Introduction to Social Statistics
Sociology 210:B2
Winter 2019 (96238)

Instructor: Dr. Les Hayduk
lhayduk@ualberta.ca
780-492-2730
Office Hours, Tory 4-21
Wednesday 4:30-5:00
Friday 4:30-5:00
or by appointment

Lectures: Monday, Wednesday, Friday 3:00-3:50, Tory 1-93

Labs: Tory-Basement 39, One of:
H5 (96239), Friday 8:00-9:50
H6 (96240), Friday 11:00-12:50
H7 (96241), Friday 1:00-2:50
H8 (96242), Friday 4:00-5:50

Teaching Assistants:
Labs H5, H7:  Nurullah  nurullah@ualberta.ca
Labs H6, H8:  Adam belton1@ualberta.ca

Textbook  The required course text is:

Healey, Joseph, Prus, Steven, & Lieflander, Riva.

Registration Requirements
Prerequisite: SOC 100, or consent of instructor

Technological Requirements

This course requires that you have access to: (1) a calculator for use in the labs, and (2) the free
statistical program R which runs “under” RStudio (http://www.r-project.org/ and www.rstudio.com/) to
complete labs and homework assignments. We will discuss how to obtain and use R in labs. A relatively
simple calculator is adequate as long as it contains a “square-root” function.

This course will use e-class for posting class materials, and making announcements, so e-class
should be checked regularly.
Course Perspective and Structure

The lectures and assignments in this course will basically follow the structure of the Healey, Prus, and Lieflander text (with some omissions and reordering of chapters). We begin with discussion of variables and statistical descriptions of single variables (univariate descriptive statistics). This is followed by simple inferential statistics which introduce the ideas of: samples versus populations, sampling distributions, estimates, and hypothesis testing. Next we consider relationships between two variables (bivariate statistics), and larger numbers of variables (multivariate statistics). I will down-play specific sections of the Healey, Prus, and Lieflander text (for example, analysis of variance).

I will occasionally supplement the text and text-power-points with material that encourages understanding how some of the statistics being discussed can be extended to become extremely useful research tools. The most extensive extension appears near the end of the course and connects to Healey, Prus, and Lieflander Chapters 13 and 14. The extensions emphasizes using statistics to model or represent causal theories – a use of statistics Healey, Prus, and Lieflander mention but do not emphasize. This extends the discussion of regression in ways which lead to understanding the relevance of control variables, and how statistical models can be employed to obtain testable theoretical implications.

Lab Sessions

The weekly lab sessions are not intended to present new material and instead provide an opportunity to review homework assignments, learn the R program, and ask the teaching assistants questions about the course material. Homework assignments will usually be submitted during lab sessions, and returned in later lab sessions.

Course Requirements, Grades, Weighting and Procedures

There are 5 homework assignments (worth a total of 20% of the course mark) plus one larger R-assignment due near the end of term (worth 15% of the course mark). See the schedule below for required submission dates. Homework assignments should be submitted to your TA during your Friday lab session on the indicated date (or earlier if you wish) but assignments will not be considered late if submitted before 6:00 PM (under the door of Tory 4-21) on the indicated date. Late assignments will be penalized 10% per day late.

There will be three closed-book exams, comprised of both multiple choice and written short-answer questions. Material from the text, lectures, e-materials, and class discussions will be included on the exams. The two term exams (each worth 20% of the course grade) will be held during scheduled class times but will NOT be held in the usual lecture room (see below). Example exam questions will be made available via e-class prior to the first Mid-term Exam. The final exam will be worth 25% of the course grade.

Your UNIVERSITY ID will be required at ALL the exams.

Mid-term Exam 1 (50 minutes):

Friday February 8, 3:00 PM in room Tory-Basement 45
Covering ALL the materials to date (text, lectures, e-materials, class discussion)
Mid-term Exam 2 (50 minutes):

Wednesday March 13, 3:00 PM, in room Tory-Basement 45
Emphasizing material covered after Mid-term Exam 1 (text, lectures, e-materials, class discussion)

Final Exam (2 hours):

Tentatively Wednesday April 24, 2019 at 2:00PM; but students should confirm the official final exam schedule date, time, and location on BearTracks. The final exam is cumulative and comprehensive, testing knowledge of the whole course.

Summary:

<table>
<thead>
<tr>
<th>Homework Assignments: 4% each</th>
<th>4% each</th>
<th>for a total of 20%</th>
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</thead>
<tbody>
<tr>
<td>R-assignment</td>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>2 Mid-term Exams: 20% each</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>Final Exam</td>
<td></td>
<td>25%</td>
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<td></td>
<td></td>
<td>100%</td>
</tr>
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Attendance, Absences, and Missed Grades

Regular attendance is essential for optimal course performance. Attendance at lectures and labs is not recorded or “required” but is strongly encouraged, as is participation in class discussions. “Excused absences” are not granted automatically and will be considered only for reasons such as incapacitating illness, severe domestic affliction, or religious convictions (see the University Calendar section on Attendance).

For absences from Term Work:

“The student should notify the instructor by e-mail within two days of the missed component. Unexcused absences will result in partial or total loss of the grade for any components that are not handed-in or completed as a result.”

For medical illness, the students can present one of the following:
1) “University of Alberta Medical Statement” signed by a doctor (this cannot be required, but will be accepted if provided in lieu of other documents)
2) “Medical Declaration Form for Students” -- for Faculty of Arts students, obtained from https://www.ualberta.ca/arts/student-services/undergraduate-student-services/forms-for-students
3) “Statutory Declaration” (for students in Faculties other than Arts, to be obtained from the Office of the Registrar)

“For other acceptable absences, such as domestic afflictions or religious convictions, the student should submit appropriate documentation of the situation.
1) For a death in the family – a copy of the death certificate
2) For religious conflict – a letter from the church or pastor
3) For a car accident – a copy of the accident report
4) For other serious afflictions – consult the instructor or Sociology Department about appropriate documents.”

“Instructors may either waive the term work or term exam, or require the student to make up the term work or term exam. For a waiver, the percentage weight allotted to the term work or term exam missed may be distributed to other term work, term exams, and/or the final exam as decided by the instructor. For make-ups, the student is required to complete equivalent term work or term exam as decided by the instructor. If the student does not complete the make-up as prescribed by the instructor, a raw score of zero will be assigned for the missed term work or term exam.”
Deferred Final Examination
Saturday May 4, 2019, 9:00 AM, BUS 1-10.
“Only the student’s home Faculty can grant a deferred final exam. Instructors cannot grant final exam deferrals.”
“A deferred final examination will not be approved if a student (a) has not been in regular attendance where attendance and/or participation are required, and/or, (b) excluding the final exam, has completed less than half of the assigned work”.

Grading

Grades are based on the percentage categories shown below. Percents will be rounded up to the next whole percent if the first decimal is ≥ .5 and will remain unchanged at the whole percent if the first decimal is ≤ .4. Letter grades are converted to “points” by the University to calculate GPA.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Letter Grade</th>
<th>Point Value</th>
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<tbody>
<tr>
<td>93-100</td>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>87-92</td>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>83-86</td>
<td>A-</td>
<td>3.7</td>
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<tr>
<td>79-82</td>
<td>B+</td>
<td>3.3</td>
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<tr>
<td>75-78</td>
<td>B</td>
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<tr>
<td>71-74</td>
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<tr>
<td>0-49</td>
<td>Fail</td>
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</tr>
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Learning and Working Environment

“The Faculty of Arts is committed to ensuring that all students, faculty and staff are able to work and study in an environment that is safe and free from discrimination and harassment. It does not tolerate behavior that undermines that environment. Anyone who feels that this policy is being violated is urged to:
1) Discuss the matter with the person whose behavior is causing concern; OR
2) If that discussion is unsatisfactory, or there is concern that direct discussion is inappropriate or threatening, discuss it with the Chair of the Department.
For additional advice or assistance regarding this policy you may contact the student ombudservice (http://www.ombudservice.ualberta.ca/). Information about the University of Alberta discrimination and harassment policy and procedures is listed in UAPPOL (University Policies and Procedures Online) at https://policiesonline.ualberta.ca/Pages/default.aspx”
Academic Honesty

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at http://www.governance.ualberta.ca) and avoid any behaviour that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.”

Please see the Academic Integrity website for further information: https://www.ualberta.ca/current-students/academic-resources/academic-integrity. If you have any additional questions, ask your instructor.

“An instructor or coordinator who is convinced that a student has handed in work that he or she could not reproduce without outside assistance is obliged, out of consideration of fairness to other students, to report the case to the Associate Dean of the Faculty. See the Academic Discipline Process.”

It is expected that all homework and the R assignments will constitute individual (not group) effort, but there is no objection to students checking with other students regarding whether or not they got the same numerical answer. Correction of inconsistent answers should return to individual endeavor. If assistance is required, your lab Teaching Assistant should be your primary “port of call”. If in doubt about what is permitted in this class, ask the instructor.

Outline Policy

“Policy about course outlines can be found in Course Requirements, Evaluation Procedures and Grading of the University Calendar.”

Recording of Lectures

”Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).”

Accessibility Resources

If you have special needs that could affect your performance in this class, please let me know during the first week of the term so that appropriate arrangements can be made. If you have special needs but are not already registered with Accessibility Resources, contact their office immediately https://www.ualberta.ca/current-students/accessibility-resources
Counselling & Clinical Services are available to assist with a wide variety of concerns beyond those that can be appropriately addressed by your TA or instructor. See https://www.ualberta.ca/current-students/counselling

Writing Assistance

The university provides free assistance with a wide variety of writing issues, including students having English as a second language, at the Centre for Writers (C4W). A description of C4W services can be found by searching for C4W from the University of Alberta website. These services can be accessed at any time during the writing process, though I urge anyone anticipating writing difficulties to contact the C4W as soon as possible.

Tentative Schedule of Topics and Readings

Various materials will be made electronically available via e-class in coordination with the lectures.

HPL = Healey, Prus, and Lieflander textbook.

**Week 1:** January 7-11
- HPL Prologue (student self-study)
- Introduction
- HPL Chapter 1
- Friday: NO LABS THIS WEEK

**Week 2:** January 14-18
- HPL Chapter 2
- R Introduction
- Friday Lab: Personal review of basic math (HPL pages1-7)

**Week 3:** January 21-25
- HPL Chapter 3
- expected value
- Friday Lab: Homework-1 DUE

**Week 4:** January 28 – February 1
- HPL Chapter 4
- Friday Lab: Homework-2 DUE

**Week 5:** February 4-8
- HPL Chapter 5
- Wednesday, Review
- Friday February 8 Mid-term EXAM 1 -- in TB-45

**Week 6:** February 11-15
- HPL Chapter 5
HPL Chapter 6
Friday Lab: *Homework-3 DUE*

**Week 7**: February 18-22
*No Classes*, Reading Week
*No Lab*, Reading Week

**Week 8**: February 25-March 1
HPL *Do* Pages 208-212 from Chapter 7
JUMP to HPL Chapter 10
Friday Lab: Open but nothing due.

**Week 9**: March 4-8
HPL Chapter 11, *Do* page 355 to 361; *Omit* the remainder of the chapter
We will *omit* all of HPL Chapter 12
Return to HPL Chapter 7 *Do* pages 212 to 230; *Omit* 230-bottom to 231-top.
Friday Lab: *Homework-4 DUE*

**Week 10**: March 11-15
Monday Review
Wednesday *March 13 Mid-term EXAM 2 -- in TB-45*
Friday Lab: Open but nothing due.

**Week 11**: March 18-22
HPL Chapter 8 (*Do* pages 243 to 257top; *Omit* 257-bottom to 266 on Cramer’s V and λ)
HPL Chapter 9 (*Do* pages 279 to 285; *Omit* 286 to 310)
Friday Lab: Open but nothing due.

**Week 12**: March 25-29
HPL Chapter 13
HPL Chapter 14 (*Do* pages 452 to 455; *Omit* remainder of the chapter)
Friday Lab: Open but nothing due.

**Week 13**: April 1-5
Regression: controlling; sets of equations as causal models;
(and, if time permits, measurement and latent variables)
*Homework-5 DUE WEDNESDAY April 3 IN CLASS***
Friday Lab: Open but nothing due. Remember the large R assignment next week.

**Week 14**: April 8-10
Catch-up and Review
*R-ASSIGNMENT DUE WEDNESDAY April 10 IN CLASS***
(No class or labs Friday.)

I wish you an instructive term.
L. Hayduk