
SOC 344

Introduction to Behavioral Statistics

Professor: Timothy L. O'Brien, Ph.D.
Location: Schroeder Family Building, Room 250
Time: M/W/F 9:00AM – 9:50AM
My Office: Schroeder Family Building, Room 58
Office Hours: M/W 1:00PM – 4:00PM; T/Th 3:00PM – 5:00PM
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Course Description

This course is designed to teach you basic statistical concepts and skills that will allow you to analyze the social world. The purpose of using statistics in social science is to make and support claims about the social world. However, since we can't directly observe everything about the social world, social scientists collect information from samples of people, families, and organizations, among other things, and use that information to learn about the population at large. This course provides an overview of how social scientists use statistics to acquire knowledge about human behavior and social interaction.

Course Goals

There are four main goals for this course:

1. Students will learn the difference between descriptive and inferential statistics. Descriptive statistics allow us to summarize characteristics of a sample (e.g., average age) and relationships between these characteristics (for example, the relationship between age and education). Inferential statistics enable us to make conclusions about the population given what we know about our sample.
2. Students will put descriptive and inferential statistics into practice by analyzing data, both by hand and using data analysis software.
3. Students will learn to interpret the findings from their analyses in substantively meaningful ways. In other words, students will be able to translate numbers into words that describe the social world.
4. Students will be able to use what they have learned in the course to become savvy consumers of statistics in everyday settings.

There are no math prerequisites, but having knowledge of finite mathematics will be very useful. The math involved is not terribly difficult, and you will not need to know anything more advanced than squaring and taking square roots with a calculator.

Required Texts

- 1) Miethe, Terance D., and Jane Florence Gauthier. 2008. *Simple Statistics: Applications in Social Research*. New York: Oxford University Press.
- 2) Several additional required readings will be available online via Blackboard at: <http://acebb.evansville.edu/>

Another helpful (free!) resource is *Online Statistics: An Interactive Multimedia Course of Study*, by David Lane, Joan Lu, Camille Peres, and Emily Zitek, found at <http://onlinestatbook.com>.

All readings should read carefully prior to the class for which they are assigned.

Course Time Commitment

You are expected to attend each scheduled class meeting for the entire allotted time. However, the time you spend in class is only a portion of your expected time commitment. For every hour you spend in class, it is expected that you will spend two hours outside of class preparing for class and critically examining course content. This includes: reading the assigned articles and chapters, working on assignments, studying and working with classmates, preparing and reviewing reading and lecture notes, and preparing for quizzes and exams. This expectation of time is standard for all 3-credit courses at the University of Evansville. Please consider this time commitment when budgeting your time across the semester.

Course Requirements and Evaluation

Students have the opportunity to earn up to 1000 points throughout the semester. Letter grades will be based on the usual scale:

- A (1000-930), A- (929-900)
- B+ (899-870), B (869-830), B- (829-800)
- C+ (799-770), C (769-730), C- (729-700)
- D+ (699-670), D (669-600)
- F (<600)

Final grades will be calculated based upon the following components:

Attendance

It is important for students to attend all class meetings because lectures and other class activities *will not* repeat what is covered in the readings. Starting in week 2, I will circulate an attendance sheet during each class meeting. It is the student's responsibility to sign the sheet each class. Students can miss four classes without penalty. Each absence *for any reason* (except for university sanctioned excuses, such as religious holidays) beyond four will result in a deduction of 25 points (or 2.5% of your final grade). A maximum of 100 points (or 10 % of your final grade) may be deducted for attendance.

Exams (100 points each)

Instead of having two or three major exams, there will be six tests throughout the semester. Each is worth 100 points. Exams will be taken during regularly scheduled class meetings, and will cover class material and assigned readings. Exams may be comprised of multiple choice, essay,

and computational questions and will focus on the material covered since the last exam. Exams are not designed to be cumulative, but the knowledge and skills you acquire in each unit of the class will build on earlier material. If you are unable to take an exam during the scheduled time, you need to contact me with a *university documented* excuse prior to the exam. Students who fail to do so will receive a zero and will not be allowed to make up the exam, except under the most unusual circumstances.

Writing Assignment (150 points)

Students are required to complete a 2-3 page writing assignment for this course. You will find and analyze a newspaper article that presents statistical evidence and use what you learn in class to discuss the strengths and weaknesses of your article. This assignment is worth 150 points and will be due Friday, March 28 at the beginning of class. More information about this assignment will be provided later in the semester.

Final Project (250 points)

The final project incorporates key topics covered during the semester and requires students to put into practice skills gained throughout the course. Students will analyze a secondary dataset, write a report that summarizes their analyses and results, and provide a brief presentation to the class of the main points of their project. More information will be provided as the semester progresses. Final projects must be submitted to me and to Turnitin.com (via Blackboard) by the beginning of our final class meeting (9:00am, Tuesday, April 28).

Classroom Expectations

Regular, enthusiastic participation in discussions and class activities is required of all students. Furthermore, I encourage students to ask questions at any point during lectures, discussions, and other activities. One of the best parts of university life is our ability to discuss important, albeit sometimes sensitive topics from a range of backgrounds and perspectives. Keeping in mind that students come from diverse backgrounds, it is necessary to frame contributions to class respectfully. Disagreeing with another perspective does not mean we cannot learn from it. Also, as a matter of courtesy to your classmates, I ask that all cell phones and other electronic devices be turned off or set to silent during class meetings.

Laptops, Tablets, Mobile Devices

Class meetings will demand your full attention. Deep learning requires sustained focus on a single task. Using a computer to take notes or refer to readings in class is acceptable, but if you use your laptop or mobile device to chat, update social media, play games, watch television, and the like it distracts me and your classmates. If I notice a student who is off task, I will invite them to get back on task. I encourage your classmates to do the same. Feel free to step outside of class to make or take important calls or texts.

Incompletes

I will not provide students with “incompletes” except under the most unusual circumstances.

Academic Integrity

This course is part of the academic community of the University of Evansville and students are expected to adhere to the highest standards of integrity. **Cases of cheating, plagiarism, or any form of academic dishonesty will not be tolerated under any circumstance.** Instances of

academic dishonesty will be handled in accordance to University policy. Please see the Student Honor Code in this regard; <http://www.evansville.edu/offices/deanstudents/docs/honorcode.pdf>.

Students with Special Needs

It is the policy and practice of the University of Evansville to make reasonable accommodations for students with properly documented disabilities. Written notification to faculty from the Office of Counseling Services is required for any academic accommodations. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with me and allow two weeks' notice. Otherwise, it is not guaranteed that the accommodation can be received on a timely basis. If you have questions about services for students with disabilities or procedures for requesting services, you may contact the Office of Counseling Services at 488-2663.

Class Meetings and Assigned Readings

*Note: All readings are to be completed **before** the class for which they are assigned.*

SS=Simple Statistics: Applications in Social Research

BB=Blackboard

Week	Day	Date	Topic	Reading
1	M	1/13	Course introduction	
	W	1/15	Key concepts in statistics	Chapter 1 (SS)
	F	1/17	Key concepts in statistics	Stat-Spotting (BB)
2	M	1/20	MARTIN LUTHER KING DAY—NO CLASS MEETING	No reading
	W	1/22	Organizing & displaying data	Chapter 4 (SS) The Gee-Whiz Graph (BB)
	F	1/23	Exam 1	No reading
3	M	1/27	Central tendency & dispersion	Chapter 5 (SS)
	W	1/29	Central tendency & dispersion	Chapter 6 (SS)
	F	1/31	Central tendency & dispersion	The Well-Chosen Average (BB)
4	M	2/3	Mean comparisons and box plots	Archer 1991 (BB)
	W	2/5	Mean comparisons and box plots	Weisse 2001 (BB)
	F	2/7	Exam 2	No reading
5	M	2/10	Lab 1 (introduction to SPSS, univariate statistics)	No reading
	W	2/12	Contingency tables	Chapter 11 pp. 188-197 (SS)
	F	2/14	Measures of association	Chapter 11 pp. 197-214 (SS)
6	M	2/17	Correlation	Chapter 13 pp. 235-242 (SS)
	W	2/19	Bivariate Regression	Chapter 13 pp. 242-260 (SS)
	F	2/21	WORK DAY FOR FINAL PROJECTS—NO CLASS MEETING	No reading

			<i>*Select data, dependent, and independent variables for final projects</i>	
7	M	2/24	Bivariate Regression	Chapter 13 pp. 243-254 (skip “Hypothesis Testing” section)
	W	2/26	Introduction to multivariate analysis	Post Hoc Rides Again (BB)
	F	2/28	Exam 3	No reading
8	M	3/3	Probability	Chapter 5 in Online Statistics (www.onlinestatbook.com)
	W	3/5	Probability	Chapter 5 in Online Statistics (www.onlinestatbook.com)
	F	3/7	Sampling distributions	The Sample with Built-in Bias (OC)
9	M	3/10	SPRING BREAK	No reading
	W	3/12	SPRING BREAK	No reading
	F	3/14	SPRING BREAK	No reading
10	M	3/17	Sampling distributions	Chapter 9 in Online Statistics (www.onlinestatbook.com)
	W	3/19	Sampling distributions	Chapter 9 in Online Statistics (www.onlinestatbook.com)
	F	3/21	Exam 4	No reading
11	M	3/24	Lab 2 (contingency tables, correlation, simple regression)	No reading
	W	3/26	Normal distribution	Chapter 7 (SS)
	F	3/28	Estimation using confidence intervals <i>*Writing Assignment Due</i>	Chapter 8 (SS)
12	M	3/31	Introduction to hypothesis testing	Chapter 9 (SS)
	W	4/2	Hypothesis testing for one sample means	Chapter 10 pp. 167-173 (SS)
	F	4/4	Exam 5	No reading
13	M	4/7	Hypothesis testing for two sample means	Chapter 10 pp. 173-183 (SS)
	W	4/9	Hypothesis testing for contingency table	Chapter 11 pp. 192-209 (SS)
	F	4/11	WORK DAY FOR FINAL PROJECTS—NO CLASS MEETING	No reading
14	M	4/14	Hypothesis testing for regression	Chapter 13 pp. 248-254 (SS)

	W	4/16	Lab 3 (multiple regression)	No reading
	F	4/18	EASTER BREAK—NO CLASS MEETING	No reading
15	M	4/21	Exam 6	No reading
	W	4/23	Student presentations	No reading
	F	4/25	Student presentations	No reading
16	M	4/28	Student presentations <i>*Final Project Due</i>	No reading
	W	4/30	READING DAY—NO CLASS MEETING	No reading

Summary of Key Dates

January 23: Exam 1
 February 7: Exam 2
 February 10: Lab 1
 February 21: Select dataset, dependent, and independent variables for Final Project
 February 28: Exam 3
 March 21: Exam 4
 March 24: Lab 2
 March 28: Writing assignment due
 April 4: Exam 5
 April 16: Lab 3
 April 21: Exam 6
 April 23, 25, 28: Student presentations
 April 28: Final projects due