



# UNIVERSITY OF CALGARY

**Fall 2019**

FACULTY OF ARTS

Department of Sociology

Department of Sociology Website: <https://soci.ucalgary.ca/>

| COURSE TITLE: Social Statistics: the General Linear Model |                                  |                 |                             |
|---|----------------------------------|-----------------|-----------------------------|
| Course Number   | Sociology 611                    |                 |                             |
| Pre/Co-Requisites   |                                  |                 |                             |
| Instructor Name   | Dr. Josh Curtis                  | Email           | joshua.curtis@ucalgary.ca   |
| Office Location   | SS 944                           | Office Hours    | Wednesday 12-1              |
| Telephone No.   | 819-821-0556                     |                 |                             |
| TA Name   | Syed Hammad Ali                  | TA Email        | syedhammad.ali1@ucalgary.ca |
| TA Office Location  | SS 939                           | TA Office Hours | Friday 1:30-2:30            |
| Class Dates   | Wednesday (Lecture) Friday (Lab) |                 |                             |
| Class Times   | 9:00-11:45                       |                 |                             |
| Class Location  | SS 921                           |                 |                             |

## Course Description and Objectives

This course covers the fundamentals of multiple regression, with a focus on the ordinary least squares (OLS) regression model. It also includes an introduction to more complex linear regression models, including models with limited dependent variables (e.g. logistic regression) and maximum likelihood estimation. Relevance for sociological research is discussed through examples drawn from the literature and the professor's own research. The course also includes a laboratory component where students will have opportunities to apply the techniques learned in class. The software Stata is used for the laboratory component of the course. This course is intended to provide students with the statistical skills to (1) successfully complete a quantitative Master's thesis, (2) understand and critique the wider sociological literature, (3) be prepared for more advanced courses (including SOCI 711). At the end of this course, students should have knowledge and understanding of the way sociologists use multivariate methods to answer research questions about direct associations, moderation, and mediation, including ruling out spuriousness through observed controls. Students should also have mastery of the assumptions of the OLS regression model, as well as how to test these assumptions. Moreover,

students should be aware of how to address variables that are dichotomous, in the cases of when these variables are either predictors or outcomes.

### Course Objectives/Learning Outcomes

This will vary by course – University regulations require this information.

### Required Textbooks, Readings, Materials, Electronic Resources

- Mehmetoglu, Mehmet and Tor Georg Jakobsen. 2017. *Applied Statistics Using Stata: A Guide for the Social Sciences*. London: Sage Publications Ltd. (to be purchased in the bookstore).
- Linneman, Thomas J. 2014. *Social Statistics: Managing Data, Conducting Analyses, Presenting Results, 2<sup>nd</sup> Edition*. New York: Routledge. (chapter photocopies will be provided for review purposes).

### Methods of Assessment and Grading Weights

|  |            |
|--|------------|
| <b>Assignment 1 (Sept 28):</b>         | <b>10%</b> |
| <b>Assignment 2 (Oct 25):</b>          | <b>10%</b> |
| <b>Assignment 3 (Nov 15):</b>          | <b>10%</b> |
| <b>Exam 1 (Oct 2):</b>                 | <b>30%</b> |
| <b>Final Exam (TBD)</b>                | <b>30%</b> |
| <b>Paper Presentation (Nov 20-27):</b> | <b>10%</b> |

**\*\*\*This schedule is subject to change\*\*\***

#### **Week 1 – September 11: Bivariate Regression**

- M&J Chapter 3.
- *Lab*: Friday, September 13 9-11:45.

#### **Week 2 – September 18: Hypothesis Testing and Bivariate Regression**

- M&J Chapter 3.
- Linneman Chapter 8.
- *Lab*: Friday, September 20 9-11:45.

#### **Week 3 – September 25: Introduction to Multiple Regression I & II**

- M&J Chapter 4
- Linneman Chapter 10.
- *Lab*: Friday, September 27 9-11:45.
- **Assignment #1: Due on D2L by 11:59 PM Friday, September 28<sup>th</sup>.**

#### **Week 4 – October 2: Midterm #1**

**Week 5 – October 9: Categorical Predictors and Multiple Regression**

- Linneman Chapter 10.
- *Lab*: Friday, October 11 9-11:45.

**Week 6 – October 16 Non-Linearity and Other Model Problems**

- M&J Chapter 4
- Linneman Chapter 14.
- *Lab*: Friday, October 18 9-11:45.

**Week 7 – October 23 Interactions**

- M&J Chapter 6
- Linneman Chapter 15.
- *Lab*: Friday, October 25 9-11:45.
- **Assignment #2: Due on D2L by 11:59 PM Friday, October 25.**

**Week 8 – October 30 Logistic Regression I**

- M&J Chapter 8
- Linneman Chapter 12.
- *Lab*: Friday, November 1 9-11:45.

**Week 9 – November 6: Logistic Regression II**

- M&J Chapter 8
- Linneman Chapter 12.

***No classes: Reading Week***

- **Assignment #3 Due on D2L by 11:59 PM Friday, November 15.**

**Week 10 – November 20: Class presentations**

**Week 11 – November 27: Class presentations**

**Week 12 – Exam review: December 4**

## Final Exam Information

Our final exam will be held during the exam period. It will consist of MCQ, short, and long answer questions.

## Grading Scale

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

| Grade | Percent range | Grade Point Value | Description  |
|-------|---------------|-------------------|--|
| A+    | 96 – 100%     | 4.0               | Outstanding performance  |
| A     | 90 – 95.99%   | 4.0               | Excellent performance  |
| A-    | 85 – 89.99%   | 3.7               | Approaching excellent performance  |
| B+    | 80 – 84.99%   | 3.3               | Exceeding good performance   |
| B     | 75 – 79.99%   | 3.0               | Good performance   |
| B-    | 70 – 74.99%   | 2.7               | Approaching good performance   |
| C+    | 67 – 69.99%   | 2.3               | Exceeding satisfactory performance   |
| C     | 63 – 66.99%   | 2.0               | Satisfactory performance   |
| C-    | 59 – 62.99%   | 1.7               | Approaching satisfactory performance   |
| D+    | 55 – 58.99%   | 1.3               | Marginal pass. Insufficient preparation for subsequent courses in the same subject |
| D     | 50 – 54.99%   | 1.0               | Minimal Pass. Insufficient preparation for subsequent courses in the same subject. |
| F     | <50%          | 0                 | Failure. Did not meet course requirements.   |

## 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 can provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary
3. Final grades are not posted by the Sociology Department. They are only available online.

## Research Ethics

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.

## Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf>) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

## Instructor Intellectual Property

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

## 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.html>

## Absences and Deferrals

Students who are absent from class assessments (tests, participation activities, or other assignments) should inform their instructors as soon as possible. Instructors may request that evidence in the form of documentation be provided. If the reason provided for the absence is acceptable, instructors may decide that any arrangements made can take forms other than make-up tests or assignments. For example, the weight of a missed grade may be added to another assignment or test. For information on possible forms of documentation, including statutory declarations, please see <https://www.ucalgary.ca/pubs/calendar/current/m-1.html>

**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 can be found at:  
<https://www.ucalgary.ca/registrar/exams/deferred-exams>

**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://live-ucalgary.ucalgary.ca/sites/default/files/teams/1/deferred\\_termwork15\\_0.pdf](https://live-ucalgary.ucalgary.ca/sites/default/files/teams/1/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).

## Academic Accommodation

The student accommodation policy can be found at: [ucalgary.ca/access/accommodations/policy](http://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](https://www.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.

## Wellness and Mental Health Resources

The University of Calgary recognizes the pivotal role that mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive support when needed. We encourage you to explore the excellent mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through Student Wellness Services (Room 370 MacEwan Student Centre, <https://www.ucalgary.ca/wellness-services/services/mental-health-services>) and the Campus Mental Health Strategy (<http://www.ucalgary.ca/mentalhealth/>).

## Student Success

The Student Success Centre provides services and programs to ensure students can make the most of their time at the University of Calgary. Our advisors, learning support staff, and writing support staff assist students in enhancing their skills and achieving their academic goals. They provide tailored learning support and advising programs, as well as one-on-one services, free of charge to all undergraduate and graduate students. For more information visit:

<https://www.ucalgary.ca/student-services/student-success>

## Student Ombuds Office

The Student Ombuds Office supports and provides a safe, neutral space for students. For more information, please visit [www.ucalgary.ca/ombuds/](http://www.ucalgary.ca/ombuds/) or email [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca).

## Student Union (SU) Information

The SU Vice-President Academic can be reached at (403) 220-3911 or [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca); Information about the SU, including elected Faculty Representatives, can be found here:

<https://www.su.ucalgary.ca>.

## Emergency Evacuation/Assembly Points

Assembly points for emergencies have been identified across campus. Assembly points are designed to establish a location for information updates from the emergency responders to the evacuees; from the evacuated population to the emergency responders. For more information, see the University of Calgary's Emergency Management website:

<http://www.ucalgary.ca/emergencyplan/assemblypoints>

## Safewalk

Campus security will escort individuals, day or night, anywhere on campus (including McMahon Stadium, Health Sciences Centre, Student Family Housing, the Alberta Children's Hospital and the University LRT station). Call 403-220-5333 or visit <http://www.ucalgary.ca/security/safewalk>. Use any campus phone, emergency phone or the yellow phone located at most parking lot pay booths. Please ensure your personal safety by taking advantage of this service.