

SOCI 315: Introductory Social Statistics II

The University of Calgary, Faculty of Arts, Department of Sociology
Course Outline, Winter 2014

<p>Instructor Alex Bierman, Ph.D. Office: SS 902 Phone: 403-220-6226 E-mail: aebierma@ucalgary.ca Office Hours: Tuesdays and Thursdays 11:00 am – 12:00 pm or by appointment ----- Teaching Assistants Shoghi Nikoo E-mail: swnikoo@ucalgary.ca Office: SS 917 Suzanne Kanuka E-mail: skkanuka@ucalgary.ca Office: SS 913 TA office hours will be announced on the first day of class.</p>	<p>Lecture Schedule: 9:30 am - 10:45 am Tuesdays and Thursdays SA 119</p> <p>Lab Schedule: 3:30 pm - 6:20 pm, Tuesdays Tri-Faculties Lab or SA 119 On non-exam days, labs will typically be held in the Tri-Faculties Lab. Mid-terms will usually be administered during lab hours, in which case they will be in SA 119.</p> <p>Final Paper: Due <i>printed</i> on March 21st in Dr. Bierman's office between 10 AM and noon</p>
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Course Description

This course will focus on multivariate statistics. It will include topics such as multiple regression, dichotomous predictors, checking assumptions, outlier analysis, tests of mediation, and interaction analysis.

Please note that this course will expand on the material learned in SOCI 311. We will begin with a brief review of concepts from SOCI 311 before introducing new topics, but students for whom the current 311 curricula is unfamiliar may need to perform additional work to become sufficiently familiar with the background material.

Required Texts

McClendon, McKee, J. 2002. *Multiple Regression and Causal Analysis*. Prospect Heights, IL: Waveland Press.

When we cover mediation, the reading will be:

Preacher, Kristopher J. and Andrew F. Hayes, A. F. 2004. "SPSS and SAS Procedures for Estimating Indirect Effects in Simple Mediation Models." *Behavior Research Methods, Instruments, & Computers* 36:717-731.

You can download this paper from the University of Calgary library. When we cover PCA, we will use the first chapter from Hatcher's 1994 text, *A Step-by-step Approach to Using the SAS System for Factor Analysis and Structural Equation Modeling*.

The publisher has made this chapter freely available online at:

<http://support.sas.com/publishing/pubcat/chaps/55129.pdf>

We will use Stata, rather than SAS, but this chapter provides a good and (relatively) readable overview of PCA.

Recommended Text

Longest, Kyle C. 2012. *Using Stata for Quantitative Analysis*. Thousand Oaks, CA: Sage.

Required Software

This statistical software used in this course will be Stata. Stata is available in the computer lab in the basement of the Social Sciences, but you can also lease Stata through the "gradplan." See:

<http://www.stata.com/order/new/edu/gradplans/>

Stata/IC should be sufficient, and you can lease it for six months for \$69.

Prerequisites

SOCI 311 or consent from the Department of Sociology.

Grading System

A+ = 95 and over	B+ = 80-84.9999	C+ = 67-71.9999	D+ = 54-58.9999
A = 90-94.9999	B = 76-79.9999	C = 63-66.9999	D = 50-53.9999
A- = 85-89.9999	B- = 72-75.9999	C- = 59-62.9999	F = 49.9999 and lower

Grade Distribution

Labs	10%
Exam 1	30%
Exam 2	30%
Final paper	30%

If an opportunity for extra credit arises, this opportunity will be given to the class as a whole. Individual opportunities for extra credit or to make up points lost due to errors on an exam will not be allowed.

Staying in Contact

Class announcements may occasionally be sent out over e-mail, so you'll need to make sure that the university has your correct e-mail address and that your e-mail account is in working order. Outside of office hours or pre-scheduled appointments, you should try to reach us through e-mail. When e-mailing, please put "SOC1 315" in the subject line of your e-mail. We will make every effort to reply to your e-mails within 24 hours, but it may take up to 24 hours to respond. ***Unless we have specifically indicated otherwise, we prefer that you contact us by email for administrative purposes only.*** For instance, you may email us to schedule an appointment outside of office hours.

Course Format

The course setup consists of two 1 hour and 15 minute class lectures per week and one three-hour lab section per week.

The purpose of the lab is to practice the type of questions that will appear on your exam. The purpose of labs is also to learn the type of analyses that will be required in the final paper, as well as explore the data you will use for your final paper.

Note: It is possible that concepts covered in lab will appear on exams. You should plan to attend both the lab and the lecture, and are responsible in an exam and the final paper for material presented in both lecture and lab.

Lecture notes

I will post PowerPoint slides on the course Blackboard for most of the class lectures, and you should print out these slides and bring them to class. You will still need to take notes, even if you have the PowerPoint slides. There are no lecture notes available from the instructor besides the PowerPoint slides, so if you miss class you'll need to get the additional lecture notes from another student.

Calculator

Your calculator must have exponent (square) and square root functions. I don't have any additional calculators, so you'll need to bring your calculator to class every day. Some calculators can have some unusual displays or function keys, so it's a good idea to make sure you can work your calculator before an exam. You will likely need a calculator for the exams, and the calculator on your phone won't be acceptable.

Exams

All exams may be indirectly cumulative, including assuming knowledge of material from SOC1 311, because the material covered in statistics is inherently cumulative. You will be permitted one 8 1/2 by 11 inch sheet (front and back) of notes during the exams. Exams may include a mixture of True/False, multiple choice, short answer, and calculation problems.

Please note that the schedule in this course outline is tentative. This is for the benefit of students. Allowing the exam schedule to be tentative will let me slow down if the class is having particular difficulty. I will let you know the firm date of an exam at least one week prior to the exam, and I will never schedule an exam earlier than when it is scheduled in your course outline.

Exams will be administered during your lab periods. The class will typically have two hours to take an exam. If you arrive late for the exam, you will only have the amount of time remaining allotted for the exam. For instance, if you show up half an hour after an exam is handed out, you will have only 90 minutes to take the exam. Once you begin an exam, it is your performance during the allotted time which will be used to determine your grade. You will not be allowed to retake the exam, sections of the exam, or complete at a later date problems you may not have answered. You also will not be allowed to take alternative sections of an exam or an alternative exam and substitute or combine your performance on the exam with alternative grades. If you believe that you may have an emergency which will interfere with your performance on the exam, or you arrive late because of an emergency, you need to talk to me about it before you take the exam. Once you begin the exam, it is your performance on that exam, during the time allotted for the exam, which will determine your grade. The only exception to this policy is if you must be hospitalized while you are taking the exam.

The Final Paper

Rather than a final exam, we will have a final paper in this class. This final paper will involve applying procedures you learned in this class (as well as some you should have learned in SOCI 311) to real-world data on Canadians. Essentially, this paper will be an integration of theory and method, where you learn how sociologists use theory to construct hypotheses that are tested by survey data. Additional detailed information on the paper will be given out in a separate handout at a later date, but the paper will take the basic form of a mini-article, including introduction, literature review, methods, results, and discussion sections. Several assignments that are a part of lab will lead up to the paper. However, you will need to do additional work to complete the final paper. Because the paper involves not only a literature review, but also data analyses, ***it is highly unlikely that you will successfully complete the paper if you leave it until the last minute.*** The final paper is due ***printed*** on March 21st in Dr. Bierman's office between 10 AM and noon.

Missing Exams or Failing to Turn in the Paper

If at all possible, you must provide advance notice to the instructor if you are unable to take an exam on time or unable to turn in the paper on the due date. All requests for deferral of a course component due to health reasons must be accompanied by written documentation as outlined in the University Calendar and should be obtained while the student has the physical or emotional problem rather than after recovery. Deferrals will be allowed in the following circumstances: illness, domestic affliction or religious conviction. Travel arrangements and misreading of the syllabus are not valid reasons for requesting a deferral. Deferrals will not be granted if it is determined that just cause is not shown by the student.

A student who has a legitimate reason for being unable to write an exam must discuss an alternative course of action with the instructor. At his discretion, the instructor will transfer the percentage weight to another component of the course, or set a make-up test. Make-up exams must be written as soon as possible at a scheduled Department of Sociology make-up test session, held on Tuesday evenings starting at 5 p.m.

The Final Paper and Labs Will Not Be Accepted Electronically

We generally cannot accept labs or the final paper through e-mail or other electronic means. Very occasionally, we will make an exception to this rule, but these exceptions must be made in advance, and will be made only under extreme circumstances.

Labs

Labs will serve several purposes. First, this will be your opportunity to attempt questions of the type you will see on exams, but with the T.A. available to help you. Second, you will learn and apply the Stata computer program to analyze data using procedures covered in class. Learning these procedures will also be important for your final paper. Third, you will explore the data you will use for your final paper.

Lab assignments will be a mixture of work problems, Stata exercises, and preparation for your papers. Labs should be turned in to the TA in lab, office hours, or before/after class. **Lab assignments must be typed and stapled.**

Because lab assignments can be turned in up to a week after lab, deferrals will typically not be allowed for lab assignments. If the lab assignment is turned in to the TA before the beginning of the subsequent lab, no marks will be deducted for lateness. After this, 50% will be deducted from the lab before any marks are deducted for errors. The only exception to this policy is for labs in which exams are being administered. In this case, a lab must be turned in by the beginning of class preceding the exam to avoid a deduction in marks.

A \$15 lab fee, payable to the Department of Sociology, will be charged to cover costs related to copying of course handouts, lab supplies, and printing in the Tri-faculties lab. The mandatory \$15 lab fee will be collected by your TA during the second week of classes. If this fee is not paid by Thursday, January 23rd, 2014, you will lose your printing privilege in the lab and we will not grade your lab assignments (resulting in a loss of 10% of your grade).

Academic Dishonesty

Instances of academic dishonesty will result in a zero for the assignment or exam in which the cheating occurs, and this includes the final paper. Using work which is not your own is academic dishonesty. Academic dishonesty of this type includes: Having someone else do work and claiming the work as your own, using someone else's words or ideas without attribution, using someone else's data analyses or literature review without citation, or copying other students' work. Another type of academic dishonesty is gaining access to materials before they are given to the class. This is not an exhaustive list of activities which may fall under the category of academic dishonesty. If you are not sure whether an action would be academic dishonesty, please ask before you take this action. **Please examine the handout for the final paper for additional information on plagiarism.** Students often do not realize they are committing certain forms of plagiarism, but will be responsible for eschewing all forms of plagiarism on the final paper.

How are Grade Disputes Handled?

Students are encouraged to resolve grade disputes by discussing the situation with the instructor. Please do so in person. At this meeting, the student's arguments will be carefully considered

and, hopefully, a resolution attained that meets with mutual satisfaction. A student seeking reappraisal of graded exams must discuss this work with the instructor within two weeks of the date the exam is handed back. However, please note that, consistent with Faculty of Arts regulations, the entire exam will be remarked and the mark may be raised, lowered or remain the same. Please note that the instructor, not the TA's, are responsible for all grade disputes.

Emergency evacuations:

In the case of fire or other emergency evacuation of this classroom/lab, please proceed to the assembly point by the Social Science Food Court.

Deferrals:

If at all possible you must provide advance notice to the instructor if you are unable to take a test or pass in an assignment or essay on time. All requests for deferral of a course component due to health reasons must be accompanied by written documentation as outlined in the University Calendar and should be obtained while the student has the physical or emotional problem rather than after recovery. Deferrals will be allowed in the following circumstances: illness, domestic affliction or religious conviction. Travel arrangements and misreading of the syllabus are not valid reasons for requesting a deferral. Deferrals will not be granted if it is determined that just cause is not shown by the student.

If you have missed a test for a legitimate reason, the instructor can require you to write a “make up” test as close in time to the original test as possible or can choose to transfer the percentage weight to another course component. If the instructor schedules a “make up” test for you, its date and location will be at the convenience of the Department of Sociology.

Deferred Final Exam Form:

Please note that requests to defer a Registrar-scheduled final exam are dealt with through the Registrar’s Office. Further information about deadlines, and where paperwork should be taken, is available on the form, which can be found at:

http://ucalgary.ca/registrar/files/registrar/APP%20FOR%20DF%20EXAM_0.pdf

Deferred Term Work Form:

Deferral of term work past the end of a term also requires a form to be filled out. It’s available at

<http://www.ucalgary.ca/registrar/files/registrar/defTW.pdf>

Once an extension date has been agreed between instructor and student, the form should be taken to the Faculty of Arts Program Information Centre (SS 110) for approval by an Associate Dean (Students).

Ethics Research: Students are advised that any research with human subjects--including any interviewing (even with friends and family), opinion polling, or unobtrusive observation--must have the approval of the Departmental Ethics Committee. In completing course requirements, students must not undertake any human subjects research without discussing their plans with the instructor, to determine if ethics approval is required.

Academic Misconduct: Plagiarism, cheating and other academic misconduct are regarded as serious academic offences. Students are advised to consult the University Calendar which presents a Statement of Intellectual Honesty and definitions and penalties associated with cheating, plagiarism, and other academic misconduct.

The Freedom of Information and Protection of Privacy (FOIP) legislation disallows the practice of having students retrieve assignments from a public place, e.g., outside an instructor’s office or the Department main office. Written assignments must be returned to students individually, during class, or during the instructor’s office hours; if a student is unable to pick up her/his assignment s/he may provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.

Safewalk: The University of Calgary provides a “safe walk” service to any location on Campus, including the LRT, parking lots, bus zones, and campus housing. For Campus Security/Safewalk call 220-5333. Campus Security can also be contacted from any of the “Help” phones located around Campus.

Academic Accommodation: Students with a disability, who require academic accommodation, need to register with the Disability Resource Centre (MC 295, phone 220-8237). Academic accommodation letters need to be provided to

course instructors no later than fourteen (14) days after the first day of class. It is a student's responsibility to register with the Disability Resource Centre and to request academic accommodation, if required.

Handing in papers outside of class, return of final papers, and release of final grades:

1. When students are unable to submit papers in class, they should make arrangements to hand in their papers directly to the instructor or teaching assistant. Papers will not be accepted in the main Sociology Department office.
2. Final papers will not be returned through the main Sociology Department office. The Freedom of Information and Privacy (FOIP) legislation disallows the practice of having students retrieve assignments from a public place (i.e. outside an instructor's office, the department office etc.) Students who want their final papers returned by mail must attach a stamped, self-addressed envelope with the paper. Otherwise final papers will be available for pick-up only during the instructor's office hours at the end of this term or at the beginning of the next term.
3. Final grades are not posted by the Sociology Department. They are available only online.

Tentative Course Schedule

(Please note that this is indeed tentative. Given the pace of the class, I may choose to change the time spent on some subject matter. I will try to do my best to maintain the dates on which exams are given, but these may change as well).

Week	Dates	Subject	Reading
1	Jan 9-14	Review of bivariate regression	McClendon Chapter 2 (Chapter 1 optional)
2	Jan 16-21	Multiple regression	McClendon Chapter 3
3	Jan 23-28	Significance testing in multiple regression	McClendon Chapter 4
4-5	Jan 30-Feb 6	Checking outliers and assumptions	
5	Feb 11	Dichotomous predictors	McClendon Chapter 5
		Note that there will be a special worksheet to help review this material for the exam.	
6	Feb 13	EXAM DURING LAB in SA 119 Open review during class time	
	Feb 18-20	Reading week	
6-7	Feb 25-27	Moderation	McClendon Chapter 7
7-8	March 4-6	Mediation	Preacher and Hayes (2004)
8-9	March 11-13	Cronbach's alpha and PCA	Hatcher (1994), chapter 1
9-10	March 18-20	Non-linear relationships	McClendon Chapter 6
10	March 25	Spillover day	
11	27-Mar	EXAM DURING LAB in SA 119 Open review during class time	

If we progress through all of this material on time, then the last two weeks of class will be dedicated to the paper.