

STA220H1 F – Fall 2021

Course Syllabus – Section L0201

Course Description

This course will provide an intuitive introduction to fundamental statistical concepts and reasoning. The course will cover: methods of data collection; constructing effective graphical and numerical displays; estimating and describing the natural variability in data; and the key ideas in how statistical tests can be used to separate significant differences from those that are only a reflection of the natural variability in data.

Intended Learning Outcomes

- Understand the ideas, principles, and considerations that are common to all statistical methods,
- Develop a statistical toolbox of some methods for the collection, analysis, and display of data
- Identify appropriate uses of the statistical methods, including their strengths and limitations, &
- Develop statistical literacy, including the ability to recognize the importance of data in decision-making and understand the social and scholarly applications of statistics.

Course Logistics

Instructor	Section	Lecture*	Tutorial***	Office Hour*
Gwendolyn Eadie gwen.eadie@utoronto.ca	LEC0201	Tu 11:00 – 13:00	Th 11:00 – 12:00	Tu 13:00 – 14:00 W 11:00 – 12:00

* Toronto time zone. We will follow “U of T time” and begin 10 minutes past the hour.

***Thursday tutorials align with LEC0201 lectures. If you attend another tutorial section, the coverage will be based on section LEC0101 and LEC5101. Topic scheduling may differ.

The course is entirely online, with weekly synchronous lectures, tutorials, and office hours happening over Zoom. **Students will be surveyed at the beginning of term and a limited number of in-person tutorial sections may be offered, depending on student demand for in-person tutorials, and the availability of TAs to lead in-person tutorials. Information about tutorial sections and formats will be posted on Quercus.** All course content (e.g., lecture slides, lecture recordings, etc.) will be available on Quercus and links therein (<https://q.utoronto.ca>). The Zoom links for lectures and tutorials are posted on Quercus only. **For security reasons, please do not copy or share the Zoom links anywhere.**

The majority of course communication and announcements will happen through Quercus. It is your responsibility to check Quercus regularly.

First Class

The first day of classes is Thursday Sept. 9, 2021. **I will run a tutorial on Thursday Sept. 9 at the usual time. This will be an introductory lecture about the course. A zoom link will be posted to Quercus.**

Piazza

We will use Piazza (<https://piazza.com/utoronto.ca/fall2021/sta220h1flec0201>, linked through Quercus) for class discussion. Piazza is for questions about *lectures, tutorials, practice problems, concepts, and course logistics*. **Homework, midterm, and final questions cannot be shared on Piazza.**

When you have questions about the course or course logistics

Before emailing your instructor, please:

1. re-read this syllabus to see if the answer is here,
2. check the discussion posts on Quercus and Piazza for an answer,
3. if the question is not personal in nature, then post to the appropriate discussion board on Quercus or Piazza,
4. go to office hours,
5. ask a Teaching Assistant (TA)

If your question is not answered after following the above, or if you have a personal question/request about accommodations, a missed assessment, etc. then please send me an email with the subject line: **STA220 LEC0201. If this subject is not included, I will likely miss your email.**

Weekly Schedule for L0201

The Module numbers listed in the table below correspond to the modules and content found at <https://sta220.utstat.utoronto.ca/>

All content at the above link is fair game in terms of homework assignments and assessments. It is highly recommended to watch the pre-lecture videos or read the transcripts at the link above prior to lecture.

Any changes to the schedule will be announced and posted on Quercus. **CHANGES as of Sept 10, 2021**

Week of...	Lecture (Tuesday)	Tutorial (Thursday)	What's due/important?
1	Sept 6	<i>no class</i>	Introduction to the course
2	Sept 13	Module 1	Example and practice problems
3	Sept 20	Module 2	Example and practice problems
4	Sept 27	Module 3	Example and practice problems
5	Oct 4	Module 4	Midterm 1 Module 5 (part 1)*
6	Oct 11	Module 5 Midterm 1	practice problems Module 5 (part 2)*
7	Oct 18	Module 8	Example and practice problems
8	Oct 25	Module 9	Example and practice problems
9	Nov 1	Module 6	Midterm 2 Module 7 (part 1)*
10	Nov 8	No class (Reading Week)	No tutorial (Reading Week)
11	Nov 15	Module 7 Midterm 2	practice problems Module 7 (part 2)*
12	Nov 22	Module 10	Example and practice problems
13	Nov 29	Module 10/11	Example and practice problems
14	Dec 6	Module 11	Review session/open questions
15	Dec 13	No class (Exam Period)	No tutorial (Exam Period)
16	Dec 20	No class (Exam Period)	No tutorial (Exam Period)

NOTE: Midterms will begin at 11:10am ET and go until 12:40pm ET.

Tutorial Objectives

The tutorials are a chance for you to work on practice problems with your classmates and with the help of the Teaching Assistants (TAs). Practice problems will be provided. Homework assignments must be completed on your own; homework questions cannot be addressed in tutorials or discussed/posted on Piazza **or other social media outlets, chats, etc.** ***Please note that two four of the tutorial spots will be used for the Midterms Lectures, and these sessions will be recorded and posted to Quercus for those who can't make the LEC0201 tutorial times.**

Assessments & Grading

All evaluations and assessments (homework assignments, midterms, and final assessment) will be completed online.

Marking Scheme

- 30% Homework (HW) assignments (best of 5 out of 6 assignments, so worth 6% each)
- 20% Midterm 1
- 20% Midterm 2
- 30% Final Assessment

Assessment Details

All assessments will be a combination of multiple-choice and short answer questions, completed online. The multiple-choice questions will be completed on Quercus, and the short answer questions will be completed on Crowdmark (<https://app.crowdmark.com/sign-in/utoronto>)

Assessment	Modules Covered	Due Date
HW 1	1	Sept 17 Sept 20*
HW 2	2	Oct 1
Midterm 1	1, 2, 3	Oct 7 Oct 12 (Tuesday, 11:10am – 12:40pm ET)
HW 3	4, 5	Oct 15 Oct 22
HW 4	8, 9	Oct 29 Nov 5
Midterm 2	4, 5, 8, 9	Nov 4 Nov 16 (Tuesday, 11:10am – 12:40pm ET)
HW 5	6, 7	Nov 19 Nov 26
HW 6	10, 11	Dec 3
Final Assessment	1 – 11 (entire course)	TBD

*if you enroll late in the course (i.e., after Sept 12) then the deadline for HW 1 will be extended for you.

Please email the instructor if you enroll late in the course.

Minimum passing requirement

In addition to the U of T grading policy, **students must complete and submit at least two of the HW assignments, one midterm, and the final assessment to pass the course.**

Late Assessments

Late homework assignments will be accepted, but with a penalty (see below). Midterms and the Final Assessment will be *timed*. These assessments must be submitted by the deadline time to avoid penalty (see below). The only exceptions to the late penalties listed below are for valid reasons (e.g., illness, personal emergency, accommodations, etc.).

Late Penalty for Homework Assignments

A 25% per day penalty will be applied to ~~short answers~~ **assignments** that are submitted late. For example, this means that if an assignment is due at 17:00, and is submitted at 17:01, then it will incur a 25% late penalty. If it is submitted at 17:01 the following day, then it will incur a 50% late penalty. ~~The multiple-choice questions must be submitted by the deadline.~~

Late Penalty for Midterms

A 5% per minute penalty will be applied to ~~short answers~~ **midterms** that are submitted late. ~~The multiple-choice questions must be submitted by the deadline.~~

Late Penalty for Final Assessment

A 5% per minute penalty will be applied to short answers **final assessments** that are submitted late. ~~The multiple-choice questions must be submitted by the deadline.~~

Missed Assessments

There are no make-ups for missed homework assignments or midterms. If a homework assignment or midterm is missed for a valid reason (e.g., illness or personal emergency), then **within one week** following the assessment you must fill out the absence declaration form on ACORN and then send me an email. See below for details on how the missed assessment will be handled.

Missed Homework

For each homework assignment that is missed due to a valid reason (e.g., illness or personally emergency), the 6% for that homework assignment will be shifted to the final assessment.

Missed Midterm

For a midterm that is missed due to a valid reason (e.g., illness or personally emergency), the 20% for that midterm will be split and shifted to the other midterm and final equally (i.e., 10% to the other midterm, and 10% to the final).

Missed Final Assessment

If the final is missed due to a valid reason (e.g., illness or personally emergency), then a make-up exam will be provided in December or early January.

Re-mark Requests

Any requests to have a homework assignment or midterm re-marked must be made in writing to me within one week of receiving your marks. Note that it is possible for a re-mark to result in a lower grade. Requests to re-mark the final exam will be handled at the department-level.

Textbooks & Supplementary Learning Resources

There is no required course textbook. We will follow the Modules found here:

<https://sta220.utstat.utoronto.ca/>

All course material can be found at the above link, and in the lectures, tutorials, and notes on Quercus. The pre-lecture videos at the above link were created a few years ago by past instructors for this course.

It is beneficial to your learning to process the material in different contexts and multiple times, so we also recommend the following two textbooks:

1. **OpenIntro Statistics 4th Ed.** Diez, D. Barr, C. D., and Cetinkaya- Rundel Mine.
 - a. *Free and available to download here:* <https://leanpub.com/os> (4th edition)
 - b. This is an excellent textbook that is less conversational but contains clearly explained concepts. A nice feature of the text and website is that many of the examples and vignettes used to illustrate the concepts are based on real applications of statistics.
2. **Stats: Data and Models 4th Canadian edition**, by Richard D. De Veaux, Paul F. Velleman, David E. Bock, Augustin M. Vukov, and Augustine C.M. Wong. 4th ed.
 - a. This textbook is available at the University of Toronto bookstore. It is written in a conversational style. Most concepts are clearly explained and there are lots of fun and interesting vignettes that illustrate statistical concepts.

Accessibility

Students with diverse learning styles and needs are welcome in this course. If you have a disability/health consideration that may require accommodations, please feel free to approach me and/or Accessibility Services as soon as possible at 416-978 8060; studentlife.utoronto.ca/as. The Accessibility Services staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let them and me know your needs, the quicker we can assist you in achieving your learning goals in this course. More information can be found here: www.accessibility.utoronto.ca

Accommodations

The University of Toronto supports reasonable accommodation of the needs of students who observe religious holy days other than those already accommodated by ordinary scheduling and statutory holidays. As mentioned on the webpage below, please let me know if you require accommodations or expect absences, and I will make reasonable effort to make accommodations at these times. More information: <https://www.vicprovoststudents.utoronto.ca/policies-guidelines/accommodation-religious/>.

Academic Integrity

The following is a statement directly from Appendix D of the Academic Integrity Handbook. More information can be found here: <https://www.academicintegrity.utoronto.ca/>

“Academic integrity is one of the cornerstones of the University of Toronto. It is critically important both to maintain our community which honours the values of honesty, trust, respect, fairness and responsibility and to protect you, the students within this community, and the value of the degree towards which you are all working so diligently.

According to Section B of the University of Toronto’s Code of Behaviour on Academic Matters (<http://www.utoronto.ca/govcncl/pap/policies/behaveac.html>) which all students are expected to know and respect, it is an offence for students to:

- To use someone else’s ideas or words in their own work without acknowledging that those ideas/words are not their own with a citation and quotation marks, i.e. to commit plagiarism
- To include false, misleading or concocted citations in their work.
- To obtain unauthorized assistance on any assignment. To provide unauthorized assistance to another student. This includes showing another student completed work.
- To submit their own work for credit in more than one course without the permission of the instructor.
- To falsify or alter any documentation required by the University. This includes, but is not limited to, doctor’s notes.
- To use or possess an unauthorized aid in any test or exam.

There are other offences covered under the Code, but these are by far the most common. Please respect these rules and the values which they protect.”

All the above applies to this course and its assessments. This means that obtaining unauthorized assistance on any STA220 homework, assessment, test, or exam is an academic offense. Providing unauthorized assistance to another student on any STA220 homework, assessment, test, or exam is also an academic offense. This includes showing someone else completed work or posting/sharing questions or answers to STA220 homework, assessment, test, or exam.