

**University of Calgary**  
**Department of Sociology**  
**Sociology 311 *Introduction to Social Statistics I***  
**Winter, 2014**

|                      |  |                                       |
|----------------------|--|---------------------------------------|
| <b>Instructor:</b>   | Dr. Jenny Godley   | <b>Class Hours:</b> M,W,F 12:00-12:50 |
| <b>Office:</b>       | SS922  | <b>Class Location:</b> ST126          |
| <b>Office Hours:</b> | M, W 11:00-12:00, or by appt.                                  | <b>Lab Hours:</b> T 15:30 - 18:20     |
| <b>Telephone:</b>    | 403-220-7566   | <b>Lab Location:</b> AFCL, SS018      |
| <b>E-mail:</b>       | <a href="mailto:jgodley@ucalgary.ca">jgodley@ucalgary.ca</a> * |                                       |

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|-------------------------|--|--|
| <b>Teaching Assts.:</b> | Jason Novick   | Olivia Skidmore  |
| <b>Office:</b>          | SS945  | SS919  |
| <b>Office Hours:</b>    | W 15:00-16:00  | Th 12:00-13:00   |
| <b>Email:</b>           | <a href="mailto:jbnovick@ucalgary.ca">jbnovick@ucalgary.ca</a> | <a href="mailto:oaskidmo@ucalgary.ca">oaskidmo@ucalgary.ca</a> |

***Emergency evacuation:***

In the case of fire or other emergency evacuation of this classroom, please proceed to the assembly point by the ICT Food Court. (Alternate assembly point: Professional Faculties Food Court). <http://www.ucalgary.ca/emergencyplan/node/75>

\* Please use email for administrative concerns only. Substantive issues should be addressed in person, either in class, during office hours, or during an appointment time.

NOTE: this course outline is subject to revision. All changes will be announced in class.

*Last revised 7 January, 2014*

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**Overview:**

This is the first of two required statistics courses in Sociology at the University of Calgary. This course focuses on introductory descriptive and inferential statistics, while the second course presents more advanced material. Together, these courses will provide you with the basic tools necessary to conduct, interpret and critique quantitative social science research. In this course, you will learn how to calculate and interpret simple descriptive and inferential statistics. You will also learn how to use a statistical software package, STATA, to produce descriptive and inferential statistics. This course assumes fluency in high school level algebra. Statistics is a language; like all languages, it is best learned through usage. You will be required to calculate and interpret descriptive and inferential statistics, both by hand and using STATA, throughout this course.

### **Objectives:**

1. To introduce you to the theory of statistical analysis.
2. To introduce you to the basic methods of descriptive and inferential statistical analysis, and develop your facility with these methods.
3. To teach you how to use STATA for descriptive and inferential data analysis both skillfully and intelligently.
4. To enable you to conduct your own mini-research project on a topic of your choice.
5. To illustrate and critique uses of social statistics.
6. To provide a solid foundation for a further course on inferential statistics.

### **Text:**

*Statistics: A tool for social research. (Second Canadian Edition).* By Joseph F. Healey and Steven G. Prus. (2013).

\*\* Available for purchase at the U of C bookstore.

### **Requirements:**

#### A. Reading:

Readings are assigned for each day of class. Please come to class every day having read the materials. Bring any questions or comments you have about the readings with you to share with your classmates. Please bring your texts to class, as we will refer to them often.

#### B. Exams:

You will have two mid terms and one final examination. The midterms will each be worth 15% of your final grade, and the final will be worth 30% of your final grade. The mid-terms will be held in class. The final will take place during the final examination period, and will be scheduled by the Registrar. Exams are mandatory. If you fail to take any of the exams without documentation, you will automatically fail the course.

NOTE: The only acceptable reasons for missing an examination in this class, as listed in the Deferral of Final Examinations section of the University of Calgary Calendar (<http://www.ucalgary.ca/pubs/calendar/current/g-6.html>), are illness, domestic affliction, or religious conviction. If you miss a mid-term examination, and you provide me with the appropriate documentation, the weight of the midterm exam will be added to your final examination. There are NO MAKE UP exams in this class. If you miss the final examination, you must contact the Registrar's Office immediately.

#### C. Practice Questions:

Practice questions are provided at the end of each chapter in the textbook, and the answers are provided at the end of the textbook. You are encouraged to do as many as

you can for each chapter, and to check your answers carefully. It is suggested that you complete the exercises *by hand, and in pencil*, and that you show all your calculations. It is your responsibility to make sure that you understand and can do all the practice questions. If you have any questions, you are encouraged to bring them up during class or in office hours. I am happy to work through any of the practice questions with you, either in a group or individually. The practice questions form the basis of the examinations. Remember that on the exams, you will also be required to show many of your mathematical calculations by hand.

D. Lab assignments:

There are four mandatory lab assignments throughout the semester. Each of these assignments will be worth 10% of your grade, for a total of 40%. The lab assignments will be handed out *in the lab sessions*. It is your responsibility to get the lab assignments.

We will not accept e-mail submissions of lab assignments. Only hard copies of lab assignments will be accepted. Lab assignments must be typed and stapled.

There is a mandatory \$15 lab fee, which will be collected during the second week of classes. We will not grade your first lab assignment until we receive your lab fee.

NOTE: Late lab assignments will receive a grade reduction of 15% for each day past the deadline. The 15% grade reduction per day also applies to weekend days and holidays. If you hand in your lab more than FIFTEEN MINUTES past the time it is due, it will be considered one day late.

Grades:

Your final grade will be computed as follow:

|                     |     |
|---------------------|-----|
| - Mid Term One      | 15% |
| - Mid Term Two      | 15% |
| - Lab Assignments   | 40% |
| - Final Examination | 30% |

I will use the following scale to convert percentage grades to letter grades for this class.

|              |           |            |
|--------------|-----------|------------|
| A+ = 95-100  | A = 90-94 | A- = 85-89 |
| B+ = 80-84   | B = 75-79 | B- = 70-74 |
| C+ = 65-69   | C = 60-64 | C- = 55-59 |
| D+ = 50-54   | D = 45-49 |            |
| F = below 45 |           |            |

The following description of letter grades comes from the University of Calgary Calendar.

An A indicates superior performance, showing comprehensive understanding of the subject matter.

A B indicates clearly above average performance, with knowledge of the subject matter generally complete.

A C indicates satisfactory performance, with a basic understanding of the subject matter.

A D indicates marginal performance and generally insufficient preparation for subsequent courses in the same subject.

An F indicates unsatisfactory performance, or failure to meet course requirements.

**Policies:**

- A. You are responsible for all the material covered in the textbook, in supplemental readings, during lectures, and during lab sessions.
- B. In the event that you have to miss class, you are responsible for getting the lecture notes from another student in the class.
- C. I will not distribute my personal notes to students under any circumstances.
- D. You may work with other students in the class on the labs and practice questions. However, all submitted work must be **YOUR OWN INDIVIDUAL WORK**. It is your responsibility to make sure you understand the definition of plagiarism, and that you avoid submitting any work which could be considered plagiarized. Students are advised to consult the 2013-2014 University of Calgary Calendar, which presents a Statement of Intellectual Honesty and definitions and penalties associated with plagiarism, cheating, and other academic misconduct. In particular, please note the following statement on penalties for academic misconduct: (<http://www.ucalgary.ca/pubs/calendar/current/k.html>)
- E. Cell phones, pagers, blackberries, surfing the internet, checking email, and listening to music are disruptive to other students. **No electronic devices** are allowed during class or during lab sessions, with the exception of using a computer to take notes,

- conduct statistical analysis, or complete lab assignments. If you are caught using electronic devices for any other reason during class or lab, you will be asked to leave the classroom.
- F. There are no re-writes on any assignments or examinations in this class, and no extra credit work will be given.
  - G. If you expect to have trouble meeting *any* of the class deadlines, please make sure to discuss your concerns with me *before* the deadline.
  - H. If you wish to discuss any grades in the class (on examinations, homework assignments, or labs) you must meet with either myself or one of the Teaching Assistants IN PERSON, either during office hours or during an appointment time. We will not discuss grades over email.
  - I. The U of C Statement on Principles of Conduct, reproduced in the University of Calgary Calendar (<http://www.ucalgary.ca/pubs/calendar/current/j-2.html>), applies to all work in this class. Please familiarize yourself with this statement.

**Additional Information:**

- A. **FOIP:**  
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 instructor's office, the department office, etc. Term assignments must be returned to students individually, during class or during the instructor's 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.
- B. **Academic Accommodation:**  
Students with a disability, who require academic accommodation, need to register with the Disability Resource Centre (MC 295, telephone 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 the student's responsibility to register with the Disability Resource Centre and to request academic accommodation, if required.
- C. **Plagiarism:**  
Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. As a result, cheating or plagiarism on any assignment or examination are regarded as serious academic offenses. Students are advised to consult the 2011-2012 University of Calgary Calendar, which presents a Statement of Intellectual Honesty and definitions and penalties associated with plagiarism, cheating, and other academic misconduct.

D. Safewalk:

The University of Calgary provides a safewalk 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.

E. Sociology Web Page:

<http://www.soci.ucalgary.ca>

F. USRI: At the completion of this course each student will be asked to complete an online Universal Student Ratings of Instruction (USRI) form.

G. 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 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.

H. Student Representative:

The 2013-14 Students' Union VP Academic can be reached at: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca).

The Faculty of Arts has four SU representatives who may be contacted at any of the following email addresses: [arts1@ucalgary.ca](mailto:arts1@ucalgary.ca), [arts2@ucalgary.ca](mailto:arts2@ucalgary.ca), [arts3@ucalgary.ca](mailto:arts3@ucalgary.ca), and [arts4@ucalgary.ca](mailto:arts4@ucalgary.ca). You may also wish to contact the Student Ombudsperson for help with a variety of University-related matters:

<http://www.ucalgary.ca/provost/students/ombuds/role>

***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.

***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](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).

| Week  | Date    | Reading              | Topic  | NOTES          |
|-------|---------|----------------------|--|----------------|
| One   |         |                      |  |                |
| W     | 8 Jan.  |                      | Course Introduction  |                |
| F     | 10 Jan. | Prologue,<br>Chpt. 1 | Math Review, Level of Measurement  |                |
| Two   |         |                      |  |                |
| M     | 13 Jan. | Chpt. 2              | Descriptive Statistics   |                |
| W     | 15 Jan. | Chpt. 2              | Charts and Graphs  |                |
| F     | 17 Jan. | None                 | No class   |                |
| T lab | 14 Jan. | Week 2 lab           | Intro. to projects, Research Ethics<br>Intro. to STATA, Intro. to Datasets |                |
| Three |         |                      |  |                |
| M     | 20 Jan. | Chpt. 3              | Central Tendency   |                |
| W     | 22 Jan. | Chpt. 3              | Dispersion   |                |
| F     | 24 Jan. | Chpt. 4              | Normal Curve   |                |
| T lab | 21 Jan. | Week 3 lab           | Survey design<br>Lab (Chpts. 2 and 3) – Survey, Univariate Statistics      | Hand out Lab A |
| Four  |         |                      |  |                |
| M     | 27 Jan. | Chpt. 4              | Normal Curve   |                |
| W     | 29 Jan. | Chpt. 5              | Inferential  |                |
| F     | 31 Jan. | Chpt. 5              | Sampling Distribution  |                |
| T lab | 28 Jan. | Week 4 lab           | Lab – (Chpts. 4 and 5) - Z scores, Drawing Samples                         | Lab A due      |

|       |         |            |   |                |
|-------|---------|------------|---|----------------|
| Five  |         |            |   |                |
| M     | 3 Feb.  | Chpt. 5    | Sampling Distribution                       |                |
| W     | 5 Feb.  | Chpts. 1-5 | Review                                      |                |
| F     | 7 Feb.  |            | Midterm 1                                   |                |
| T lab | 4 Feb.  | Week 5 lab | Data collection                             |                |
| Six   |         |            |   |                |
| M     | 10 Feb. | Chpt 6     | Estimation                                  |                |
| W     | 12 Feb. | Chpt 6     | Confidence Intervals                        |                |
| F     | 14 Feb. | Chpt. 7    | Hypothesis testing – one sample             |                |
| T lab | 11 Feb. | Week 6 lab | Lab – (Chpt. 6) – confidence ints.          |                |
| Seven |         |            |   |                |
| M     | 24 Feb. | Chpt 7     | Hypothesis testing – one sample             |                |
| W     | 26 Feb. | Chpt. 8    | Hypothesis testing – 2 samples              |                |
| F     | 28 Feb. | Chpt. 8    | Hypothesis testing – 2 samples              |                |
| T lab | 25 Feb. | Week 7 lab | Lab – (Chpts. 7 and 8) – Hypothesis testing | Hand out Lab B |
| Eight |         |            |   |                |
| M     | 3 March | Chpt. 9    | ANOVA                                       |                |
| W     | 5 March | Chpt. 9    | ANOVA                                       |                |
| F     | 7 March | Chpt. 10   | Chi square                                  |                |
| T lab | 4 March | Week 8 lab | Lab – (Chpt. 9) – ANOVA                     | Lab B due      |

|          |          |             |  |                |
|----------|----------|-------------|--|----------------|
| Nine     |          |             |  |                |
| M        | 10 March | Chpt. 10    | Chi square   |                |
| W        | 12 March | Chpt. 10    | Review Chapters 1-10                                     |                |
| F        | 14 March |             | Mid term 2   |                |
| T lab    | 11 March | Week 9 lab  | No lab   |                |
| Ten      |          |             |  |                |
| M        | 17 March | Chpt. 11    | Bivariate – Nominal                                      |                |
| W        | 19 March | Chpt. 11    | Bivariate – Nominal                                      |                |
| F        | 21 March | Chpt. 11    | Bivariate – Nominal                                      |                |
| T lab    | 18 March | Week 10 lab | Lab (Chpt. 10) – Chi square                              | Hand out Lab C |
| Eleven   |          |             |  |                |
| M        | 24 March | Chpt 12     | Bivariate – Ordinal                                      |                |
| W        | 26 March | Chpt 12     | Bivariate – Ordinal                                      |                |
| F        | 28 March | Chpt. 12    | Bivariate – Ordinal                                      |                |
| T lab    | 25 March | Week 11 lab | Lab (Chpts. 11 and 12) – bivariate nominal and ordinal   | Lab C Due      |
| Twelve   |          |             |  |                |
| M        | 31 March | Chpt. 13    | Regression   |                |
| W        | 2 April  | Chpt. 13    | Regression   |                |
| F        | 4 April  | Chpt. 13    | Regression   |                |
| T lab    | 1 April  | Week 12 lab | Lab (Chpts. 13 and 14) – Regression and Mult. regression | Hand out Lab D |
| Thirteen |          |             |  |                |
| M        | 7 April  | Chpt. 14    | Multiple Regression                                      |                |
| W        | 9 April  | Chpt. 14    | Multiple Regression                                      |                |
| F        | 11 April | Chpt. 14    | Multiple Regression                                      |                |
| T lab    | 8 April  | No lab      |  | Lab D due      |

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Fourteen

M

14 April

Review Session

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Final Examination (CUMULATIVE – covers the entire course): Registrar Scheduled during exam time (17-29 April)

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