

## SOC 380 Elements of Statistics and Data Analysis

Fall 2022, Class# 59510  
TTh 2:30-3:45, Fraser 106

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**Textbook:** “The Basic Practice of Statistics,” 5th ed., David S. Moore

There will be no textbook in KU Bookstore. You can purchase this book from on-line merchants at a much discounted price. “Student CD” is not required for this course. The 4th edition (or more expensive 6–9th) is also good. The contents of basic statistics are the same over the last several decades. The main updates in the recent editions are practice questions.

**Course Website:** <http://people.ku.edu/~chkim/Stat/>

(An ID and a password [they are different from your KU-ID] are required to open the restricted materials on the course website. Contact the instructor to acquire them.)

**Other Requirements:** (1) Calculator with a square root function key; (2) Access to a computer with R (R is an open-source program; You can install R-program in your own computer, downloading from <http://www.r-project.org/> at no cost); (3) Regular access to Canvas.

**Course Objectives:** This course will introduce you to basic procedures for analyzing quantitative sociological data, especially sample surveys. You will learn basic statistics ranging from descriptive statistics to bivariate regression and tests of means of two populations. This course is required of all sociology major students and provides a basis for further studies in statistics or sociology. This course necessitates knowledge of basic mathematical operations (addition and subtraction, multiplication and division, and squares and squares roots) as well as understanding of basic rules of algebra.

**Exams:** There will be three in-class examinations (100 points each). Examinations will be based entirely on topics covered in lectures. In-class examinations are non-cumulative; they cover only the material since the previous exam. All exams are “often-note-exams.” You can consult your own note in exams, but you cannot use the textbook or a carbon copy of someone else’s notes including lecture handouts. All students must take all of the exams. I do not give any make-up exams except for valid and documented medical, religious or very serious personal conflicts. If possible, you must discuss such issues with me BEFORE the exam date. If that is not possible, then you must come to see me in person within two weeks of the missed exam (unless physical illness prevents it). If no make-up exam is granted, then your grade for the missed exam is 0.

**Assignments:** There will be 11 homework assignments and each homework assignment is worth

20 points. However, only your best 10 homework scores will be counted (i.e., your lowest homework score will be dropped). Homework is therefore worth a total of 200 points. Assignments must be received in class no later than the dates indicated. One day late submission is accepted with 2 points penalty. The late submission is allowed until a week. The maximum late penalty is a 10 point. Students who miss assignments will not be able to make up the work.

**Evaluation** A total of 500 points is possible for the course. Final course grades will be determined according to the following scale:

Points	Grade	Total	Grade	Total	Grade
450 - 466	A- (3.7)	467 - 500	A (4.0)		
400 - 416	B- (2.7)	417 - 433	B (3.0)	434 - 449	B+ (3.3)
350 - 366	C- (1.7)	367 - 383	C (2.0)	384 - 399	C+ (2.3)
300 - 316	D- (0.7)	317 - 333	D (1.0)	334 - 349	D+ (1.3)

### **Course Policies**

**COVID-19:** We will follow all University protocols as for COVID-19. Wearing a mask is strongly recommended even when such requirement is lifted.

**Religious Holidays:** While I have attempted to construct the course schedule around religious holidays, I may have overlooked some. If you are unable to attend a class due to a religious holiday, please let me know in advance, and we can make other arrangements.

**Accommodations** I am available to discuss appropriate academic accommodations that you may require as a student with a disability. I will need documentation from the appropriate college office before making any changes. You will need to let me know as soon as possible, so that I can make arrangements.

**Academic Dishonesty:** I would like to believe that all students are in college because of a passion for learning and that they take courses - even general education requirements - for their own enlightenment. While this may describe many students in the class, I also understand that many students may be tempted to engage in plagiarism, cheating, etc. Academic dishonesty will not be tolerated.

**Classroom Etiquette:** There are several things that I find very distracting during class, talking while I and others are speaking and leaving early from class. If you need to leave early from class please talk to me before class. And don't forget turning off your cell-phone. Reading newspapers or checking cell-phones in class is considered as class disruption. Repeated class disruptions will result in lowering of your final grade or dismissal from the class.

**IT Gadgets:** The usage of cell-phones, tablets, laptops and any other IT gadgets (other than calculators) in class is strictly prohibited. Several academic studies have proven that using IT gadgets in class lower the learning efficiency. There is not much benefit in using IT gadgets for class learning. If you need to use a laptop for notetaking, get a permission from the instructor.

**Record Keeping:** Students are obliged to save their important emails such as class absence

notification in their email accounts and to keep other important records.

**Copy Rights:** Lectures, class handouts, and web materials are belong to the lecturer. Any commercial use, dissemination, or publication without authorization is strictly prohibited.

**Other Policies:** Please note that the University of Kansas has many policies regarding how classes will be conducted and expected behaviors of students. Even though these may not be explicitly listed here, this class will be run in accordance with KU policies.

## **Tentative Course Schedule**

### **I. Descriptive Statistics**

Week 1: Introduction, Chapter 1, and Summation sign and its rules

Week 2: Chapter 2: Descriptive Statistics

Week 3 & 4: Chapter 3: Normal Distribution (No class on Feb 3rd)

Week 5: Chapter 4: Correlation

Week 6: Chapter 5: Regression

### **II. Sampling Distribution**

Week 7: Chapter 8: Sampling

Week 8 & 9: Chapter 11: Sampling Distribution

Week 10: Spring Break Week 11: Chapters 14 and 15

### **III. Inferential Statistics**

Week 12: Chapter 17

Week 13: Chapter 18

Week 14: Chapter 19

Week 15: Chapters 19 and 20

Week 16: Chapters 6 and 21

Week 17: Wrap-up