
PANDEMIC CHANGES

The University of British Columbia has directed UBC programs to redesign courses to be delivered online given the COVID-19 pandemic. As a result this course has been redesigned to be delivered online. From the Provost's Office: "During this pandemic, the shift to online learning has greatly altered teaching and studying at UBC, including changes to health and safety considerations. Keep in mind that some UBC courses might cover topics that are censored or considered illegal by non-Canadian governments. This may include, but is not limited to, human rights, representative government, defamation, obscenity, gender or sexuality, and historical or current geopolitical controversies. If you are a student living abroad you will be subject to the laws of your local jurisdiction and your local authorities might limit your access to course material or take punitive action against you. UBC is strongly committed to academic freedom but has no control over foreign authorities (please visit <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,33,86,0> for an articulation of the values of the University conveyed in the Senate Statement on Academic Freedom). We recognize that students will have legitimate reason to exercise caution in studying certain subjects. If you have concerns regarding your personal situation, consider postponing taking a course with manifest risks until you are back on campus or reach out to your academic advisor to find substitute courses. For further information and support, please visit: <http://academic.ubc.ca/support-resources/freedom-expression>"

COURSE INFORMATION

Course Title	Course Code - Section	Credit Value
SOCI 328 Social Statistics I	SOCI 328 - 101	3

Class Time	Class Location	Session Term
Mon/Wed 11:00 am – 12:20 pm	Canvas	2020W1

Calendar Description

The testing of sociological theories using quantitative data analysis techniques on numerical data from social surveys, experiments and official statistics.

Prerequisites and Anti-requisites

Three credits of 100-level SOCI is the only prerequisite for this course. The Science Credit Exclusion List in the UBC Calendar indicates that UBC students cannot apply credits from any two of the following introductory statistics courses to their UBC degrees: STAT 200, 203, BIOL 300, COMM 291, ECON 325, EPSE 482, 483, FRST 231, GEOG 374, KIN 371, POLI 380, PSYC 218, 278, 366, SOCI 328.

INSTRUCTOR INFORMATION

Course Instructor	Email	Office Hours
Gerry Veenstra, PhD	gerry.veenstra@ubc.ca	TBD

I moved to Vancouver in 1998 after completing my PhD at McMaster University in Hamilton, Ontario (very near to where I grew up). I didn't know anyone when I first got here but I made some friends, played lots of soccer, got married and had a couple of kids – I won't be leaving this beautiful city anytime soon. My research primarily entails

quantitative investigation of social determinants of health. You can find out more about me and my research here: <https://sociology.ubc.ca/profile/gerry-veenstra/>

Teaching Assistant	Email	Office Hours
Jiaxin Gu, MA	gujiaxinsoci@gmail.com	TBD

COURSE DESCRIPTION

Course Overview

This course introduces students to elementary techniques of quantitative data analysis common in sociological research. It emphasizes selection of appropriate statistical techniques, examination of assumptions associated with them and interpretation of the results provided by them. The course does not emphasize complex calculations or memorization of complex formulae.

Learning Objectives

In this course students will:

- Develop an understanding of the importance of statistics in the social sciences
- Learn to think critically about quantitative data described in scientific and media reports
- Learn how to calculate and interpret basic descriptive statistics
- Become familiar with the concept of statistical inference
- Learn to determine when, why and how various statistical techniques are used
- Learn to analyze data using statistical software

Learning Materials

Garner, Roberta. 2010. *The Joy of Stats. Second Edition*. Toronto: The University of Toronto Press.

The statistical software program jamovi is available for Windows, Mac, Linux and Chromebook and can be downloaded for free at www.jamovi.org. Students with Windows or Mac should download the “solid” version. See <https://www.jamovi.org/user-manual.html> for more information on how to install jamovi on your computer.

Canvas will be used for video lectures, discussions, exercises, assignments and office hours. The following materials are also available in Canvas:

- Lecture videos (Media Gallery)
- Lecture slides (Files/Lecture slides)
- “How to in jamovi” videos (Media Gallery)
- GSS and Country datasets (Files/jamovi materials)
- Descriptions of variables in the GSS and Country datasets (Files/jamovi materials)
- Practice questions (Files/Practice materials)

Videos

Each unit of the course has one or two lecture videos associated with it. Some units also have short videos illustrating various techniques in jamovi. These videos are all available in the Media Gallery section of Canvas.

Communication

Students are welcome to post questions in the “Ask Gerry Anything” discussion in Canvas. The instructor and TA can also be reached by email; we will do our best to get back to you within 24 hours (perhaps longer on weekends). The instructor will be available for questions in Zoom during designated class times at which time students will also have the opportunity to discuss the exercises with other students in small breakout groups. The instructor and/or TA will also hold designated office hours during the week (also in Zoom). Finally, students are encouraged to consult Canvas regularly for announcements.

ASSESSMENTS FOR LEARNING

Summary

#	Component	Weight
1	Exercises	30%
2	Assignments	60%
3	Engagement	10%
	Total	100%

Exercises

The exercises are located in Canvas Assignments and are comprised of multiple choice and short answer questions based on the lectures and textbook readings. The exercises for a given class have a submission deadline of midnight the following day. Late exercises will be penalized 10%. An exercise submitted more than four days past the due date will receive a grade of zero.

Assignments

The assignments are located in the Assignments section of Canvas and require the online submission of short reports based on applying statistical techniques to real data using jamovi. The suggested submission deadlines for the assignments are provided below. Assignments submitted past Dec 11th will be penalized 10% per day.

Engagement

Based on watching lecture videos, completing exercises and assignments in a timely manner, contributing discussion questions, attending class and office hours, participating in learning teams, etc.

Grading Scheme

Grade	Percent	Level of Achievement
A+	90-100	Exceptional
A	85-89	Exceptional
A-	80-84	Exceptional
B+	76-79	Competent
B	72-75	Competent
B-	68-71	Competent
C+	64-67	Adequate
C	60-63	Adequate
C-	55-59	Adequate
D	50-54	Adequate
F	00-49	Inadequate

Missed Exercises

Students who encounter medical, emotional or personal problems that affect their ability to complete the exercises in a timely manner should be aware of the following course policies:

- First missed exercise: Submit the Student Self-Declaration form available in Canvas (Files/Miscellaneous) to the instructor. If in-term concession is granted the final exercise grade will be calculated from the remaining exercises. This policy does not apply to the Unit 12 exercises which must be completed.
- Second missed exercise: Submit the Request for Academic Concession and Student Self-Declaration forms to Arts Academic Advising Services. If in-term concession is granted the final exercise will be calculated from the remaining exercises. This policy does not apply to the Unit 12 exercises which must be completed.
- Additional missed exercises: Zero for the missed material.

SCHEDULE

Date	Lecture video	Topics	Textbook readings
Wed Sep 9	Unit 1: Introduction	Statistics in sociology; learning objectives	pp. 17–27, 287–317
Thurs Sep 10	Exercises for Unit 1 due @ 11:59 pm		
Mon Sep 14	Unit 2: Variables	Units of analysis; variables; levels of measurement	pp. 29-41
Tue Sep 15	Exercises for Unit 2 due @ 11:59 pm		
Wed Sep 16	Unit 3: Causality	Criteria for causality; multivariate causal scenarios	pp. 41-45
Thurs Sep 17	Exercises for Unit 3 due @ 11:59 pm		
Mon Sep 21	Unit 4: Sampling	Descriptive and inferential statistics; parameters and statistics; sampling strategies	pp. 46-49
Tue Sep 22	Exercises for Unit 4 due @ 11:59 pm		
Wed Sep 23	Unit 5: Summarizing variables – Part 1	Frequency tables; pie and bar charts; central tendency; dispersion	pp. 55-66, 70-79
Thurs Sep 24	Exercises for Unit 5 (Part 1) due @ 11:59 pm		
Mon Sep 28	Unit 5: Summarizing variables – Part 2	Shape; transformations	pp. 55-66, 70-79
Tue Sep 29	Exercises for Unit 5 (Part 2) due @ 11:59 pm		
Wed Sep 30	Lab for Assignment 1		
Fri Oct 2	Assignment 1 due @ 11:59 pm (suggested)		

Date	Lecture video	Topics	Textbook readings
Mon Oct 5	Unit 6: Probability models – Part 1	Probability; probability models	pp. 87–117, 121–127
Tue Oct 6	Exercises for Unit 6 (Part 1) due @ 11:59 pm		
Wed Oct 7	Unit 6: Probability models – Part 2	Normal distributions; sampling distributions; Central Limit Theorem	pp. 87–117, 121–127
Thurs Oct 8	Exercises for Unit 6 (Part 2) due @ 11:59 pm		
Mon Oct 12	Thanksgiving (no class)		
Wed Oct 14	Unit 7: Confidence intervals	Confidence intervals for means and proportions	pp. 128-135
Thurs Oct 15	Exercises for Unit 7 due @ 11:59 pm		
Mon Oct 19	Unit 8: Tests of significance	Logic of hypothesis testing; Type I and Type II errors	pp. 135-142
Tue Oct 20	Exercises for Unit 8 due @ 11:59 pm		
Wed Oct 21	Unit 9: Bivariate associations (categorical by categorical) – Part 1	Contingency tables; % differences; Cramer's V; Kendall's tau-b	pp. 153-155, 157, 191–199
Thurs Oct 22	Exercises for Unit 9 (Part 1) due @ 11:59 pm		
Mon Oct 26	Unit 9: Bivariate associations (categorical by categorical) – Part 2	Chi-squared test of significance; statistical and practical significance	pp. 153-155, 157, 191–199
Tue Oct 27	Exercises for Unit 9 (Part 2) due @ 11:59 pm		
Wed Oct 28	Lab for Assignment 2		
Fri Oct 30	Assignment 2 due @ 11:59 pm (suggested)		
Mon Nov 2	Unit 10: Bivariate associations (quantitative by quantitative) – Part 1	Scatterplots; Pearson's r	pp. 156, 166–186
Tue Nov 3	Exercises for Unit 10 (Part 1) due @ 11:59 pm		
Wed Nov 4	Unit 10: Bivariate associations (quantitative by quantitative) – Part 2	OLS regression line; Spearman's rho	pp. 156, 166–186
Thurs Nov 5	Exercises for Unit 10 (Part 2) due @ 11:59 pm		
Mon Nov 9	Lab for Assignment 3		

Date	Lecture video	Topics	Textbook readings
Wed Nov 11	Remembrance Day (no class)		
Fri Nov 13	Assignment 3 due @ 11:59 pm (suggested)		
Mon Nov 16	Unit 11: Bivariate associations (categorical by quantitative)	Comparing central tendencies, dispersions and shapes; oneway ANOVA test of significance	pp. 157–158, 203–209
Tue Nov 17	Exercises for Unit 11 due @ 11:59 pm		
Wed Nov 18	Lab for Assignment 4		
Fri Nov 20	Assignment 4 due @ 11:59 pm (suggested)		
Mon Nov 23	Unit 12: Multiple regression – Part 1	Multivariate causal scenarios (again); multiple regression	pp. 159–165, 186–190
Wed Nov 25	Unit 12: Multiple regression – Part 2		
Thurs Nov 26	Exercises for Unit 12 due @ 11:59 pm		
Mon Nov 30	Lab for Assignment 5		
Fri Dec 11	Assignments 1 – 5 due @ 11:59 pm		

UNIVERSITY POLICIES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and as such there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on [the UBC Senate website](#).

Academic Integrity

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply when the matter is referred to the Office of the Dean. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the [UBC Calendar: Student Conduct and Discipline](#).

Academic Accommodation for Student with Disabilities

Academic accommodations help students with a disability or ongoing medical condition overcome challenges that may affect their academic success. Students requiring academic accommodations must register with the [Centre for Accessibility](#). They will determine the student's eligibility for accommodations in accordance with [Policy 73: Academic Accommodation for Students with Disabilities](#). Academic accommodations are not determined by your instructors, and instructors should not ask you about the nature of your disability or ongoing medical condition, or request copies of your disability documentation. However, your instructor may consult with the Centre for Accessibility should the accommodations affect the essential learning outcomes of a course.

Copyright

All materials of this course (lecture slides and videos, assessments, course readings, etc.) are the intellectual property of the instructor or licensed to be used in this course by the copyright owner. The lecture videos should not be downloaded from Canvas. Redistribution of these materials by any means without permission of the copyright holder(s) constitutes a breach of copyright and may lead to academic discipline.

ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the $xwm\text{ə}θkw\text{ə}y\text{əm}$ (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people who for millennia have passed on their culture, history and traditions from one generation to the next on this site.