

Introduction to Statistical Computing in Clinical Research

BIOSTAT 212, Summer 2021



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Course Objectives

Foundations of clinical research

- Organization and workflow
- Reproducible research
- Visualizing and presenting results

Course Objectives

Using STATA for

- Data management
- Basic statistical and epidemiologic analysis
- Reproducible reports
- Publication quality tables and figures

7 Week Course: July 20th to August 31st

7 Pre-Recorded Lectures

- on your own, prior to large group

7 Live Large Group Discussions (via Zoom)

- Tuesdays 1:15 – 2:15PM (all times in PDT)

7 Computer labs (in-person option tentative)

- Tuesdays 2:30 – 4:00PM

5 Assignments (75%)

- 4 shorter assignments (12.5% each)
- 1 double assignment/midterm (25%) – **Due August 17th**

Final project (25%)

- **Due September 7th**

Lecture Topics

Format:

Pre-recorded lectures (content)

Large Group Discussions (Q/A)

- 1) Introduction to Statistical Computing
- 2) Data Exploration + Project Organization
- 3) Data Management and Cleaning Part 1
- 4) Data Cleaning Part 2
- 5) Data Visualization
- 6) Basic Commands for Statistics + Tables
- 7) Intro to Epi Concepts + Reproducible Documents

Computer labs

- Time to work on your assignments
- Time to ask questions and get help
- Delivered via Zoom
 - Tentatively an in-person option at Mission Hall

Office Hours

Fridays 8:30 – 10:00AM PDT via Zoom

July 23rd to September 3rd

Link will be posted on the CLE

BIOSTAT 212, Summer 2021 Schedule

Week	Date	Time (PST)	Description	Homework Due	Homework Assigned
1	7/20	1:15-2:15PM	Large Group Discussion (watch pre-recorded lecture beforehand on your own time)	None	HW #1
	7/20	2:30-4:00PM	Lab		
	7/23	8:30-10AM	Office Hours		
2	7/27	1:15-2:15PM	Large Group Discussion (watch pre-recorded lecture beforehand on your own time)	HW #1 due @ 1:00 PM	HW #2
	7/27	2:30-4:00PM	Lab		
	7/30	8:30-10AM	Office Hours		
3	8/3	1:15-2:15PM	Large Group Discussion (watch pre-recorded lecture beforehand on your own time)	HW #2 due @ 1:00 PM	Midterm Assignment
	8/3	2:30-4:00PM	Lab		
	8/6	8:30-10AM	Office Hours		
4	8/10	1:15-2:15PM	Large Group Discussion (watch pre-recorded lecture beforehand on your own time)	None	None
	8/10	2:30-4:00PM	Lab		
	8/13	8:30-10AM	Office Hours		
5	8/17	1:15-2:15PM	Large Group Discussion (watch pre-recorded lecture beforehand on your own time)	Midterm due @ 1:00 PM	HW #3
	8/17	2:30-4:00PM	Lab		
	8/20	8:30-10AM	Office Hours		
6	8/24	1:15-2:15PM	Large Group Discussion (watch pre-recorded lecture beforehand on your own time)	HW #3 due @ 1:00 PM	HW #4
	8/24	2:30-4:00PM	Lab		
	8/27	8:30-10AM	Office Hours		
7	8/31	1:15-2:15PM	Large Group Discussion (watch pre-recorded lecture beforehand on your own time)	HW #4 due @ 1:00 PM	Final*
	8/31	2:30-4:00PM	Lab		
	9/3	8:30-10AM	Office Hours		

*The final is due on September 7th @ 1:00 PM PST. Details for the final will be posted no later than 8/24 to allow extra time for those that wish to start early.

- Assignments due 1 week after assigned **by 1:00 PM**
 - 2 weeks for midterm
- Late assignments will receive only half credit (max.)
- OK to work on your assignments with classmates but you **MUST** turn in your own work

<https://courses.ucsf.edu/course/view.php?id=8595>

Course Website

- Pre-recorded lectures
 - Available typically ~ 1 week in advance
 - Thank you to Amanda Irish for creating and recording the lecture
- Zoom links
 - Any LIVE sessions (including labs & office hours) will NOT be recorded!
- Resources on the course website
 - Stata commands
 - External resources/cheat sheets



Training In Clinical Research

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- Overall Schedule
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Introduction to Statistical Computing in Clinical Research

(Click for Course Description)

BIOSTAT 212 Summer 2021 (1 unit)

Course Director: Crystal Langlais, MPH
Department of Epidemiology and Biostatistics

POST QUESTIONS HERE!!!

- Announcements
- BIOSTAT 212 Forum

Settings for forum preferences and notification preferences:
<https://ucsflibrary.zendesk.com/hc/en-us/articles/360020570094-View-and-Edit-CLE-Preferences>



- STATA 16 or 17 supported in course work
- Can access STATA via RAE (formally MyResearch) if necessary (can be unstable, setup is tricky for Mac users)
- IC okay for this course, but limited memory for real projects
- Recommend SE or MP
- <https://www.stata.com/order/new/edu/gradplans/student-pricing/>
- <https://it.ucsf.edu/directory/team/it-service-desk>
- **Please be ready to use STATA for the first lab session!**



To pass the class:

- Turn in all 5 assignments
- Satisfactory final project
- Attendance is NOT required (but highly encouraged!)

Grading

- Letter grades: Standard cutoffs

• 90-100%	A
• 80-89%	B
• 70-79%	C
• 60-69%	D
• <60% or Course Requirements not met:	F

- Satisfactory/Unsatisfactory

• >80%	Satisfactory
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- **Late assignments/finals will receive a maximum of half credit**

- TICR Grading policy

- http://www.epibiostat.ucsf.edu/courses/masters/grading_policy.html

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