

## SOC 510 Elements of Statistics and Data Analysis

Spring 2012, Class# 62224

TTh 1:00-2:15, Fraser 106

<u>Instructor:</u>	<u>Teaching Assistant</u>
ChangHwan Kim	Stefan Vogler
Fraser 707	Fraser 713
M 2:00–3:00 & Th 2:30–3:30	T 10:00–12:00 & W 10:00–12:00
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**Textbook:** “The Basic Practice of Statistics,” 5th ed., David S. Moore

**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 downloadable at no cost; SPSS is available on KU public computers; Stata is the instructor’s favorite); (3) Regular access to the Blackboard.

**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 two in-class examinations (100 points each) and the final exam (150 points). 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. The final exam will be cumulative in its content, but will be weighed towards the material after the second in-class 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. I do not discuss grades via email.

**Assignments:** There will be 10 homework assignments and each homework assignment is worth 10 points. However, only your best 8 homework scores will be counted (i.e., your lowest two homework

scores will be dropped). Homework is therefore worth a total of 80 points. Assignments must be received in class no later than the dates indicated. Late assignments will be lowered a 1 point for each day late (weekends count as one day). No credit will be given for assignments turned in after the solution is posted on the course website. I will not accept any work “turned in” via email. Students who miss assignments will not be able to make up the work.

**Data Analysis:** There will be 2 data analysis homework assignments and each homework assignment is worth 25 points. The statistical package we will discuss in class is R which can be downloaded at <http://www.r-project.org> with no charge. However, students can use any statistical packages of their preference.

**Class Attendance:** On twelve randomly selected days, attendance will be taken. Your final point for the course will be reduced by two points per absence. The first two absences will not cost the points, though. Class attendance is worth for total 20 points. You must notify me by email if there is a reasonable excuse why you cannot come to class (e.g., doctor’s appointment; GRE exam; attending academic conferences). Students who leave before attendance has been taken will not be counted for the day. Perfect attendance (i.e., all twelve attendances) will be awarded by extra 10 points.

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

Item	Points	Total	Grade	Total	Grade	Total	Grade
Exam 1	100	450 - 466	A– (3.7)	467 - 500	A (4.0)		
Exam 2	100	400 - 416	B– (2.7)	417 - 433	B (3.0)	434 - 449	B+ (3.3)
Exam 3	150	350 - 366	C– (1.7)	367 - 383	C (2.0)	384 - 399	C+ (2.3)
Homework	80	300 - 316	D– (0.7)	317 - 333	D (1.0)	334 - 349	D+ (1.3)
Data Analysis	50	<= 299	F				
Attendance	20						
Total	500						

### **Course Policies**

**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.

**Appointments:** Students who miss a scheduled appointment outside of office hours with TA or me will be penalized one letter grade.

**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**

Introduction

Chapter 1

Summation sign and its rules

Chapter 2

Chapter 3

Chapter 4

Chapter 5

**Exam 1** (February 16 Thursday)

**II. Probability**

Chapter 8

Chapter 10

Chapter 11

Chapter 14

Chapter 15

Chapter 16

**Exam 2** (March 30 Thursday)

**III. Inferential Statistics**

Chapter 18

Chapter 19

Chapter 20

Chapter 21

Chapter 6

Chapter 23

Review for the final & wrap-up

No Class on May 3

**Exam 3** (May 7 10:30am – 1:00 pm according to the final exam schedule)