



UNIVERSITY OF CALGARY

Faculty of Arts
Department of Sociology

Sociology Department Home Page: <http://www.soci.ucalgary.ca>

SOCI 701.5

Doctoral Seminar in Sociology (Advanced Quantitative Methods)

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|-------------|---------------------------------|----------|
| • Fall 2018 | • Wednesdays 9:00 am – 11:45 am | • SS 905 |
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Instructor: Alex Bierman

Office: SS902

Email: aebierma@ucalgary.ca

Phone: 403-220-6226 (email is the best way to reach Dr. Bierman)

Office Hours: Wednesday noon-1 pm; Thursday 11 am to noon

Course Description

This course will focus on the analysis of clustered data. Clustered data encompass observations that are nested in a higher-order unit. Common examples are students nested in schools, residents living in neighborhoods, or surveys of people from different nations. Methods of examining these types of data that will be covered in this class include multilevel modeling, cluster-robust standard errors, and generalized estimating equations. Another type of clustering is multiple observations of the same unit over time. A common example of this type of clustering is a panel survey in which the same set of people are repeatedly surveyed. Methods of examining these types of data that will be covered in this class are growth curve models, random and fixed-effects models, and latent growth curve models. Time permitting, this class will finish with a survey of regression approaches to categorical or count response variables.

Course Objectives/Learning Outcomes

At the end of this course, students should have an understanding of why special approaches are necessary when examining clustered data. Students should be able to use these methods to examine the consequences of contextual factors for individual outcomes, as well as the way that contextual factors moderate the influence of lower-order factors. When encountering longitudinal data, students should be able to estimate trajectories of change,

as well as estimate associations between time-varying factors while holding constant all time-stable sources of spuriousness. Students should also be adept at choosing between and applying modeling techniques that appropriately analyze categorical and count outcomes

Required Textbooks

Snijders, Tom A.B. and Roel J. Bosker. 2012. *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling, Second Edition*. London: Sage Publishers.

This text has been ordered from the bookstore. In addition, we will have a number of papers and chapters assigned that are available from the university library. A separate list of these readings will be emailed to students as the class progresses.

Optional Textbooks

If you are not familiar with Stata, this book may be useful:

Longest, Kyle C. 2014. *Using Stata for Quantitative Analysis, 2nd Edition*. Thousand Oaks, CA: Sage.

Please note that the purchase of this text is not a necessity for individuals unfamiliar with Stata. Your instructor will provide several examples of basic Stata recoding procedures. Furthermore, examples of all Stata syntax for the models under study will be provided to the class as a whole.

Access to Stata and Mplus

This class will use the Stata statistical program (please note that “Stata” is not an acronym and should not be in all capital letters). Stata can be leased from the company for \$75.00 (USD) for six months, and I recommend that you do so for this class. Alternatively, Stata is available in the department’s computer lab and also in the tri-faculties computer lab in the basement of the Social Sciences building. Please be aware that, if you intend to use the basement lab, you will have to work around scheduled classes.

Mplus may also be used for some assignments. Two copies of Mplus are available in the department computer lab.

Staying in Contact

Class announcements may 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. Due to the complexity of the course material, I prefer that you contact me by email for administrative purposes only. For instance, you may email me to schedule an appointment outside of office hours. When e-mailing, please put “SOC1 701” in the subject line of your e-mail. I will make every effort to reply to your e-mails within 24 hours, but it may take up to 24 hours to respond.

Lecture Notes

PowerPoint slides will be posted on D2L for most of the class lectures. Students should print out these slides and bring them to class or have them available on an electronic device capable of note-taking. Students will still need to take notes, even if the PowerPoint slides are available. There are no lecture notes besides the PowerPoint slides, so a student who misses a class will need to get the additional lecture notes from another student.

Reading Assignments

Reading assignments will be given out over email as the class progresses. It is the student's responsibility to keep track of the reading assignments.

Homework Assignments

As this is a doctoral-level class, there is no specific "lab" time in which we will all meet to work on an assignment together, but we will have homework assignments. These assignments will require students to perform the analytic procedures covered in class, and may also require conceptual responses, as well responses to questions regarding empirical papers. Homework assignments may not be due every week, and may instead be due when we have covered sufficient material for an assignment. I will inform you when an assignment is due at least a week ahead of time, and homework will typically be due on Wednesday mornings before class. Homework assignments should be turned in through the appropriate folder on D2L. In the event that a lab is not turned in on time, it should be emailed directly to Dr. Bierman. In the case of a late assignment that does not meet department policies for deferrals, 50% will be deducted from the assignment before any marks are deducted for errors. You cannot turn in sections of a homework assignment at different times. If you turn in an assignment partially completed, no additional aspects of the assignment will be accepted at a later time. No assignments will be accepted after December 5th at 9 am.

You may work on a homework assignment with one partner, although working on an assignment alone is perfectly acceptable, too. If you work on a homework assignment with a partner, you must turn in one assignment with both names. Students receive the same grade when working with a partner, regardless of the amount of work each student put into the assignment.

Final Paper or Take-Home Exams

Students will have a choice regarding whether they wish to complete a final paper or a take-home exam. The take-home exam will be an extensive set of exercises that covers the majority of the analytic methods covered during the semester, and may also include conceptual questions. The paper will be an analysis of real survey data in the form of a paper to be submitted to a journal. More information will be provided about the paper in a separate document posted to D2L. This document will include possible sources of data on which the paper may be based. Students must notify Dr. Bierman through email by **November 1st at noon** if they wish to complete a paper or a take-home exam. Students who do not notify Dr. Bierman by this time and date will be assumed to be completing a

take-home exam. If students choose to complete a final paper, in this email they should also indicate (a) the topic of their paper, (b) the dataset they will base the paper on, (c) any special properties of the dataset that they will need to address (e.g., post-stratification weights or complex sampling), and (d) the journal they are targeting in writing the paper. Your instructor may offer suggestions on the proposed paper, including indicating that the paper topic, dataset, or target journal is not workable or appropriate. Due to the competitive nature of the academic job market, doctoral students are encouraged to choose the paper option, but no penalty will be given if a student chooses the take-home exam option. Both the paper and take-home exam will be due to the appropriate dropbox on D2L by noon on December 17th. If working on a take-home exam, the same rules regarding working with a partner that apply to homework assignments will apply to the take-home exam.

Grade Distribution

Labs	60%
Final paper or take-home exam	40%

Extra Credit

Extra credit assignments are not typically offered, but 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 marks lost due to errors on an exam will not be allowed.

Grading Scale

Letter grades will be assigned and submitted to the registrar based on the following scale:

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

The grades for a course component may be scaled to maintain equity among sections and to conform to departmental norms.

Grade Reappraisal

Within two weeks of the date the exam/assignment is returned, students seeking reappraisal of examinations or assignments must either submit a written response to the instructor explaining the basis for reconsideration of one’s mark, or meet with the instructor and discuss the basis for reconsideration. In the event of an in-person meeting, the instructor may not make an immediate decision regarding a change of grade. It should be noted that a re- assessed grade may be raised, lowered, or remain the same.

Emergency Evacuations

In the case of fire or other emergency evacuation of this classroom, please proceed to the assembly point at Professional Faculties - Food Court. Please check these assembly point locations for all of your classes at: <http://www.ucalgary.ca/emergencyplan/assemblypoints>

Handing in Papers, Assignments

1. The main Sociology Department office does not deal with any course-related matters. Please speak directly to your instructor.
2. **Protection of Privacy:** The Freedom of Information and Protection of Privacy (FOIPP) legislation does not allow students to retrieve any course material from public places. Anything that requires handing back will be returned directly during class or office hours. If students are unable to pick up their assignments from the instructor, they provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.
3. Final grades are not posted by the Sociology Department. They are only available online.

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 Faculty 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

Please refer to the website listed below for information on University of Calgary policies on Plagiarism/Cheating/Other Academic Misconduct:
<http://www.ucalgary.ca/pubs/calendar/current/k-5.html>

Deferrals

When possible, please provide advance notice if you are unable to write an exam or complete/turn-in assignments 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 health issue rather than after recovery. Deferrals will be allowed in the following circumstances: illness, domestic affliction or religious conviction. Travel arrangements, misreading the syllabus, and scheduling conflicts with other classes or employment 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:

<https://www.ucalgary.ca/registrar/student-forms>

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

https://www.ucalgary.ca/registrar/files/registrar/deferred_termwork15_0.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).

Student Representation

The 2018-19 Students' Union VP Academic is Jessica Revington (suvpaca@ucalgary.ca).

For more information, and to contact other elected officials with the Student's Union, please visit this link: <https://www.su.ucalgary.ca/about/who-we-are/elected-officials/>

You may also wish to contact the Student Ombudsperson for help with a variety of University-related matters: <http://www.ucalgary.ca/ombuds/contact>

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

The student accommodation policy can be found at: ucalgary.ca/access/accommodations/policy.

Students needing an Accommodation because of a Disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities ucalgary.ca/policies/files/policies/student-accommodation-policy.

Students needing an Accommodation based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the course instructor.

Student Resources

[SU Wellness Centre](#)

[Campus Mental Health Strategy](#)