

# CAAP STATISTICS

Summer 2022

---

**Instructor:** Sowon Jeong

**TA:** Tala Germani

**Email:** sowonjeong@uchicago.edu

**Email:** germani@uchicago.edu

---

**Schedule:** Mon, Tue, Thu, Fri 11:00 - 12:20 pm in Cobb 430

## Office Hours:

Office hours will be held via Zoom. In-person OH will be made upon request.

**Sowon Jeong:** Mon, Fri 1:00pm - 2:00pm and by appointment

**Tala Germani:** Tue, Thu 1:00pm - 2:00pm and by appointment

## Course Description:

This course aims to introduce students to statistical methods and data analysis using statistical software, widely applicable to a wide range of studies. We will be motivated by practical questions from biological, physical, and social sciences. The course aims to nurture the intuition to understand real-life data and, at the same time, to explain the data based on suitable statistical theory. Students will learn to take a question such as

- \* Does this medicine effectively prevent a cold?
- \* Does this commercial bring more customers to the store?

and will be able to convert these questions into accessible statistical hypotheses:

- \* Is the difference in the proportion of having a cold “significant” between the groups?
- \* Does the number of customers visiting the store “significantly” increase after the commercial?

**Objective** 1) Be familiar with basic statistics concept

2) Gain reasonable intuition about data analysis

**Course Requirement:** No prerequisite required. *Make sure to bring your own laptop for R Session*

**Textbook:** OpenIntro Statistics (<https://www.openintro.org/book/os/>)

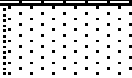
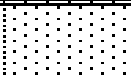
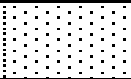
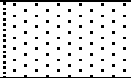
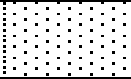
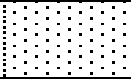
**Quiz:** 2 Quizzes (Tentative)

**Grading:** Class Participation **50%**, Quiz **10%** (Each), Project **30%**

# [Course Schedule]

CAAP Statistics, Summer 2022

Exam/ Review	Lecture	Lab
-----------------	---------	-----

	Monday	Tuesday	Wednesday	Thursday	Friday
Wk1	4-Jul 	5-Jul Lec 01	6-Jul 	7-Jul Lec 02	8-Jul Lec 03
	<b>Independence Day</b>	Intro to Course	<b>No class</b>	Intro to Data Chapter 1	Intro to R R Session 1
Wk2	11-Jul Lec 04	12-Jul Lec 05	13-Jul 	14-Jul Lec 06	15-Jul Lec 07
	Summarizing Data Chapter 2	R Session 2 R Markdown	<b>No class</b>	Probability Chapter 3	R Session 3 Importing Data
Wk3	18-Jul Lec 08	19-Jul Lec 09	20-Jul 	21-Jul Lec 10	22-Jul Lec 11
	Distribution Chapter 4	R Session 4 Visualization	<b>No class</b>	Intro to Project <b>Quiz 1</b>	Intro to Inference Chapter 5
Wk4	25-Jul Lec 12	26-Jul Lec 13	27-Jul 	28-Jul Lec 14	29-Jul Lec 15
	R session 5 EDA	Inference on num data Chapter 7	<b>No class</b>	R session 6 <b>Project discussion</b>	Inference on cat data Chapter 6
Wk5	1-Aug Lec 16	2-Aug Lec 17	3-Aug 	4-Aug Lec 18	5-Aug Lec 19
	R Session 7 <b>Project discussion</b>	Linear Regression Chapter 8	<b>No class</b>	R session 8 <b>Project discussion</b>	Linear Regression <b>Project Due</b>
Wk6	8-Aug Lec 20	9-Aug Lec 21	10-Aug 	11-Aug Lec 22	12-Aug Lec 23
	<b>Presentation Day</b>	<b>Final Review Feedback Q &amp; A</b>	<b>No class</b>	<b>Quiz 2</b>	<b>Program Ends</b>