

**Sociology 3H06S, Summer 2017**  
**Research Techniques and Data Analysis**

**Day and Time of Lectures:** Tuesdays and Thursdays, 6:30-9:30pm

**Class Location:** BSB-105

**Online Course Materials:** [avenue.mcmaster.ca](http://avenue.mcmaster.ca)

**Instructor:** Gerald Bierling

**Ext.:** 26513

**Office:** KTH-642

**Office Hours:** Tuesdays and Thursdays, 5:30-6:30pm, or by appointment

**Email:** [bierling@mcmaster.ca](mailto:bierling@mcmaster.ca)

**Course Overview:**

The objective of 3H06 is to provide an overview of data analysis and research techniques in Sociology (and social science in general). Sociologists ask many different types of questions which can be answered through the application of *quantitative* data 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?

This course will serve two broad purposes. First, a large body of literature will become accessible to students who are familiar with these research techniques. 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. Second, this course will enable students to utilize the techniques in their own research, and in formulating research strategies in other courses.

**Course Learning Objectives:**

This course addresses three University Undergraduate Degree Level Expectations (see, <http://ccl.mcmaster.ca/COU/pdf/Undergraduate%20Degree%20Level%20Expectations.pdf>). 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. 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. 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.

**Course Format:**

Lectures will take place from 6:30-8:20pm (with a short break in the middle). During lectures I will explain and illustrate the use of various statistical techniques.

Weekly tutorial/computer lab sessions will also be held from 8:30-9:20pm, starting on May 11. The tutorial/lab component of the course will comprise one of the following two activities:

- a. We will work on exercises that illustrate the methods and issues covered in the lectures. This is an opportunity for students to gain some familiarity with these methods and issues.
- b. We will meet in the computer lab, where you will learn SPSS, the statistical analysis program being used for the course.

It is essential for students to attend lectures and tutorials/computer labs, and that students complete all assigned readings. The nature of the course is such that it is difficult to catch up on missed material. In addition, computer labs are essential in order to learn how to use SPSS so that assignments can be completed.

### **Computer Labs & SPSS:**

We will be using SPSS to analyze social survey data. SPSS is a statistical software program used by many sociologists, and public and private sector organizations. The software is available on the computers in the campus labs we will be using. You do **not** need to purchase any software or manuals to learn or use SPSS. We will be having at least 12 SPSS labs in this course. You will be awarded a ½ point for each lab you attend and for which you show that you have done the lab exercise (for up to 10 labs).

### **Course Requirements:**

<b>Requirement</b>	<b>Value</b>
Assignment #1	20%
Assignment #2	20%
SPSS Labs	5%
Mid-term Exam #1	15%
Mid-term Exam #2	15%
Final Exam	25%

### **Policy on 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 *DEPARTMENTAL/UNIVERSITY POLICIES*. Students will only be allowed a make-up exam if they apply for and receive a deferment from their Faculty office.

### **Course Text:**

Jack Levin, James Alan Fox and David Forde, *Elementary Statistics in Social Research*, 12<sup>th</sup> edition. (New York: Allyn and Bacon, 2014). The Bookstore might have used copies available, as the same text was used in 3H06 from September-April. The 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> editions, which are very similar to the 12<sup>th</sup>, are also acceptable.

**Course Schedule:**

<b>Date</b>	<b>Topic</b>	<b>Readings (from text)</b>
May 2	Introduction & Course Overview	
May 4	Purpose of Social Research	Chapter 1 William Davies, <i>How statistics lost their power – and why we should fear what comes next</i> (see link at bottom of Schedule)
May 9	a) Review of Math Fundamentals b) Organizing the Data: Part I	Appendix E Chapter 2
May 11	Organizing the Data: Part II	Chapter 2
May 16	Central Tendency: Part I	Chapter 3
May 18	Central Tendency: Part II	Chapter 3
May 23	Variability: Part I	Chapter 4
May 25	Variability: Part II & Mid-Term Review	Chapter 4
May 30	<b>Mid-Term Exam #1</b>	
June 1	Probability & the Normal Curve	Chapter 5
June 6	Samples & Populations; Sampling Distributions	Chapter 6
June 8	Hypothesis Testing & Levels of Significance <b>Assignment #1 Due (in class)</b>	Chapter 7
June 13	Difference of Means	Chapter 7
June 15	Analysis of Variance	Chapter 8
June 20	Crosstabulation/Chi-Square & Mid-Term Review	Chapter 9
June 22	<b>Mid-Term Exam #2</b>	
June 27	Correlation: Part I	Chapter 10, pp. 367-382
June 29	Correlation: Part II	Chapter 12
July 4	Methods of Data Collection	Chapter 1, pp.1-9
July 6	Controlling for Third Variables: Part I	Chapter 10, pp. 382-389
July 11	Controlling for Third Variables: Part II	Chapter 10, pp. 382-389
July 13	Regression Analysis: Part I	Chapter 11
July 18	Regression Analysis: Part II	Chapter 11
July 20	Regression Analysis: Part III	Chapter 11
July 25	Choosing the Correct Procedure <b>Assignment #2 Due (in class)</b>	Chapter 13
July 27	Presentation Workshop Course Review & Exam Preparation	Instructor provided material
Aug. 1	Final Examination	

Link to William Davies article:

[https://www.theguardian.com/politics/2017/jan/19/crisis-of-statistics-big-data-democracy?CMP=share\\_btn\\_link](https://www.theguardian.com/politics/2017/jan/19/crisis-of-statistics-big-data-democracy?CMP=share_btn_link) (also posted on Avenue)

## **Academic Dishonesty:**

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and 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 kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at <http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>

The following illustrates only three forms of academic dishonesty:

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

Any written assignments deemed too similar will be given a grade of 0. Therefore, 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;
- **DO NOT** ask anyone else in the class to print your assignment;
- **DO NOT** get someone else to hand in your assignment.

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

## **Departmental/University Policies:**

Do **NOT** fax assignments. Please see your instructor for the most appropriate way to submit assignments.

The Sociology staff does **NOT** date-stamp assignments, nor do they monitor the submission or return of papers.

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 should check Avenue, the white board and the Undergraduate Bulletin board outside the Sociology office (KTH-627) for notices pertaining to Sociology classes or departmental business (eg.

class scheduling information, location of mailboxes and offices, tutorial information, class cancellations, TA job postings, etc.).

Computer use in the classroom is intended to facilitate learning in that particular lecture or tutorial. At the discretion of the instructor, students using a computer for any other purpose may be required to turn the computer off for the remainder of the lecture or tutorial.

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.

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.