<div align="center">

University of Toronto
SOCIOLOGY 497H1S: New Topics in Sociology,
Advanced Quantitative Methods in Sociology
Department of Sociology
Winter, 2021

</div>

Class Time:	Wednesdays 3:10PM-6:00PM
Course Delivery:	Online via Zoom. See Quercus for meeting links and password
Instructor:	Cassandra Barber
Office Hours:	by appointment
Email:	cassandra.barber@utoronto.ca

Calendar Description: *Prepares students to undertake advanced quantitative research methods in sociology. Students will learn to prepare data for analysis, carry out analyses, and interpret research results using a variety of advanced quantitative methods.*

Prerequisites: SOC252H1 and 1.0 SOC FCE at the 300+ level**.** Students without the prerequisites will be removed at any time discovered and without notice.

Course Description

In this online course we will examine commonly used advanced quantitative methods in sociology – linear regression; logistic regression; multilevel modeling; survival analysis; and factor analysis. We will discuss the application of these methods and how to interpret results. We will focus on practical aspects of sociological inquiry and spend time discussing how to select the best method in response to a research question.

There will also be an applied online lab portion of the class. We will conduct data analysis using Statistical Package for Social Sciences (SPSS), a statistical analysis software package. In the lab, we will work through a series of exercises using secondary data. Students will have an opportunity to conduct research in an area of interest using a method covered during the course.

Course Objectives

- To be exposed to a range of advanced quantitative methods
- To develop a research paper
- To demonstrate the ability to conduct analyses using SPSS statistical software, interpret results and communicate findings

Required Text

Course readings consists of both methodological and peer-reviewed research articles and texts. There are no required text for this course. However, I highly recommend that everyone have at

least one basic methods textbook. If you do not have one from a previous course, I would recommend that you look at purchasing <u>any edition</u> of the following text:

- Tabachnick, Barbara G., and Linda S. Fidell. *Using multivariate statistics*. Boston, MA: Pearson.

Readings from the above textbook listed in the course schedule are optional (though recommended), the empirical readings are mandatory. We will spend a portion of most classes discussing how the methods are applied. The assigned empirical readings are provided below in the class schedule and are accessible online from the University of Toronto Library.

Methods of Assessment

Each assessment component is described below.

Participation	15%	
Research Paper:		
Research Proposal	20%	(February 3 at 3:00PM)
Presentation	25%	(April 7)
Final Research Paper	40%	(April 7 at 3:00PM)

Please try to submit your assignments in on time. Late assignments will be penalized except in cases of serious illness or emergencies. **You will lose 5% per day that an assignment is late, and it will not be accepted if it is more than one week late,** unless you have made special arrangements with me at least two weeks prior to the due date of the assignment or have an emergency.

Participation: Participation is worth 15% of your grade. Students are expected to come to class having read the assigned readings and prepared to actively participate in class discussions. During each class students will be expected to provide a summary of the text's methods and results section, share their thoughts, opinions on what was or was not useful and relate the material to your area of interest and/or projects. The more you participate, the more you will get from the class and the more interesting it will be for all of us!

During class discussions please use the 'hand raise' feature in Zoom or post your comment and/or question directly in the Zoom chat.

Research Paper: The research paper will be completed in two stages over the course of the semester. The research paper can be on any topic but must employ one of the methods covered in the course.

Your paper must be between 1,500 and 2,000 words in length (not including title, abstract, references, or tables, charts and figures) using 12-point font Times New Roman, double-spaced, 1" margins and submitted as a word file. Abstract must be 250 words or less. Please post the word count on the front page for both the abstract and paper separately.

Research papers must be submitted by 3:00PM on April 7 on Quercus.

More details will be provided on Quercus and during lectures.

Research Proposal: In this assessment you will propose a research question, identify your dataset and outline the methods you will employ. This assignment will serve as the basis of your research paper and provides students with an opportunity to receive feedback. **Proposals must be submitted by 3:00PM on February 3 on Quercus.**

Presentation: During the last day of class (April 7), each student will present their research paper to the class. You may choose to create a poster presentation or a PowerPoint slide presentation. We will construct this day similar to an academic conference. Each student will be awarded 10-minutes to present their research paper, followed by a 5-minute question period. This exercise will help prepare students to present their research at an academic conference and/or future workplace meetings. I will provide guidance on how to make your posters or slide presentations later in the term.

Selecting a Topic, Data, and Method

- You are free to select any topic for the research paper. It can be part of a thesis, something you started for another course, a previous idea or topic of interest. However, this project cannot be based on a paper that you are currently working on with someone else. This must be your work.
- You will want to select data that is readily available and that will help you answer your question. Feel free to browse publicly available datasets from ICPSR (http://www.icpsr.umich.edu/icpsrweb/ICPSR/access/index.jsp). There are also several national and international publicly available datasets available from:
    - Statistics Canada (https://www150.statcan.gc.ca/n1/en/type/data?MM=1)
    - The Interuniversity Consortium for Political and Social Research (ICPSR) at the University of Michigan (http://www.icpsr.umich.edu/icpsrweb/)
    - The US General Social Survey (GSS) at the North American Opinion Research Centre at the University of Chicago (https://gssdataexplorer.norc.org/)
    - The World Values Survey (WVS; http://www.worldvaluessurvey.org)
    - The European Social Survey (ESS; https://www.europeansocialsurvey.org/data/)
    - The International Social Survey Program (ISSP; http://w.issp.org/menu-top/home/)
    - The Understanding America Study (UAS; https://uasdata.usc.edu/index.php)
- Lastly, your paper must employ one of the methods covered during the course.

Class Schedule

Class	Date	Topics, Labs, Readings and Assignments
1	Jan 13	Topic: Introduction to advanced quantitative research
2	Jan 20	Topic: Research Questions and Quantitative Methods Readings: Chapters 1 & 2
3	Jan 27	Topic: Correlation & Regression Analysis (**Lab**) Readings: Chapters 3 & 4

		Empirical Readings:
		- Zou, Kelly H., Kermal Tuncali and Stuart G. Silverman. 2003. "Correlation and Simple Linear Regression." *Radiology* 227:617-628. - Feliciano, Cynthia and Yader R Lanuza. 2017. "An Immigrant Paradox? Contextual Attainment and Intergenerational Educational Mobility." *American Sociological Review* 82(1):211-241.
4	Feb 3	Topic: Categorical Independent Variables and Interaction Effects (**Lab**) *Empirical Readings*: - Andrew F. Hayes and Amanda K. Montoya. 2017. A Tutorial on Testing, Visualizing, and Probing an Interaction Involving a Multicategorical Variable in Linear Regression." *Analysis, Communication Methods and Measures* 11(1):1-30. - Schieman, S., M. H. Schafer and M. McIvor. 2013. "The Rewards of Authority in the Workplace: Do Gender and Age Matter?" *Sociological Perspectives* 55(3):75-96. - Joyner, Kara and J. Richard Udry. 2000. "You Don't Bring Me Anything but Down: Adolescent Romance and Depression." *Journal of Health and Social Behavio*r 41(4): 369-391. **Assignment: Research Proposal Due at 3:00PM**
5	Feb 10	Topic: Multiple Regression (**Lab**) Reading: Chapter 5 *Empirical Readings*: - Burgard, Sarah A. and Jennifer A. Ailshire. 2013. "Gender and Time for Sleep among U.S. Adults." *American Sociological Review* 78(1):51-69. - Margolis, Rachel and Myrskyla, Mikko. 2011. "A Global Perspective on Happiness and Fertility." *Population and Development Review* 37(1): 29-56.
-	Feb 17	Reading Week
6	Feb 24	Topic: Logistic Regression (**Lab**) Reading: Chapter 10 *Empirical Readings*: - Peng, Lee and Ingersoll. 2002. "An Introduction to Logistic Regression Analysis and Reporting." *The Journal of Educational Research*. 96(1): 1-14. - DeMaris, Alfred. 1995. "A Tutorial in Logistic Regression." *Journal of Marriage and the Family* 57(4):956 Wu, Cary. 2020. How does gun violence affect Americans' trust in each other? *Social Science Research* 91.
7	March 3	Topic: Survival Analysis (**Lab**) Reading: Chapter 11 *Empirical Readings*: - Clark, T. G., M. J. Bradburn and D. G. Altman. 2003. "Survival Analysis Part I: Basic Concepts and First Analysis." *British Journal of Cancer* 89:232-238. - Allison. 1982. "Discrete Time Methods for the Analysis of Event Histories." *Sociological Methodology* 13:61-98. - Margolis, Rachel and Mikko Myrskylä. 2015. "Parental Well-being Surrounding First Birth as a Determinant of Further Parity Progression." *Demography* 52(4):1147-1166.

		- Hewitt, Belinda, Janeen Baxter and Mark Western. 2005. Marriage breakdown in Australia: The social correlates of separation and divorce. *Journal of Sociology* 41(2):163-183.
8	March 10	Topic: Multilevel Models (**Lab**) Reading: Chapter 14 *Empirical Readings*: - Leventhal and Brooks-Gunn. 2003. "Moving to Opportunity: An Experimental Study of Neighborhood Effects on Mental Health." *American Journal of Public Health* 93(9):1576-1582. - DiPrete, Thomas A. and Jerry D Forristal. 1994. "Multilevel models: methods and substance." *Annual Review of Sociology* 20:331-357. - Leppink, Jimmie. 2015. "Data Analysis in Medical Education Research: A Multilevel Perspective." *Perspectives on Medical Education* 4:14-24.
9	March 17	Topic: Survey Design *Empirical Readings*: - Artino, Anthony R., Jr., Seffery S. La Rochelle, Kent J. Dezee and Hunter Gehlback. 2014. "Developing questionnaires for educational research: AMEE Guide No. 87." *Medical Teacher* 36(6):463-474. - Cangiarella, Joan, Colleen Gillespie, Judy A. Shea, Gail Morrison and Steven B. Abramson. 2016. "Accelerated medical education: A survey of deans and program directors." *Medical Education Online* 21:1.
10	March 24	Topic: Factor Analysis (**Lab**) Reading: Chapter 13 Empirical Readings: - Yong, An Gie and Sean Pearce. 2013. "A Beginner's Guide to Factor Analysis: Focusing on Exploratory Factor Analysis." *Tutorials in Quantitative Methods for Psychology* 9(2):79-94. - Tavakol, S., Reg Dennick and Mohsen Tavakol. 2011. "Psychometric properties and confirmatory factor analysis of the Jefferson Scale of Physician Empathy." *BMC Med Educ* 11(54).
11	March 31	Topic: Data Visualization (**Lab**) Readings: TBA
12	April 7	**Assignment: Research Presentations and Paper Submission**

Note: If there is no lab session, classes will be held in our regular class time from 3:10-6:00PM

Labs: Labs are held online from 5:00pm-6:00pm on the following dates:

- Jan 27
- Feb 3
- Feb 10
- Feb 24
- March 10
- March 24
- March 31

Labs are designed to provide students with applied experience conducting analysis. They are designed to complement the weeks methodological technique. Labs will be structured in two sections. The first section will be comprised of an exercise in which students will work through a

series of questions using a dataset. The second half will be dedicated for students to work on their research paper.

Class Format and Requirements

Students are expected to regularly attend online scheduled classes and labs on time. Classes will be comprised of a blend of lectures, group discussions, and labs. The first half of each class will be dedicated to new material, in lecture and group discussion format. During the second half of the class on dates where there is a lab session, we will learn how to analyze quantitative data using SPSS.

Videotaping and recording classes is strictly forbidden without written permission from the instructor.

The use of a webcam is preferred but not mandatory. I strongly encourage students to use a webcam during classes. This provides the class with a more natural feel. It is also helpful for your peers who may be facilitating class discussion. Although I strongly encourage you to use a webcam, it will not be mandatory.

Office Hours: will be held online via Zoom by appointment.

Communication: cassandra.barber@utoronto.ca (I will respond to emails within 24 hours)

Deadlines: Any request for a deadline extension for assignments should be made at least two weeks prior to the due date of the assignment. Assignments that are handed in late without prior arrangement with the instructor will be penalized 5% per day and will not be accepted if it is more than one week late, unless you have made special arrangements with the instructor or have an emergency.

Important Policies

Academic Misconduct: Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the University of Toronto degree that you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves. Cheating, misrepresentation, and plagiarism will not be tolerated. Students who commit an academic offence face serious penalties. Know where you stand by reading the "Code of Behaviour on Academic Matters" in the Calendar of the Faculty of Arts and Science.

Grade Appeals: Students who have concerns about the mark they receive are required to submit in writing their reasons for this, along with a copy of the marked work, no later than 2 weeks after assignments have been returned to the class.

Electronic Communications and Quercus: The University of Toronto Quercus system will contain the course syllabus, assignments, discussion board, and course announcements. Students are

responsible for the content of all course materials and for checking their official utoronto.ca email address regularly.

Student Responsibility: You are expected to know the contents of the syllabus. Please consult the syllabus before emailing the instructor. And you are responsible for all the material covered each week, as well as announcements posted on the course website (make sure to turn on the notifications of your choice on Quercus).

Accessibility: The University of Toronto is committed to accessibility. If you require accommodations or have any accessibility concerns, please visit http://studentlife.utoronto.ca/as as soon as possible. If you are registered with Accessibility Services, please forward your accommodations paperwork to the instructor within the first two weeks of the course so that arrangements can be made.

Equity, Diversity, and Inclusion: The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Resources

Writing Center: Students can attend workshops and arrange one-on-one appointments to discuss their writing projects: www.writing.utoronto.ca.

Crisis Lines: Students can access a list of free crisis lines at https://www.toronto.ca/311/knowledgebase/kb/docs/articles/311-toronto/information-and-business-development/crisis-lines-suicide-depression-telephone-support-lines-non-crisis-mental-health-services.html. These include crisis lines specific for suicide, LGBT-issues, depression, anxiety, and sexual assault. Some lines are anonymous, and most are available 24-hours a day. The following is a list of phone numbers and websites that students may find useful:

- 24/7 Canada Suicide Prevention Service (CSPS) 1-833-456-4566
- 24/7 Crisis Text Line Canada: text CONNECT to 686868
- UofT Campus Community Police: 416-978-2222
- WalkSmart: 416-978-7233
- UofT Accessibility Services: 416-978-8060
- 24/7 Good2Talk (For depression, anxiety, resources): 1-866-925-5454
- LGBTIQ+ Community Trans Lifeline: 877-330-6366
- 24/7 Mental Health # for veterans and family members: 1800-268-7708
- Wounded Warriors (for vets): 1888-706-4808
- UofT Health and Wellness: 416-978-8030
- UofT Sexual Violence and Prevention Support Centre: 416-978-2266
- UofT Anti-Racism and Cultural Diversity Office: 416-978-1259
- UofT Sexual and Gender Diversity Office: 416-978-5624○24/7 General Distress HelpLine: 416-408-HELP (4357)

- Gerstein Centre (Mental Health Crisis): 416-929-5200
- 24/7 Assaulted Women's Helpline: 416-863-0511
- 24/7 Toronto Rape Crisis Centre: 416-597-8808
- Jewish Family and Child (Sliding Scale Therapy, Bereavement): 416-638-7800

Registrar's Office: Students are encouraged to contact their registrar promptly with any unexpected difficulties they may experience during the course.