

## SOCY2200: STATISTICS

**Instructor: Natasha Sarkisian**  
**Office: 417 McGuinn**  
**Mailbox: 426 McGuinn**  
**Office hours: W 11-12 & by appointment**  
**Email: natalia@sarkisian.net**  
**Phone: (617) 755-3178**

**TA: Bennet Pellows**  
**TA office: McGuinn 410 D**  
**TA mailbox: McGuinn 410**  
**TA office hours: W 1:30-2:30 & by appointment**  
**TA email: bennet@bc.edu**

**Class time and location: MW 3-4:15, Campion 300**  
**Course website: <http://www.sarkisian.net/socy2200/>**

### Course Description

This is a basic course intended to introduce you to statistics. Various uses of statistics surround you – in newspapers, on television, on the Internet. These media use statistics in discussing topics such as women’s roles in the workplace and the family, homelessness and poverty, racial inequality and violence. And you have most likely seen multiple uses of statistics in the other classes you’ve taken. So frequently you are bombarded with numbers and percentages without any means to understand where they come from and what exactly they mean. In this course, you will learn how information about the world can be presented with statistics, both in useful and misleading ways.



“Data don’t make any sense,  
we will have to resort to statistics.”

Moreover, statistics are increasingly used in a range of careers as the volume of available data is increasing dramatically – in fact, it is forecasted that the number of jobs in statistics will grow 27% between 2012 and 2022 (although it was statisticians who came up with that statistic – and we have yet to decide whether we can trust them ☺).

The course assumes no background in statistics. Many students have concerns about a course like this one, which involves math and statistical analyses. Some students feel comfortable with their math skills, but many of you may have had difficulties in math courses, or feel like it’s been a long time since your last math class, or simply believe that you are not “good” at math and statistics. Please set those fears aside! You don’t need any prior knowledge of statistics or elaborate math skills to succeed in this class. Math, statistics and computers are tools, and if you keep an open mind and learn to use them in the right way, you’ll have no trouble mastering them.

## Required Materials

1. Two required texts will be available at the bookstore; they will be also placed on reserve at the library:
  - *Statistics for People Who (Think They) Hate Statistics*. 6<sup>th</sup> edition. By Neil J. Salkind. Sage Publications, 2016.
  - *Naked Statistics*. By Charles Wheelan. W.W. Norton & Company, 2014.
2. Calculator – just a basic one, don't need anything fancy. But you cannot use your cellphone or laptop.
3. Laptop computer – please bring it to every class meeting (unless I explicitly tell you not to) but ONLY use it in class when we are learning Stata.

## Recommended Materials

Stata documentation can help you learn more about Stata: <https://www.stata.com/features/documentation/>  
There are also numerous other online resources, e.g., <http://www.ats.ucla.edu/stat/stata/>  
But for those who feel particularly anxious about using statistical software, I recommend the following book (will be available at the bookstore):  
*Alan C. Acock. 2016. A Gentle Introduction to Stata, Fifth Edition. Stata Press.*

## Course Requirements and Grading

1. Class Participation. You will be expected to attend classes and fully participate in class work and discussions. Your attendance is crucial, as each class builds upon the previous class session. Further, actual participation in class work is a very important part of your learning experience in this course, so please come prepared to do the work, ask questions, and fully engage with the course. Participation and attendance will count as 10% of your grade.
2. Assignments. On the dates when assignments are due, you are expected to submit your assignments to me in the beginning of the class. You will probably write up some portions by hand -- they should be legible! Assignments are each worth 5% of your grade (50% total).
3. Exams. There will be two in-class exams; these exams will cover both the readings and in-class material, and include multiple choice and short answer questions as well as a Stata component. The make-up exams will be scheduled only if you make arrangements with me prior to the exam AND if you can document the reason for your absence. Each exam will be worth 20% of your grade (40% total).

## Course Policies

Communication: The course is based on an interactive relationship between the instructor and students, as well as on collaboration among the students. You are strongly encouraged to ask questions in class, and to come and see me or the TA with any additional questions. It can really help you do better in class! Email is the best way to quickly get in touch with me outside of the classroom – I check my email very often. Email is the best way to get a quick question answered or to set up an appointment to discuss something at length. Please make sure to check your BC email regularly as I will send announcements by email when new course materials (assignments, handouts, etc.) are posted on the website.

Coursework: Throughout the course, you are expected to do all your coursework on time. Ordinarily, no late assignments will be accepted. Unless you have a valid (and documented) excuse, I will not administer make-up exams and will not give credit for late assignments. Travel plans are not an acceptable excuse for

a missed exam; no make-up exams will be provided for this reason. Please keep a copy of all of your work throughout the semester--retain all of the work that is returned to you (homework, exams) until after you have received your final course grade.

Feedback: I would like to know how I could make this course experience as useful and interesting as possible. Therefore, in the end of each class, I will ask you to submit a sheet of paper with your name, the date, and at least one sentence of reaction to that class meeting, indicating what you learned, or something you liked or did not like, found interesting or controversial, found clear or too simplistic, or found confusing and in need of further (or better) explanation. You may also submit comments on the course in general. Please be honest in your comments – if something is unclear or doesn't work for you, I really do want to know about that and will not penalize you in any way!

Electronic Devices: As we will be learning to use a statistical package, Stata, to do data analyses, you will have to bring your laptops to class. But you are not allowed to use your laptops or any other electronic devices (except for the calculator) during other portions of the class, when we are not learning Stata. I will explicitly announce when you should use your laptop. I will also announce if you do NOT need to bring a laptop to the following class. Please turn off your electronic devices when coming to class so that they do not make any distracting noises.

Academic Integrity: It is your obligation to be fully aware of the Boston College policies on academic honesty. ANY violation may subject the offender to severe penalty, including course failure. If you are not familiar with the Boston College policy on academic honesty, see: <http://www.bc.edu/offices/stserv/academic/integrity.html>

Disability Accommodation: If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan, (617) 552-8093, [dugganka@bc.edu](mailto:dugganka@bc.edu), at the Connors Family Learning Center regarding learning disabilities and ADHD, or Paulette Durrett, (617) 552-3470, [paulette.durrett@bc.edu](mailto:paulette.durrett@bc.edu), in the Disability Services Office regarding all other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations.

**Tentative Course Outline (subject to change!)**

<b>Date</b>	<b>Topics</b>	<b>Readings</b>	<b>Assignments</b>
January 18	Overview of the course		
January 23	Introduction to Statistics		
January 25	Data Description: Averages	Salkind, Ch.1 & 2	
January 30	Data Description: Variability	Salkind, Ch.3	
February 1	Data Description: Graphs	Salkind, Ch. 4	
February 6	Introduction to Stata		
February 8	Measurement	Salkind, Ch. 6	Assignment 1 (Description)
February 13	Hypothesis Testing	Salkind, Ch.7	
February 15	Introduction to Probability	Salkind, Ch.8	Assignment 2 (Stata)
February 20	Introduction to Inferential Statistics	Salkind, Ch.9	
February 22	Inferential Statistics for Single Means	Salkind, Ch.10	Assignment 3 (Normal curve)
February 27	Inferential Statistics for Single Means		
March 1	Inferential Statistics for Mean Differences: Independent Samples	Salkind, Ch.11	Assignment 4 (Confidence intervals)
March 6	No class: Spring Break		
March 8	No class: Spring Break		
March 13	Inferential Statistics for Mean Differences: Paired Samples	Salkind, Ch.12	Assignment 5 (Single means)
March 15	Review Session		
March 20	Midterm		In-class exam
March 22	ANOVA	Salkind, Ch.13	Assignment 6 (Mean differences)
March 27	ANOVA (continued)		
March 29	Correlation	Salkind, Ch. 5	Assignment 7 (ANOVA)
April 3	Correlation (continued)	Salkind, Ch. 15	
April 5	Regression	Salkind Ch.16	Assignment 8 (Correlation)
April 10	Regression (continued)		
April 12	Chi-Square Test	Salkind, Ch.17	Assignment 9 (Regression)
April 17	No class: Easter Monday/Patriot's Day	Wheelan Ch. 1-3	
April 19	Chi-Square Test (continued)		
April 24	Statistics in social sciences and day-to-day life	Wheelan Ch. 4-6	
April 26	Statistics in social sciences and day-to-day life	Wheelan Ch. 7-9	Assignment 10 (Chi-square)
May 1	Statistics in social sciences and day-to-day life	Wheelan Ch. 10-13	
May 3	Review session		
TBD	Final Exam		