssign" Modules.
- You will have several attempts (3 by default) to complete your homework assignments, so you will be able to achieve a 100% score if you put enough effort into it.
- There will be no extension for homework but the lowest assignment scores will be dropped.
- Complete all your homework assignments on your own. Remember homework is assigned to assist you in learning, and it provides a good check of your understanding of the statistical concepts taught in class.
- If you need any technical support, call the WebAssign support team @ 800-354-9706
- I have posted several useful WebAssign links in the WebAssign module.

Exams: It is the student's responsibility to create a schedule that does not have any time conflicts.

1. Midterm 1: in-class test on Wednesday, April 20.
2. Midterm 2: in-class test on Monday, May 16.
3. Final exam: Section A (1:00 pm class): 11:30 am - 2:30 pm on Thursday, June 9.
   Section B (2:00 pm class): 3:00 - 6:00 pm on Friday, June 10.

- All tests are cumulative (comprehensive) test.
- You must take all the tests in your registered section.

Makeup exams: Make-up examinations will be given only under very unusual circumstances and only if the student provides official written notification to the instructor no less than two weeks prior to the missed test. Students who miss a test without a **justifiable** and **verifiable** reason, will most likely fail the course.exception!

Grades: The overall score will be computed as follows:

- Homework: 7%
- Midterm 1: 20%
- Midterm 2: 28%
- Final exam: 45%

There is no opportunity in this course to do "extra credit" work. Your grade will be determined solely by homework scores and the test scores. The overall course grade will be curved. **I reserve the right to modify these weights as needed during the quarter.**

Useful links:

- Digital Learning: https://keeplearning.ucsd.edu
- Return to Learn: https://returntolearn.ucsd.edu/
- Ed Tech support: Students needing technical assistance should contact servicedesk@ucsd.edu or 858-246-4357.
- COVID-19 Information: https://vcsa.ucsd.edu/news/covid-19-info.html

Disability: If you have a documented disability, please bring your documentation to me as soon as possible so that I can make suitable accommodations for you. If you believe that you have a disability and desire accommodation, please register with the Office for Students with Disabilities (OSD).

Class conduct: Each student is expected to contribute and help to maintain a positive classroom environment conducive to learning.

Academic Integrity: Any student found responsible for violating UCSD's academic integrity policy will earn a failing grade for the course. In addition, the Council of Deans of Student Affairs will impose a disciplinary penalty. You can find information on the university's policy on academic integrity at this website: http://academicintegrity.ucsd.edu

General comments

- Even if I don't explicitly assign reading from the text, it is a good idea to read the chapter before coming to class in order to have some understanding of the concepts to be presented.
- ***This class moves rapidly***. *Cramming* is not an effective way to learn this material. A student who keeps up with the topics as they presented will find the course much more enjoyable and will master the concepts more quickly.
- **Attend all lectures on time**. You are responsible for any information given during lectures.
- Please do use my office hours or TAs office hours for everything related to the content of the course. If you have doubts about the materials, do not wait until a few hours before the exam.
- Students are encouraged to ask questions in class. You've probably heard this before, but if you have a question, chances are that others in the class have the same question.
- Finally, ask questions before, during, or after class or come to my office if you having any trouble with the course material. Remember the goal of education is to learn, not to suffer!

Course content and schedule (Changes, if any, will be announced.)

The following course schedule should be considered tentative, and will likely change depending on our pace through the quarter. I reserve the right to modify this schedule as needed during the quarter.

1. (Week 1 - 2) Descriptive Statistics: Chapter 1 - 3
    - Introduction: Statistical decision making
    - Population vs Sample; Parameters vs Statistics
    - Data collection and Random sampling
    - Data description: Organizing, summarizing, and presenting data

2. (Week 3 - 5) Random variables and distributions: Chapter 4 - 6
    - Data and randomness
    - Random variable
    - Computing probabilities
    - Probability distribution - Statistical characterization of random variable
    - Functions of a random variable: Use of random variables

3. (Week 6 - 8) Inferential statistics: Chapter 7 - 9
    - Sampling
    - Sampling distribution and sample statistics
    - Law of Large Numbers, convergence in distribution and Central Limit Theorem.
    - Estimation
    - Hypothesis testing

4. (Week 9 - 10) Two or more random variables: Chapter 3.5, 5.4, part of Chapter 10
    - Joint distributions, Conditional expectation
    - Relationship among random variables: Causality, Covariance, Correlation
    * Testing differences between multiple statistics
    * Test for independence

I reserve the right to add and/or subtract topics as the course progresses. Not all topics will be covered in the same detail. Time constraints may cause some topics to be omitted.