

# Introduction to Social Statistics

Sociology 210:A2

Fall 2016 (65684)

**Instructor:** Dr. Leslie Hayduk

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780-492-2730

Office Hours, Tory 4-21

Monday 11:00-11:30

Friday 11:00-11:30

or by appointment

**Lectures:** Monday, Wednesday, Friday 3:00-3:50, Tory Basement-West 1

**Labs:** Tory-Basement 39

D5 (65685), Friday 8:00-9:50

D6 (65686), Friday 11:00-12:50

D7 (65687), Friday 1:00-2:50

D9 (66848), Friday 4:00-5:50

**Teaching Assistants:**

Labs D5,D6: Miya Draga [draga@ualberta.ca](mailto:draga@ualberta.ca)

Labs D7,D9: Aleena Amjad Hafeez [aamjadha@ualberta.ca](mailto:aamjadha@ualberta.ca)

**Textbook** The required course text is:

**Healey, Joseph, & Prus, Steven.** *Statistics: A Tool for Social Research*, Third Canadian Edition. Nelson Publishing, 2013, ISBN 978-0-17-665136-7

## 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/](http://www.rstudio.com/) ) to complete labs and homework assignments. We will discuss how to obtain and use R in class. 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 and Prus text. 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 and Prus text (for example, analysis of variance).

I will occasionally supplement the Healey and Prus text and power-points with material that permits understanding how the basic statistics being discussed extend to become extremely useful research tools. The most extensive extension appears near the end of the course and connects to Healey and Prus Chapters 13 and 14. The extensions emphasizes using statistics to model or represent causal theories – which is a use of statistics Healey and Prus 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.**

Calculators are permitted at the exams but should not be required.

### Mid-term Exam 1:

**October 7**, in room **TB-45** (Tory Basement 45)

Covering ALL the materials to date (text, lectures, e-materials, class discussion)

### Mid-term Exam 2:

**November 2**, in room **TB-45** (Tory Basement 45)  
Emphasizing material covered after Mid-term Exam 1 (text, lectures, e-materials, class discussion)

### Final Exam (2 hours):

*Tentatively* Tuesday December 20, 2016 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:

5 Homework Assignments: 4% each, for a total of	20%
R-assignment .....	15%
2 Mid-term Exams: .....20% each, for a total of	40%
Final Exam .....	25%
	Total 100%

## 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. “Regarding absences that may be excusable and procedures for addressing course components missed as a result, consult sections §23.3(1) and §23.5.6 of the University Calendar. 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 absences from **Term Work**:

**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 [http://www.foa.ualberta.ca/en/Undergraduate\\_Programs/Student\\_Services/Forms%20Cabinet.aspx](http://www.foa.ualberta.ca/en/Undergraduate_Programs/Student_Services/Forms%20Cabinet.aspx))
- 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 January 14, 2017, 9:00 AM, ESB 2-36.

“Only the student’s home Faculty can grant a deferred final exam. Instructors *cannot* grant final exam deferrals.”

As indicated in the University Calendar section 23.3(2)c: “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, as stated in §23.3(2)c of the Calendar.”

## 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  $\geq .5$  and will remain unchanged at the whole percent if the first decimal is  $\leq .4$ . Letter grades are converted to “points” by the University to calculate GPA.

Percentage	Letter Grade	Point Value
93-100	A+	4.0
87-92	A	4.0
83-86	A-	3.7
79-82	B+	3.3
75-78	B	3.0
71-74	B-	2.7
66-70	C+	2.3
62-65	C	2.0
58-61	C-	1.7
54-57	D+	1.3
50-53	D	1.0
0-49	Fail	0.0

## 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 [www.uappol.ualberta.ca](http://www.uappol.ualberta.ca) .”

## 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.”

“Students are encouraged to consult the [Student Conduct and Accountability](#) -website for useful resources about academic integrity, cheating and plagiarism, including the Academic Integrity Undergraduate Handbook.”

“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 homework and the R assignment 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).”

## Student Accessibility Services (SAS)

“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 are not already registered with-SAS, contact their office immediately (1-800 SUB; email [ssdsrec@ualberta.ca](mailto:ssdsrec@ualberta.ca) ; phone 780-492-3381; web [www.ssds.ualberta.ca](http://www.ssds.ualberta.ca) ).

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

H&P = **Healey and Prus** textbook.

### **Week 1a, 1b:** Sept 2-9

Introduction

H&P Chapter 1

Friday: *No Labs Sept 2 or Sept 9.*

### **Week 2:** Sept 12-16

H&P Chapter 2

R Introduction

Friday Lab: Personal review of basic math (H&P pages1-7)

### **Week 3:** Sept 19-23

H&P Chapter 3

expected value

Friday Lab: ***Homework-1 DUE***

### **Week 4:** Sept 26-30

H&P Chapter 4

Friday Lab: ***Homework-2 DUE***

### **Week 5:** Oct 3-7

H&P Chapter 5

Wednesday, Review

Friday **October 7 *Mid-term EXAM 1***

### **Week 6:** Oct 10-14

H&P Chapter 5

H&P Chapter 6

Friday Lab: ***Homework-3 DUE***

**Week 7:** Oct 17-21

H&P Chapter 7

**Week 8:** Oct 24-28

H&P Chapter 8 (We will NOT cover Chapter 9)

H&P Chapter 10

Friday Lab: ***Homework-4 DUE***

**Week 9:** Oct 31 – Nov 4

Chapter 10, Review

Wednesday **November 2, *Mid-term EXAM 2***

**Week 10:** Nov 7 – 11

*No Classes*, Reading Week

*No Lab*, Reading Week

**Week 11:** Nov 14 - 18

H&P Chapter 11 (segments)

H&P Chapter 12 (segments)

**Week 12:** Nov 21 - 25

H&P Chapter 13

H&P Chapter 14 (segments)

Friday Lab: ***Homework-5 DUE***

**Week 13:** Nov 28 – Dec 2

Regression: controlling, sets of equations as causal models  
(and if time permits) measurement, latent variables

**Week 14:** Dec 5-7

Catch-up and Review

Wednesday: ***R-ASSIGNMENT DUE IN CLASS***

(no labs Friday)

I wish you an instructive term.

L. Hayduk