

SOCI 315: Introductory Statistics II

The University of Calgary, Faculty of Arts, Department of Sociology
Course Outline, Fall Semester, 2011

<p>Instructor Alex Bierman, Ph.D. Office: SS 902 Phone: 403-220-6226 E-mail: aebierma@ucalgary.ca Office Hours: Wed., 12:15 pm – 1:15 pm, or by appointment.</p> <p>-----</p> <p>Teaching Assistants</p> <p>Michal Kofman; michali.kofman@gmail.com</p> <p>Alicia Polachek; ajpolach@ucalgary.ca</p> <p>Office hours for TA's by appointment.</p>	<p>Lecture Schedule: 9:30 am - 10:45 am Tuesdays and Thursdays MS 211</p> <p>Lab Schedule: 3:30 pm - 6:20 pm, Tuesdays Tri-Faculties Lab or MS 211</p> <p>On non-exam days, labs will typically be held in the Tri-Faculties Lab.</p> <p>Mid-terms will usually be administered during lab hours, in which case they will be in MS 211.</p> <p>Final: Registrar scheduled</p>
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Required Texts

Joseph F. Healey and Steven G. Prus. 2010. *Statistics: A Tool for Social Research, First Canadian Edition*. Toronto: Nelson Education.

Paul Allison. 1999. *Multiple Regression: A Primer*. Thousand Oaks: Pine Forge Press.

Course Description

This course will focus on inferential statistics. Inferential statistics is based on using samples to extrapolate to a population. Topics and subjects involved in inferential statistics include probability and the normal distribution, the sampling distribution, confidence intervals, testing differences in means and proportions, non-parametric tests, and analysis of variance. We will also link inferential statistics to correlation, bivariate regression, and multivariate regression.

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 material, but students for whom it has been some time since they took 311 may need to put in some extra work to get up to speed.

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 Exam (Cumulative)	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.

We are happy to meet with students, but please observe the following guidelines so that we may respond to students in a way that is fair and attentive:

- 1) Except for cases in which we have instructed you to email something, 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.
- 2) Professor Bierman should be your first resource for substantive questions. Dr. Bierman will often be available to meet immediately after class on Tuesdays and Thursdays, as well as Friday mornings, and also Wednesday afternoons beyond the stated office hours. Please do not hesitate to ask Dr. Bierman for an appointment. If Dr. Bierman is not available, contact the TA's for help with class material.

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 with your TA's assistance questions of the type that will appear on your exam. We will also examine how to use SPSS to analyze data with the procedures covered in class.

Note: It is possible that concepts covered in lab may appear on exams. You should plan to attend both the lab and the lecture, and are responsible in all exams for any material presented in either lecture or 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. I don't really have any lecture notes 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.

Exams

Only the final exam will be expressly cumulative, but all exams may be indirectly cumulative because they are likely to build on previous material. 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 really 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 at least one week before the firm date of an exam, and I will never schedule an exam earlier than when it is scheduled in your course outline.

Exams will most likely 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.

Missing Exams

If at all possible, you must provide advance notice to the instructor if you are unable to take an exam 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.

A student who is unable to write a mid-term exam due to fully documented illness, domestic affliction, or religious conviction will have the weight of that examination applied to the final exam. No make-up mid-terms will be given.

Labs

Labs will serve two purposes. First, this will be your opportunity to attempt questions of the type you will see on the exams, but with the T.A. available to help you. In addition, you will learn and apply the SPSS computer program to analyze data using statistics being covered in class. Lab assignments will be a mix of work problems and SPSS exercises. The lab is designed to be finished and turned in within the time allotted for lab. However, if the lab assignment is turned in to the TA's 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. This is so that we can get your lab assignments back to you before the exam, so that you can use them in studying for the exam. Please turn in your assignments to the TA's in person during lab or before class. Because lab assignments can be turned in up to a week after lab, deferrals will typically not be allowed for lab assignments. We will, however, drop your lowest grade for your lab assignments.

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, September 23rd, 2010, 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).

Practice Problems

Practice problems will be given out with each chapter. These practice problems will be posted on the class Blackboard, and it is your responsibility to download them. Practice problems will cover a chapter of our text, although I may have two sets of problems for longer chapters. However, work on these problems will not be graded. It is your responsibility to work on the problems as practice for the exam. These problems will be very similar to some of the problems you will see on the exam. Failure to prepare for the exam by working on these practice problems will most likely strongly affect your grade. You will also be given fully worked answer keys

(i.e., not simply the answers, but, if work is required on these problems, examples of how the work was done). You are strongly urged to compare your answers on the practice problems to the answer keys and, if you do not understand an answer, seek out your instructor or TA's guidance. If your answers on exams do not match the form, structure, and phrasing of answers on the answer keys, you can expect to lose credit on the exams.

Laptops and Computer Use

Laptops should be used for taking notes and other class work only. If a student is observed using a laptop during class for instant messaging, e-mailing, work for other classes, or surfing the internet more than once, he or she will lose the right to use a laptop during class. Please use the lab computers for only for lab work during lab.

Academic Dishonesty

Instances of academic dishonesty will result in a zero for the assignment or exam in which the cheating occurs. 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, or copying other students' work. Other types of academic dishonesty include gaining access to materials before they are given. 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.

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, is 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 tests are given, but these may change as well)

Tu	13-Sep	Read the course outline. Review of 311.
Th	15-Sep	Probability and the normal distribution (H/P, Chapter 5)
Tu	20-Sep	Finish prob. and norm dist. Start sampling distribution (H/P, Chapter 6)
Th	22-Sep	Sampling distribution and large-sample confidence intervals (H/P, Chapters 6 & 7)
Tu	27-Sep	Sampling distribution and large-sample confidence intervals (H/P, Chapters 6 & 7)
Th	29-Sep	Hypothesis testing of one-sample means (H/P, Chapter 8)
Tu	4-Oct	Hypothesis testing of one-sample means (H/P, Chapter 8)
Th	6-Oct	Hypothesis testing of two-sample means (H/P, Chapter 9)
Tu	11-Oct	Hypothesis testing of two-sample means (H/P, Chapter 9)
Th	13-Oct	Review for Exam 1
Tu	18-Oct	Review for Exam 1 during class time; Exam 1 DURING LAB IN MS 211
Th	20-Oct	ANOVA (H/P, Chapter 10)
Tu	25-Oct	Bivariate regression and correlation (H/P, Chapter 15, Allison Chapter 5)
Th	27-Oct	Bivariate regression and correlation (H/P, Chapter 15, Allison Chapter 5)
Tu	1-Nov	Bivariate regression and correlation (H/P, Chapter 15, Allison Chapter 5)
Th	3-Nov	Hypothesis testing in bivariate regression
Tu	8-Nov	Hypothesis testing in bivariate regression
Th	10-Nov	Remembrance Day-No Class or Lab
Tu	15-Nov	Review for Exam 2; Exam 2 DURING LAB IN MS 211
Th	17-Nov	Assumptions of regression (Allison Chapter 6)
Tu	22-Nov	Multiple Regression (H/P, Chapter 17, Allison Chapters 1 & 2)
Th	24-Nov	Multiple Regression (H/P, Chapter 17, Allison Chapters 1 & 2)
Tu	29-Nov	Multiple Regression (H/P, Chapter 17, Allison Chapters 1 & 2)
Th	1-Dec	Chi-square tests (includes review of Cross-tabs; H/P Chapter 11)
Tu	6-Dec	Chi-square tests (includes review of Cross-tabs; H/P Chapter 11)
Th	8-Dec	Review for final