

(IS2204-01) Statistics for Social Science

Kyung Hee University
Spring 2023
Tue/Thu. 10:30-11:45am

YeonKyung Jeong

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Office hours: By appointment only

Overview

This course is designed to introduce undergraduate students to basic statistics for social sciences. This course will cover core topics including descriptive statistics, probability, hypothesis testing, and linear models. Students will also work with real datasets through the particulars of statistical software. Students who successfully complete this course will:

- 1) understand basic quantitative methods and statistical techniques used in social sciences;
- 2) be able to interpret and write about statistical results;
- 3) and be able to conduct basic quantitative analyses using Stata.

Requirements

- Attendance (10%): Attendance is mandatory. Three absences are allowed without penalty. Students with more than three absences will get ZERO point for attendance.
- Assignments (30%): 3 assignments, 10% each.
- Midterm exam (30%): Thu, April 27
- Final exam (30%): Tue, June 20

Course Materials

- Diez, David M., Christopher D. Barr, and Mine Cetinkaya-Rundel. *OpenIntro Statistics 4th Edition*. Boston, MA, USA. 2019. The book can be downloaded as a free PDF at: <https://leanpub.com/os> (select \$0 for free download)
- Introductory materials on Stata will be provided when needed.
- Stata is available in the computer lab. If you would like to purchase Stata for personal use, consider 6-month student pricing (<https://www.stata.com/order/dl/>), which costs \$48USD/6mnths.

Exam Policy

The in-class midterm exam is scheduled for Thursday, April 27th. The in-class final exam is scheduled for Tuesday, June 20th. The exam dates are firm. The exams are closed book and closed note. No electronic devices/calculator are allowed during the exam. There are no make-up exams. If you miss one of the exams for a legitimate reason (e.g. medical emergency) **AND** when you let me know about your absence before missing the exam, your score on another exam that you could take will count double. I may require supporting documentation (e.g. a doctor's note). Otherwise, you will fail the course.

Assignment Policy

Assignments will be uploaded on e-campus approximately 1-2 weeks before the due date. Hard copies of assignments must be turned in **at the start of class on the due date** (Email submission will NOT be accepted). Turning an assignment in late without an agreed extension will result in the loss of 10 points (out of 100) every 24 hours that the assignment is late.

Course Schedule

(Week 1) Course overview

(Week 2) Summarizing data [OS Chs. 1-2]

(Week 3) Sampling principles and strategies [OS Ch.1.3]

(Week 4) Probability [OS Ch.3]

(Week 5) Distribution of random variables [OS Ch.4]

(Week 6) Foundations for inference (1) [OS Ch.5]

(Week 7) Foundations for inference (2) [OS Ch.5 (cont'd)]

(Week 8) **Midterm Exam: Thu, April 27**

(Week 9) Inference for categorical data [OS Ch.6]

(Week 10) Inference for numerical data (1) [OS Ch.7]

(Week 11) Inference for numerical data (2) [OS Ch.7 (cont'd)]

(Week 12) Introduction to linear regression (1) [OS Ch.8]

(Week 13) Introduction to linear regression (2) [OS Ch.8 (cont'd)]

(Week 14) **Tue, June 6: No Class (Memorial Day)**. Multiple regression [OS Ch.9]

(Week 15) Review session

(Week 16) **Final Exam: Tue, June 20**