STA490Y1Y: Statistical Consultation, Communication, and Collaboration
2019–20

Section L0101
Instructor: Prof. Alison Gibbs
Email: alison.gibbs@utoronto.ca
Office: SS 6009
Office hours: Thursdays 12:00–13:00
Preferred pronouns: she/her

Section L0201
Instructor: Prof. Nathalie Moon
Email: nathalie.moon@utoronto.ca
Office: SS 6024A
Office hours: Thursdays 12:00–13:00
Preferred pronouns: she/her

Course web page
All materials will be posted on Quercus https://q.utoronto.ca

Graduate student mentors
Cédric Beaulac, Michael Chong, Alex Gao, Jeffrey Negrea, Marija Pejcinovska, Yanbo Tang, Robert Zimmerman

Course content
The purpose of the course is to develop skills in the collaborative practice of statistics. This will be done through class discussion, readings, case studies, and two projects. Course activities develop skills in statistical problem solving and oral and written communication, and engage you in issues related to appropriate and ethical statistical practice.

Class meetings
Class meetings are typically on Thursdays 10:10–noon. You should attend the meeting for your section only. Attendance at all meetings is mandatory as there is no substitution for participating in the discussion that will take place. For most meetings, there will be assigned reading or work which must be done in preparation.

Breakout sessions
Breakout sessions will be held during the non-Thursday scheduled class time (Tuesdays 10:10AM - 12PM for section L0101 and Mondays 5:10PM - 7PM for section L0201) on the dates indicated on the course schedule. These will be led by your graduate student mentors. The activities in these breakout sessions will vary, but may include the following:

• Introduction to your project,
• One-on-one chats with your graduate student mentor to discuss and assess your progress on a particular aspect of the project you are working on
• Group discussion to brainstorm strategies for analysis, compose questions for the research collaborator, etc.

Projects
Much of the course will be structured around two projects, one in the Fall term and the other in the Winter term.

• Fall term project:
  All students will work on the same project but will be expected to complete and submit independent work. Discussion of this project will occur in both breakout sessions and in class meetings.
• Winter term project:
  Students will be divided into groups of approximately 10 students and each group will be
  assigned to one project. Your work on this project will be guided by a graduate student
  mentor who is a PhD student in statistics.

  Discussion about your project with your classmate(s) assigned to the same project is encour-
  aged, but you may not use work completed by another student. You are expected to complete
  and submit independent work (both for statistical analysis, including code, and written re-
  ports). To protect yourself from potential academic integrity offences, do not share your code
  and written materials.

Readings and references
  Required readings will be posted on Quercus.
  Anytime you need a reference on a statistics topic (software or methodology) see what you
  can find on your own. Then ask your graduate student mentor or your instructor.

Computing
  We will use R, the R Studio IDE, and R Notebooks. You need to install R first, and then R
  Studio. R can be downloaded for free from [http://cran.r-project.org](http://cran.r-project.org). R Studio can be

Communication
  Please direct general course questions to the STA490 Piazza page
  Email is appropriate if you are unable to come to campus because of illness or if it is necessary
to make an appointment outside of office hours. The instructor(s) may contact the entire class
by email, at your address that is on your student account. Please make sure your read the
email that goes to that account.

  Your graduate student mentor may set up an alternative method of discussion for your project.

Accessibility needs
  The University of Toronto is committed to accessibility. If you require accommodations for
  a disability, or have any accessibility concerns about the course, the classroom, or course
  materials, please contact Accessibility Services as soon as possible:
  [accessibility.services@utoronto.ca](mailto:accessibility.services@utoronto.ca) or [http://www.accessibility.utoronto.ca](http://www.accessibility.utoronto.ca).

Academic integrity
  Academic integrity is fundamental to learning and scholarship at the University of Toronto.
  Participating honestly, respectfully, responsibly, and fairly in this academic community en-
  sures 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.

  Familiarize yourself with the University of Toronto’s Code of Behaviour on Academic Matters
  available at [http://academicintegrity.utoronto.ca](http://academicintegrity.utoronto.ca).
**Evaluation** (dates are tentative, but unlikely to change)

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<thead>
<tr>
<th>Attendance, participation, and preparation</th>
<th>Weight</th>
<th>Date</th>
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<tbody>
<tr>
<td>(as demonstrated in class, in project meetings, and via submissions on Quercus)</td>
<td>20%</td>
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<table>
<thead>
<tr>
<th><strong>Fall term project</strong></th>
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<td><strong>Components:</strong></td>
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<tr>
<td>EDA</td>
<td>20 points</td>
<td>Sun Sept 29, 11:59PM</td>
</tr>
<tr>
<td>Statistical Analysis</td>
<td>25 points</td>
<td>Sun Oct 20, 11:59:PM</td>
</tr>
<tr>
<td>Draft methods/results section</td>
<td>20 points</td>
<td>Mon Nov 11, 11:59PM</td>
</tr>
<tr>
<td>Final Report</td>
<td>35 points</td>
<td>Mon Dec 2, 11:59PM</td>
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<th><strong>Winter term project</strong></th>
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<tr>
<td><strong>Components:</strong></td>
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<tr>
<td>Project presentations (group grade)</td>
<td>15 points</td>
<td>Feb. 6 or Mar. 19 (in class)</td>
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<tr>
<td>EDA</td>
<td>10 points</td>
<td>Sun Jan 20, 11:59PM</td>
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<tr>
<td>Statistical Analysis</td>
<td>30 points</td>
<td>Sun Mar 1, 11:59PM</td>
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<tr>
<td>Draft Report</td>
<td>15 points</td>
<td>Mon Mar 16, 11:59PM</td>
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<tr>
<td>Final Report</td>
<td>30 points</td>
<td>Thurs April 2, 11:59PM</td>
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<tr>
<th><strong>BMJ presentation</strong></th>
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<tr>
<td>(date as assigned)</td>
<td>5%</td>
<td>Nov. 21 or Jan. 23 or Feb. 27 or Mar. 26 (in class)</td>
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<th><strong>Career panel reflection</strong></th>
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<td>5%</td>
<td>Thurs Feb 27, 11:59PM</td>
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**Note:** No late work will be accepted without documentation of a valid reason. Think of this course as professional practice. Manage your deadlines carefully.

**How to succeed in the course**

- Be prepared and on time for all classes and meetings.
- Ask good questions.
- Do all of the assigned work on time.
- Demonstrate that you are trying.
- Work on your project every week.

**Course Mantra**

*It’s OK not to know.*

*Expressing ignorance is encouraged.*

*It’s not OK to not have a willingness to learn.*