

# SOC252H1 S

## Intermediate Quantitative Methods in Sociology

### Summer 2024 Syllabus

#### Course Meetings

##### SOC252H1 S

| Section | Day & Time                   | Delivery Mode & Location |
|---------|------------------------------|--------------------------|
| LEC0101 | Monday, 9:00 AM - 1:00 PM    | Online Synchronous       |
|         | Wednesday, 9:00 AM - 1:00 PM | Online Synchronous       |

Refer to ACORN for the most up-to-date information about the location of the course meetings.

#### Course Contacts

**Instructor:** Sebastien Parker

**Email:** [sebastien.parker@mail.utoronto.ca](mailto:sebastien.parker@mail.utoronto.ca)

**Office Hours and Location:** By appointment using Quercus Calendar

**Teaching Assistant:** Lance Stewart

**Email:** [lance.stewart@mail.utoronto.ca](mailto:lance.stewart@mail.utoronto.ca)

**Office Hours and Location:** By appointment using Quercus Calendar

#### Course Overview

Provides students with the opportunity to develop an understanding of the logic of multivariate analysis by applying various strategies for the analysis of complex multivariate data. Restricted to sociology majors and specialists.

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#### Course Learning Outcomes

By the end of this course, you will be able to:

- (1) Use professional tools for quantitative data analysis such as RStudio
- (2) Summarize and visualize quantitative data
- (3) Conduct exploratory data analysis
- (4) Use and interpret regression models
- (5) Critically evaluate statistical claims and modeling choices

**Prerequisites:** SOC202H1

**Corequisites:** None

**Exclusions:** SOC300H1, ECO220Y1, PSY202H1, STA221H1

**Recommended Preparation:** SOC150H1

**Credit Value:** 0.5

## Course Materials

All course materials, including readings, tutorial scripts, and assignment resources will be provided on the course website.

## Marking Scheme

| Assessment    | Percent | Details   | Due Date         |
|---------------|---------|---|------------------|
| Participation | 10%     | Active and consistent participation is crucial for this online course, contributing to both your personal learning and the collective success of the class. Each session is divided into a 2-hour lecture with hands-on examples and a 2-hour tutorial. Regular attendance and active engagement during the sessions, for both the lecture and tutorial components, are required. You are expected to come prepared, follow along as we work through examples, ask questions, and share resources with your peers, as well as look to foster a positive virtual classroom environment. Additionally, early and active engagement with the stepping stone assignments and final report is essential, whether you choose to submit individually or as part of a group. This collaborative and proactive approach will ensure a rich and effective learning journey for all. | No Specific Date |

| Assessment          | Percent | Details  | Due Date  |
|---------------------|---------|--|---|
| <b>Problem Sets</b> | 30%     | <p>Understanding quantitative methods in theory is like learning to use a hammer by watching others—you only truly grasp the skills through hands-on practice. To ensure you gain practical experience, this course includes six problem sets that focus on applying statistical techniques using R. These assignments will enable you to work directly with real datasets, reinforcing the concepts covered in class. Each problem set is designed to provide task-oriented exercises, allowing you to develop your skills in quantitative analysis through application-based learning. While collaboration and discussion with peers are encouraged, each student is responsible for submitting their own individual work. The problem sets will be distributed regularly throughout the course, ensuring consistent engagement and practice with the material. This approach will help solidify your understanding and prepare you for real-world quantitative analysis challenges.</p> | 2024-07-08,2024-07-15,2024-07-17,2024-07-24,2024-07-29,2024-08-07 |

| Assessment                        | Percent | Details   | Due Date              |
|-----------------------------------|---------|---|-----------------------|
| <b>Stepping Stone Assignments</b> | 30%     | The stepping stone assignments are crucial components of this course, designed to guide you step-by-step towards completing a comprehensive final report. This final report will be a professional and complete manuscript, showcasing your ability to apply the quantitative methods and analytical skills you've developed throughout the course. You are encouraged to collaborate and work in a group for these assignments (4 max), as well as the final report. (1) The first stepping stone (15%) is a discussion of your research question, hypotheses, and data due on July 22. (2) The second stepping stone (15%) involves exploratory data analysis and initial results, due on July 31 | 2024-07-22,2024-07-31 |
| <b>Final Report</b>               | 30%     | The final write-up of the report should be structured as a journal article and include the following: (a) introduction; (b) literature and hypotheses; (c) description of data; (d) description of methods of analysis; (e) results; (f) discussion; (g) conclusion. Final report guidelines will be posted on the course website.  | 2024-08-12            |

### **Late Assessment Submissions Policy**

A penalty of 10% will be applied, for a maximum of 7 days (including weekends).

### **Course Schedule**

| <b>Session &amp; Date</b> | <b>Topic</b>                    | <b>Readings</b>                      | <b>Assessment</b>  |
|---------------------------|---------------------------------|--------------------------------------|--------------------|
| 1. July 3                 | Intro to course & R             | ROS Ch. 1 & 2<br>MD Ch. 1            |                    |
| 2. July 8                 | EDA, Visualizing, Asking I      | ROS Ch. 3<br>MD Ch. 2 & 3            | PS1 (5%)           |
| 3. July 10                | EDA, Visualizing, Asking II     | ROS Ch. 4<br>MD Ch. 4 & 7            | PS2 (5%)           |
| 4. July 15                | EDA, Visualizing, Asking III    | ROS Ch. 5<br>MD Ch. 8                |                    |
| 5. July 17                | Modeling I: SLR                 | ROS Ch. 6 & 7<br>MD Ch. 5 & 6        | PS3 (5%)           |
| 6. July 22                | Modeling II: MLR & Interactions | ROS Ch. 8 & 10<br>MD Ch. 6           | SS1 (15%)          |
| 7. July 24                | Modeling III: GLM & MNR         | ROS Ch. 13, 14 & 15<br>MD Ch. 9 & 10 | PS4 (5%)           |
| 8. July 29                | Model Assumptions, Fit, & Check | ROS Ch. 11, 12 & 17                  | PS5 (5%)           |
| 9. July 31                | Causal Inference I              | ROS Ch. 18 & 19                      | SS2 (15%)          |
| 10. August 7              | Causal Inference II             | ROS Ch. 20 & 21                      | PS6 (5%)           |
| 11. August 12             | Project Support                 | MD Ch. 11                            |                    |
| 12. August 13             |                                 |                                      | Final report (30%) |

## **Policies & Statements**

### **Late/Missed Assignments**

If a student misses a test or submit assignments later for medical reasons, the student must contact me (not the TA) within 1 day of the missed exam or assignment and also declare their

absence on ACORN. For other reasons, such as family emergencies or personal reasons, they must have the college registrar email me.

## **Students with Disabilities or Accommodation Requirements**

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year by visiting <https://studentlife.utoronto.ca/department/accessibility-services/>. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

## **Academic Integrity**

All suspected cases of academic dishonesty will be investigated following procedures outlined in the [Code of Behaviour on Academic Matters \(https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019\)](https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019). If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources. For example, to learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at <http://www.writing.utoronto.ca>. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see [A&S Student Academic Integrity \(https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity\)](https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity) and the [University of Toronto Website on Academic Integrity \(https://www.academicintegrity.utoronto.ca\)](https://www.academicintegrity.utoronto.ca).

## **Specific Medical Circumstances**

If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI (including dates, academic impact, practitioner's signature, phone and registration number). For more information on the VOI, please see <http://www.illnessverification.utoronto.ca>. For information on Absence Declaration Tool for A&S students, please see <https://www.artsci.utoronto.ca/absence>. If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

## **Accommodation for Personal Reasons**

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me or to an advisor in your College Registrar's office; they can help you to decide if you want to request an extension or other forms of academic consideration. They may be able to email your instructors directly to provide a College Registrar's letter of support and connect you with other helpful resources on campus.

### **Late/Missed Assignments**

This item is listed here to remind you to include your late/missed assignment policy; if you have late penalties, you are required to publish them in your syllabus. Please see the [A&S Academic Handbook \(https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook\)](https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook) sections on missed term work (Section 4.7), late term work and extensions (section 4.8), and missed term tests (Section 5.3) for more information.

### **Plagiarism Detection Tool**

Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>).

### **Religious Accommodations**

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of cultural and religious traditions. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (such as a test or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

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### **Make-Up Quizzes/Tests**

This item is listed here to remind you that you may wish to include your policy on make-up quizzes and term tests in your syllabus. There is some latitude in designing a policy that will work in the context of your course, but any policy works best if it is stated clearly from the outset and applied fairly and consistently. See Section 5.3 in the [A&S Academic Handbook \(https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook#TermTests\)](https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook#TermTests).

### **Quercus Info (if using)**



This Course uses the University's learning management system, Quercus, to post information about the course. This includes posting readings and other materials required to complete class activities and course assignments, as well as sharing important announcements and updates. New information and resources will be posted regularly as we move through the term. To access the course website, go to the U of T Quercus log-in page at <https://q.utoronto.ca>.  
**SPECIAL NOTE ABOUT GRADES POSTED ONLINE:** Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.