SOCIOLOGY 3FF3: INTRODUCTORY STATISTICS FOR SOCIOLOGY
Fall, 2020

Instructor: Gerald Bierling **Office:** online
Email: bierling@mcmaster.ca **Office Hours:** Mondays, 7pm to 8pm
Lecture: online **TA:** To be determined
Room: online **TA email:** To be determined

Course Description

The objective of 3FF3 is to provide an overview of the basic types of statistical analysis done in Sociology (and social science in general). Sociologists ask many different types of questions which can be answered through the application of statistical analysis, such as: is crime increasing or decreasing? why is economic inequality greater in some countries as opposed to other countries? why do some people support same-sex marriage while other people don't?

Course Objectives

This course addresses three University Undergraduate Degree Level Expectations. By the end of the course students should be able to:

- First, sociologists use a diverse range of methods to examine the social world. Gaining knowledge of these diverse methods will expand the student's depth and breadth of knowledge. A large body of literature will become accessible to students who are familiar with these research techniques.
- Second, after learning about each of these strengths and weaknesses of these various methods, students will be able to consider and critically evaluate different approaches to understanding the social world. As part of this, students will gain an awareness of the limits to obtaining 'true' and 'valid' knowledge of social phenomena. Sociology students need to be familiar with the various assumptions and techniques employed in published research, and to be able to critically read this literature.
- Finally, this course will encourage students to discuss in class the methodological challenges that social scientists frequently encounter, and then discuss these challenges in greater depth in the final assignment and final examination. Student's analytical and critical analysis skills will be challenged and enhanced.

This is NOT a mathematics course. We do review some basic rules of math in the first week, because we need to know a few math rules to understand what comes next. The focus of the course is on selecting, applying, and interpreting statistical techniques for data analyses.

Required Materials and Texts

- Jack Levin, James A. Fox and David Forde (2017) *Revel for Elementary Statistics in Social Research*, Updated Edition, Access Card, 12/E

Class Format

Course lectures are listed as taking place Mondays 7pm to 9pm. However, all course materials are on Avenue, in the form of PowerPoint slides, recorded lectures, and links to various supporting materials, and can be viewed at any time. All course materials will be available from the start of term. I highly recommend that each week you set aside the amount of time you would normally spend for an in-person course. The content of this course is cumulative - what is learned later in the course requires understanding the material that came before it.

I will be using the Monday evening time, from 7pm to 8pm, to hold a live office hours via Zoom (except on November 2, when the midterm examination takes place). Office hours will be held on a first-come, first-served basis. I also encourage students to email me directly with their questions.

Students were automatically assigned to a lab/tutorial group when registering for the course, for either 6pm or 9pm on Monday evenings. This will be an opportunity for students to attend a virtual tutorial/lab, in which a Teaching Assistant will lead students through a live SPSS session, in which the procedures discussed in lectures are illustrated. SPSS is a statistical analysis software package.

Both my office hours and the virtual labs/tutorials require the use of Zoom, using your McMaster licensed Zoom account. More information on creating a McMaster licensed Zoom account, and session access details, will be available on the Avenue course site.

Course Evaluation – Overview

1. Assignment – 30%, due November 26, 11:59pm
2. Quizzes (5) – 10%, Mondays, 8pm to 8:40pm [refer to the Weekly Course Schedule for the specific dates)
3. Midterm Examination – 30%, November 2, 7pm to 9pm
4. Final Examination – 30%, day and time to be set by Registrar's Office

Course Evaluation – Details

Assignment (30%), due November 26, 11:59pm

The assignment has questions which are focused on the interpretation of the various statistical techniques covered in the course. No additional research is required to complete the assignment. Turnitin.com is used to check for plagiarism.

Quizzes (10%), refer to the Weekly Course Schedule for dates
Each quiz will have 20 questions; each quiz is worth 2% of the final course grade. To get the 2 points a grade of at least 65% is required, otherwise a grade of 0 is assigned. The questions will be multiple-choice and true-false format. Each quiz is only available for a 40-minute period, from 8pm to 8:40pm on the night indicated in the schedule.

Midterm Examination (30%), November 2, 7pm to 9pm
The midterm exam questions will be a mix of multiple-choice, true-false, and written interpretation formats. The exam will cover the topics from Week 1 to Week 7.

Final Examination (30%), Date to be set by Registrar's Office, and will be held during the December examination period
The final exam questions will be a mix of multiple-choice, true-false, and written interpretation formats. The exam will mostly cover the topics from Week 8 to Week 13, along with some questions based on foundational materials (such as levels of measurement) from earlier weeks.

Weekly Course Schedule and Required Readings

Note
In each of the **Topic** modules in the *Content* area of Avenue there will sometimes be a list of pages in the chapter which you do **not** need to read. These will typically be sections that contain more detailed math and formulae than is needed for this course.

Week 1 (September 14-18)

    Topic A: Course Overview & Math Review
    Readings: Textbook, Appendix E

    Topic B: The Purpose of Social Research & Levels of Measurement
    Readings: Textbook, Chapter 1; Maggie Koerth-Baker, *No Terrorist is a 'Lone Wolf'* [https://fivethirtyeight.com/features/no-terrorist-is-a-lone-wolf/]

Week 2 (September 21-25)

    Topic: Organizing the Data
    Readings: Textbook, Chapter 2

Week 3 (September 28-October 2)

    Topic: Central Tendency
    Readings: Textbook, Chapter 3
    Note: Quiz 1, September 28 (covers Chapters 1 and 2)

Week 4 (October 5-9)

    Topic: Variability
    Readings: Textbook, Chapter 4

Week 5 (October 12-16)
Mid-term Recess

Week 6 (October 19-23)
Topic: Probability & the Normal Curve
Readings: Textbook, Chapter 5
Note: Quiz 2, October 19 (covers Chapter 3 and 4)

Week 7 (October 26-30)
Topic: Samples & Populations
Readings: Textbook, Chapter 6

Week 8 (November 2-6)
Topic: Hypothesis Testing & Difference of Means
Readings: Textbook, Chapter 7
Note: Midterm Examination, November 2 (covers Chapters 1 to 6)

Week 9 (November 9-13)
Topic: Analysis of Variance
Readings: Textbook, Chapter 8
Note: Quiz 3, November 9 (covers Chapters 6 and 7)

Week 10 (November 16-20)
Topic: Crosstabulation & Chi-square
Readings: Textbook, Chapter 9

Week 11 (November 23-27)
Topic: Bivariate Correlation
Readings: Textbook, Chapters 10 & 12
Note: Assignment Due, November 26, 11:59pm, submitted via Avenue assignment folder
Note: Quiz 4, November 23 (covers Chapters 8 and 9)

Week 12 (November 30-December 4)
Topic: Regression
Readings: Textbook, Chapter 11

Week 13 (December 7-9)
Topic: Choosing a Procedure, Course Review & Final Exam Preparation
Readings: Textbook, Chapter 13
Note Quiz 5, December 7 (covers Chapters 10, 11 and 12)

Course Policies

Submission of Assignments

Assignments will only be accepted via submission to the assignment dropbox folder on the Avenue to Learn course site.

Late Assignments

Late assignments will be penalized one grade per day (e.g. an assignment with a grade of B+ will become a B) unless you have followed the absence procedure as detailed below in the section titled *Absences, Missed Work, Illness*.

Absences, Missed Work, Illness

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar "Requests for Relief for Missed Academic Term Work". The McMaster Student Absence Form (http://www.mcmaster.ca/msaf/) is a self-reporting tool for undergraduate students to report absences that last up to 3 days and provides the ability to request accommodation for any missed academic work worth less than 25% of the course grade. Please note, this tool cannot be used during any final examination period.

You may submit a maximum of 1 Academic Work Missed request per term. It is **YOUR** responsibility to follow up with your instructor immediately regarding the nature of the accommodation.

If you are absent more than 3 days, exceed 1 request per term, or are absent for a reason other than medical, you MUST visit your Associate Dean's Office (Faculty Office). You may be required to provide supporting documentation. This form should be filled out when you are about to return to class after your absence. Students will only be allowed a make-up exam if they apply for and receive a deferment from their Faculty office.

Avenue to Learn

In this course we will be using Avenue to Learn. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

Turnitin.com

In this course we will be using a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. The term assignment submitted automatically to turnitin.com via the Avenue to Learn (A2L) assignment submission

folder. Students who do not wish to submit their work through A2L and/or Turnitin.com must still submit an electronic and/or hardcopy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com or A2L. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, other software, etc.). For more information please refer to the Turnitin.com Policy.

University Policies

Academic Integrity Statement

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy.

The following illustrates only three forms of academic dishonesty

- Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations.

Any assignments in this course deemed too similar will be given a grade of 0. To prevent the possibility of getting a zero, heed the following advice:

- Do NOT collaborate with other students when writing your assignments.
- Do NOT share your written work with anyone else.

If you have any questions regarding plagiarism in relation to assignments and exams, please contact me.

Academic Accommodation of Students with Disabilities
Students with disabilities who require academic accommodation must contact Student Accessibility Services (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a Program Coordinator. For further information, consult McMaster University's *Academic Accommodation of Students with Disabilities* policy.

Academic Accommodation for Religious, Indigenous or Spiritual Observances (RISO)
Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students requiring a RISO accommodation should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

Conduct Expectations
As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the Code of Student Rights & Responsibilities (the "Code"). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, whether in person or online.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students' access to these platforms.

Copyright and Recording
Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The *Copyright Act* and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

Faculty of Social Sciences E-mail Communication Policy
Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student's own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student's responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

Course Modification
The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

Extreme Circumstances
The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.

Grades
Grades will be based on the McMaster University grading scale:

MARK	GRADE
90-100	A+
85-89	A
80-84	A-
77-79	B+
73-76	B
70-72	B-
67-69	C+
63-66	C
60-62	C-
57-59	D+
53-56	D
50-52	D-
0-49	F