



# Sociology 6040

## Advanced Quantitative Methods

Fall 2019 • Tuesdays 12:00-14:50 • Room SN4030

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office hours: Wednesdays 13:30-16:00; room AA4053

book meeting: <http://liamswiss.youcanbook.me/>

### 1 Course Overview & Objectives

This course introduces advanced quantitative social research methods. The course is practical in orientation and aims to achieve three learning objectives by the end of the term: (1) Students are comfortable reading and able to comprehend published quantitative research in mainstream sociological journals; (2) Students have greater awareness of quantitative methods of social research and are comfortable using such methods; and (3) Students have greater awareness of quantitative analysis software and are comfortable using such software to conduct independent research. Overall, this course will attempt to prepare you for your future engagement with research methods whether in your own graduate research or in other professional experience. The course is by no means exhaustive will introduce but some of the many advanced techniques used by sociologists.

### 2 Course Readings & Statistical Software

#### Texts

Mehmet Mehmetoglu and Tor Georg Jacobsen. 2017. *Applied Statistics Using Stata: A Guide for the Social Sciences*. Thousand Oaks, CA: Sage. (hereafter M & J)

Healy, Kieran, and James Moody. 2014. "Data Visualization in Sociology." *Annual Review of Sociology* 40(1):105-28.

Stauffer, Katelyn, and Diana Z. O'Brien. 2018. "[Quantitative Methods and Feminist Political Science](#)" *Oxford Research Encyclopedia of Politics*.

Walter, Maggie, and Chris Andersen. 2013. [Indigenous Statistics: A Quantitative](#)

[Research Methodology](#). Walnut Creek, CA: Left Coast Press.

## Software

Course instruction will be provided in Stata version 14. Arrangements for a reduced rate purchase of Stata will be discussed in the first class. Instruction in and support for other programs will not be offered by the instructor. Purchasing a license for Stata for use at home is advisable, as access to the computer labs on campus can sometimes be difficult on evenings and weekends.

## 3 Course Requirements

Requirement	Value	Due Date
1. Take-Home Exercises (3)	10% ea	Sept 24; Oct 29; Nov 19
2. Inequalities in Quantitative Methods	10%	Oct 1
3. Research Paper Proposal	n/a	Oct 8
4. Article Deconstruction	10%	Oct 17
5. First Draft of Research Paper	10%	Nov 5
6. Final Draft of Research Paper	30%	Nov 26
7. Research Paper Presentation	10%	Nov 26

**1. Take-Home Exercises (30%):** *Due September 24<sup>th</sup>; October 29<sup>th</sup>; November 19<sup>th</sup>.* Respond to the questions as fully as possible, detailing the steps taken to arrive at the answer and providing relevant backing evidence to support your work. This work must be completed individually.

**2. Inequalities in Quantitative Methods (10%):** *Due October 1<sup>st</sup>.* Read Stauffer & O'Brien (2018) and Water and Anderson (2013) and prepare an 800-1000-word analysis of the issue of inequalities in quantitative research methodologies and how they can be addressed by researchers. Base your argument on examples from both texts and make a clear argument that would be suitable for publication as an op-ed or commentary.

**3. Research Paper Proposal (not graded):** *Due October 8<sup>th</sup>.* Prepare a two-page overview of your proposed research paper project for this class. Your proposal should outline the research question, context, and rationale for the research, as well as the anticipated method, data set, sample, and any other relevant issues. This proposal must be submitted before your draft paper will be reviewed.

**4. Article Deconstructions (10%):** *Due October 17<sup>th</sup>.* Find a quantitative sociology article on a subject of interest to you from one of the journals in the list provided by Dr. Swiss. Read the article and prepare a three-page (double-spaced) summary which deconstructs and summarizes the article into the following parts: (1) Research problem; (2) Theoretical Framework; (3) Data; (4) Hypotheses; (5) Results and Main Findings.

**5. First Draft of Research Paper (10%):** *Due November 5<sup>th</sup>.* This 20-25-page paper will use quantitative methods to examine a sociological research question of your choosing. You are expected to identify your own research question, data, and to employ appropriate quantitative techniques (at minimum Multiple Regression or Logistic Regression) to answer your question. The paper should resemble a basic quantitative journal article with the following main headings: Introduction; Background or Literature Review; Methodology & Data; Results; Discussion; and Conclusion. Formatting will be discussed extensively in class.

**6. Final Research Paper (30%):** *November 26<sup>th</sup>.* This will be the final draft of the research paper outlined above incorporating the feedback provided by Dr. Swiss on your first draft.

**7. Research Proposal Presentation (10%):** *Due November 26<sup>th</sup>.* You will prepare and deliver a maximum 10-minute conference-style presentation of your final paper. Please make use of slides/visual aids and stick to the specified time limit. Paper presentation tips will be discussed in class.

## 4 Course Calendar

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<b>Week 1 – Sept 10</b>	<i>Data, Central Tendency, &amp; Distributions</i>	
<b>Week 2 – Sept 17</b>	<i>Categorical Data, Cross-Tabulation &amp; Data Visualization</i>	M&J Chapters 1-2; Healy & Moody; Assigned Article
<b>Week 3 – Sept 24</b>	<i>Inference &amp; Hypothesis Testing: T-Tests &amp; Chi-Square</i>	Assigned Article

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<b>Week 4 – Oct 1</b>	<i>Correlation, Causation, &amp; Linear Regression</i>	M&J Chapter 3; Assigned Article
<b>Week 5 – Oct 8</b>	<i>Multiple Regression</i>	M&J Chapters 4, 7
<b>Week 6 – Oct 17</b>	<i>Logistic Regression</i>	M&J Chapter 8
<b>Week 7 – Oct 22</b>	<i>Dummy Variables</i>	M&J Chapter 5
<b>Week 8 – Oct 29</b>	<i>Interaction Effects</i>	M&J Chapter 6
<b>Week 9 – Nov 5</b>	<i>Data Transformations</i>	M&J Chapter 13
<b>Week 10 – Nov 12</b>	<i>Marginal Effects</i>	M&J Chapter 6
<b>Week 11 – Nov 19</b>	<i>Communicating your Results</i>	
<b>Week 12 – Nov 26</b>	<i>Student Paper Presentations - Room TBD</i>	

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## **5 Timely Submission of Assignments**

Assignments are due when specified on the course outline above. No extensions will be granted except in the case of a documented medical issue or emergency. Late assignments will be penalized by 5% of the overall assignment value per day late.

If you require a deferred final exam or assignment/paper etc. for medical reasons, please inform me in a timely manner. If a medical condition persists for longer than 5 days, please secure documentation from a medical professional.

## **6 Academic Misconduct**

Academic misconduct is an act committed by a student to distort the marking of assignments, tests, examinations, and other forms of academic evaluation. Academic misconduct is neither accepted nor tolerated by the University. Anyone found guilty of academic misconduct is liable to severe academic sanctions. Some examples of academic offences include:

- engaging in any form of plagiarism or cheating;
- presenting falsified research data;
- handing in an assignment that was not authored by the student; or
- submitting the same assignment in more than one course, without the written consent of the professors concerned.

For more information, please refer to Section 4.12 of the MUN Calendar regarding “Academic Misconduct” of Graduate Students:

<http://www.mun.ca/regoff/calendar/sectionNo=GRAD-0029>

## 7 Student Services on Campus

Many student support services exist on campus that may be of use to you throughout the course of the term:

1. **The Aboriginal Resource Office (4<sup>th</sup> Floor UC)** provides support services to Aboriginal students. The office works to advocate and educate the general university population regarding inclusion of our unique Aboriginal peoples found within Newfoundland and Labrador.
2. **The Commons (QEII library)** provides access to print, electronic and technology resources.
3. **The Counselling Centre (UC-5000)** helps students develop their personal capabilities, ranging from study strategies to assisting distressed students.
4. **The Glenn Roy Blundon Centre (UC-4007)** serves students whose disabilities involve conditions affecting mobility, vision, hearing, learning (disabilities), chronic illness, or mental health; support is also provided to students with documented temporary illnesses and injuries.
5. **Internationalization Office (CA-2004)** provides a variety of programmes to support international students’ transition to Memorial University and Newfoundland.
6. **Student Affairs and Services (Answers, UC-3005)** answers questions about such things as courses, housing, books, financial matters and health.
7. **The Writing Centre (SN-2053)** is a free, drop-in facility for students and to help you become a better writer and critical thinker.