

STA130: Introduction to Statistical Reasoning and Data Science

Class meetings:

- L0101 Monday 11:10 AM – 1 PM ET (see ACORN for location)
- L0201 Monday 3:10 PM – 5 PM ET (see ACORN for location)



Tutorial meetings (required):

- TUT0101 – TUT0112 Friday 9:10 AM – 11 AM ET (various locations, see ACORN)
 - TUT0201 – TUT0212 Friday 1:10 PM – 3 PM ET (various locations, see ACORN)
- Note that students in L0101 must enroll in a tutorial section from 101 to 112 and those in L0201 must enroll in a tutorial section from 201 to 212.*

Course email: sta130@utoronto.ca

Course webpage: All materials will be posted on Quercus (<https://q.utoronto.ca>)

Teaching Team Information (both instructors will teach both sections)

| | | |
|--|--|--|
|  | <p>Professor: Nathalie Moon Please call me: Nathalie OR Professor Moon (pronouns: she/her) How do you pronounce that? “Moon” is like the English word, and the ‘h’ in Nathalie is silent.</p> | <p>Schedule will be posted on Quercus on the Office Hours page</p> |
|  | <p>Professor: Morris Greenberg Please call me: Morris OR Professor Greenberg (pronouns: he/him) How do you pronounce that? “Morris” rhymes with English the word “chorus”. “Greenberg” is exactly like the English words “green” and “berg”</p> | |
| | <p>Head Teaching Assistant: George Stefan Teaching Assistant Team: 24 experienced grads/undergrads whose job it is to support your learning in STA130!</p> | |

Course Summary

Data permeates almost every aspect of our lives, but how do we make sense of it all? How do sports coaches understand how their teams are performing? How does Amazon plan optimal shipping and distribution routes? How do geneticists uncover genes that can increase our risk of certain diseases? How does TikTok decide what content to show us?

This course is an introduction to statistical reasoning and data science, which refer to the interdisciplinary field and associated skillset that have arisen to solve many of these modern-day problems, encompassing acquiring, managing, and analysing data. In this course, you’ll develop the basic skills and intuition needed to start your journey into the broader fields of statistics and data science, with a focus on statistical reasoning, computation, and communication. We will use the R programming language and environment for statistical computing, and you will gain experience communicating statistical ideas and knowledge.

Course Goals

The table below summarizes the learning objectives for the course and the opportunities through which you will demonstrate your mastery:

| Learning Objective | Opportunities to demonstrate mastery |
|---|---|
| 1) Describe how statistical methods can be used to learn from data, including methods for description, explanation, and prediction. | - Problem Sets - Tutorials - Project (Proposal, Content) - Midterm & Exam |
| 2) Execute data cleaning operations and create reproducible code and reports using R and Quarto which can be run without errors by peers. | - Problem Sets - Tutorials - Project (Content) - Midterm & Exam |
| 3) Formulate answerable research questions from available data and address them with appropriate statistical methods, and understand the strengths and limitations of varying methods | - Problem Sets - Tutorials - Project (Proposal, Content) - Midterm & Exam |
| 4) Carry out a variety of relevant statistical analyses in R including generating descriptive statistics and visualizations, conducting hypothesis tests and constructing confidence intervals via simulation, fitting regression models, and building predictive models. | - Problem Sets - Project (Content) - Midterm & Exam |
| 5) Clearly communicate the process of data collection, data wrangling, analysis, results, and implications to both technical and non-technical audiences. | - Problem Sets - Tutorials - Project (Content, Presentation, Q&A) - Midterm & Exam |
| 6) Critically evaluate ethical issues in statistics and data science | - Problem Sets - Tutorials - Midterm & Exam |
| 7) Reflect on personal growth through three structured mentorship reflections and pre/post surveys exploring experiences with community-engaged learning partners. | - Mentorship Program - Pre/post course surveys - Tutorials |

Land Acknowledgement

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the [Huron-Wendat](#), the [Seneca](#), and the [Mississaugas of the Credit](#). Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

A land acknowledgement is a way of honouring the Indigenous people who have lived and worked here for thousands of years, and whose land was colonised. It is also an invitation to reflect on the history of this land and we encourage you to consider the history of the land wherever you are now.
<https://www.whose.land/en/>
<https://indigenous.utoronto.ca/about/land-acknowledgement/>

How will your mastery be measured?

| WEIGHT | WHAT | WHERE TO SUBMIT | DATE(S) |
|--------|--|--|--|
| 8% | Weekly R problem sets | MarkUs (best 7 of 10 will count) | Due Thursdays at 11:59 PM, except: - Thurs Feb 13 th (midterm week) - Thurs Feb 20 th (reading week) - Thurs Apr 3 rd (poster fair week) |
| 12% | Weekly Tutorial - Engagement and Participation (4%) - Communication Activity (Writing or Presentation) (8%) | Quercus (best 7 of 10 will count) | Due Fridays after the weekly tutorial (take a photo of your work and submit it to Quercus) No tutorials on: - Fri Feb 14 th (midterm) - Fri Feb 21 st (reading week) - Fri Apr 4 th (poster fair) |
| 20% | Midterm exam | In person, locations TBA on Quercus | Friday February 14 th - L0101: 9:10 AM – 11:00 AM - L0201: 1:10 PM – 3:00 PM |
| 20% | Final project - 2%: Project Proposal - 1%: Draft Poster - 10%: Final Poster - 4%: Video Presentation - 1%: Poster fair Q&A - 1%: Peer Evaluation - 1%: Reflection | More details will be provided on Quercus | Submissions will be due at 11:59 PM on the following days: - Friday February 28 th (Project Proposal) - Sunday March 23 rd (Draft Poster & Analysis) - Thursday April 3 rd (Final Poster, Video Presentation) - Friday April 4 th : In-person poster fair during tutorial time - Friday April 4 th (Peer Evaluations, Reflections) |
| 2% | Pre/Post Course Surveys (1% each) | Quercus | 5 PM Friday January 24 th (Pre) 5 PM Friday April 4 th (Post) |
| 3% | Mentorship Program | Quercus | There will be events throughout the term, but final reflections are only due by Thursday April 3 rd |
| 35% | Final exam | In person Location TBD | <i>Will be scheduled by the Faculty of Arts & Science</i> |

Course Materials

There is no required textbook for this course. All necessary materials will be posted on the course's Quercus page.

Class Meetings

Class meetings will be held on Mondays from 11:10 AM – 1 PM (L0101) and Mondays from 3:10 PM – 5 PM (LEC0201); the class locations are available on ACORN. Attendance is strongly encouraged but not required or graded. These class meetings will be in person unless extenuating circumstances arise (see below). We will do our best to provide recordings for at least one section per week but cannot guarantee this. Whenever possible, recordings will be posted on Quercus (allow at least 24 hours for these to appear).

If you are feeling unwell, please do not come to campus. Course materials will be posted before class for you to follow along (as well as after class if there were significant annotations made during class) and you can attend office hours to clarify any points of confusion.

If a course instructor is unwell or is otherwise unable to come to campus or access the classroom, Monday class meetings may be delivered on Zoom instead of in-person. If this occurs, you will be notified via a Quercus announcement on Monday morning – it is your responsibility to check Quercus regularly.

(8%) Weekly Problem Sets (due Thursdays)

A problem set will be assigned each week apart from the week of the midterm (Week 6), reading week (Week 7), and the last week of the term (Week 12), for a total of 10 problem sets. In each problem set, you'll be asked to complete a set of questions using R to generate figures, tables, and/or statistical analyses and interpret the results you obtain.

Problem sets will be posted on Quercus on Mondays by 6 PM and due on Thursdays by 11:59 PM (.qmd and .pdf files). Submissions will only be accepted via MarkUs (no email submissions) and it is your responsibility to make sure you submit the correct files on time. You can make submissions as many times as you like, but only the latest submission will be graded.

Only your top 7 of 10 problem sets will count towards your final problem set score. Because of this, no declaration of illness is required to be excused from a missed problem set as this calculation will be applied automatically by the instructors. No further accommodations for missed problem sets will be given beyond this adjustment, so you are encouraged to submit problem sets (even if they are incomplete) in case circumstances later in the term make it difficult for you to complete problem sets at that point.

Note: The last day you can add the course is Sunday January 19, 2025. If you add the course on this date, you will have missed problem sets 1 and 2. You will be responsible for submitting problem set 3 by Thursday January 23 and for catching up with missed material from previous problem sets (solutions will be posted on Quercus by the Monday after each deadline).

(12%) Tutorials (Fridays)

Each week, you'll spend two hours in a class meeting led by a course instructor and two hours in a small-group tutorial. The decision to dedicate equal time to large class meetings and small tutorial meetings is intentional and reflects the importance of learning new material in class meetings and deepening your understanding through communication-focused activities in tutorials.

Tutorials will be held each Friday from 9:10 am – 11am (Section L0101, TUT0101 – TUT0112) and 1:10 PM – 3 PM (Section L0201, TUT0201 – TUT0212), with the exception of Friday February 14th (midterm day), Friday February 21st (reading week), and Friday April 4th (Poster Fair day). **You must register for a tutorial section that corresponds to the lecture section you are enrolled in. Participation in tutorials is graded**

(see below) and it is important that you arrive on time and stay until the end as there will be group activities and discussions. You must attend the tutorial in which you are registered on ACORN.

Tutorials will consist of a mixture of the following types of activities:

- Individual reflection and brainstorming
- Small group discussions
- Informal presentations
- Writing tasks
- Planning and delivering short group presentations

Each week, your tutorial grade will consist of two parts:

- Tutorial Attendance and Participation: To get full marks here, you must attend the full tutorial AND actively participate in the individual, small group, and large group activities and discussions. If you attend but don't actively participate, you will not get full credit, and similarly if you arrive late / leave early you will get partial credit even if you participate actively.
- Tutorial Writing / Presentation Activity: In each tutorial, you will get time to work on a writing or presentation task. These will be assigned and completed in the tutorial time. When required (e.g. for writing or presentation outline tasks), you will submit your work to Quercus by taking a photo of your handwritten work, within 2 hours of the end of your tutorial, that is by 1 PM for students in L0101 and by 5 PM for students in L0201. Late submissions will not be accepted, as all work is expected to be completed during the tutorial time, not afterwards.

Only your top 7 of 10 tutorials will count towards your final tutorial score. Because of this, no declaration of illness is required to be excused from a missed tutorial as this calculation will be applied automatically by the instructors. No further accommodations for missed tutorials will be given beyond this adjustment.

If a TA is unwell or otherwise unable to come to campus to lead the tutorial, every effort will be made to find a replacement TA. However, if this is not possible, the tutorial may be moved to online delivery. You will be notified as early as possible with this information via Quercus.

Note that a weekly scheduling conflict is not a valid reason for requesting this accommodation. If you have conflicts that prevent you from attending your own Section's tutorials but allow you to attend another Section's tutorials, please email sta130@utoronto.ca as soon as possible so that we can attempt to find a possible accommodation.

Finally, please note that **you are required to attend the tutorial under which you registered on ACORN** unless given explicit permission by an instructor. **Attending a different tutorial without permission will result in a grade of 0 for your tutorial that week.**

(55%) Midterm and Final Exam

There will be two written exams during the course: a **midterm exam** (20%) that will take place on Friday February 14th and a **final exam** (35%) that will take place during the final exam period. Additional details on the nature of the exams will be provided on Quercus when they are available, later in the term.

(20%) Final Project

A substantial component of the second half of the course will be a **final group project**. This will involve synthesizing many of the topics discussed in the course into an analysis of a real-world dataset while learning to work in a team. This will be broken down into several components, as can be seen in the course grading scheme.

Additional details regarding the dataset, group policy, etc. will be provided on Quercus at a later date.

(2%) Pre/Post Course Surveys

There will be an online pre-course survey and a post-course survey that you will need to fill out by 11:59 PM on Sunday January 29th and Friday April 4th, respectively. Each will be worth 1% of your grade. Links to these surveys will be posted on Quercus on the “2% pre/post survey” page.

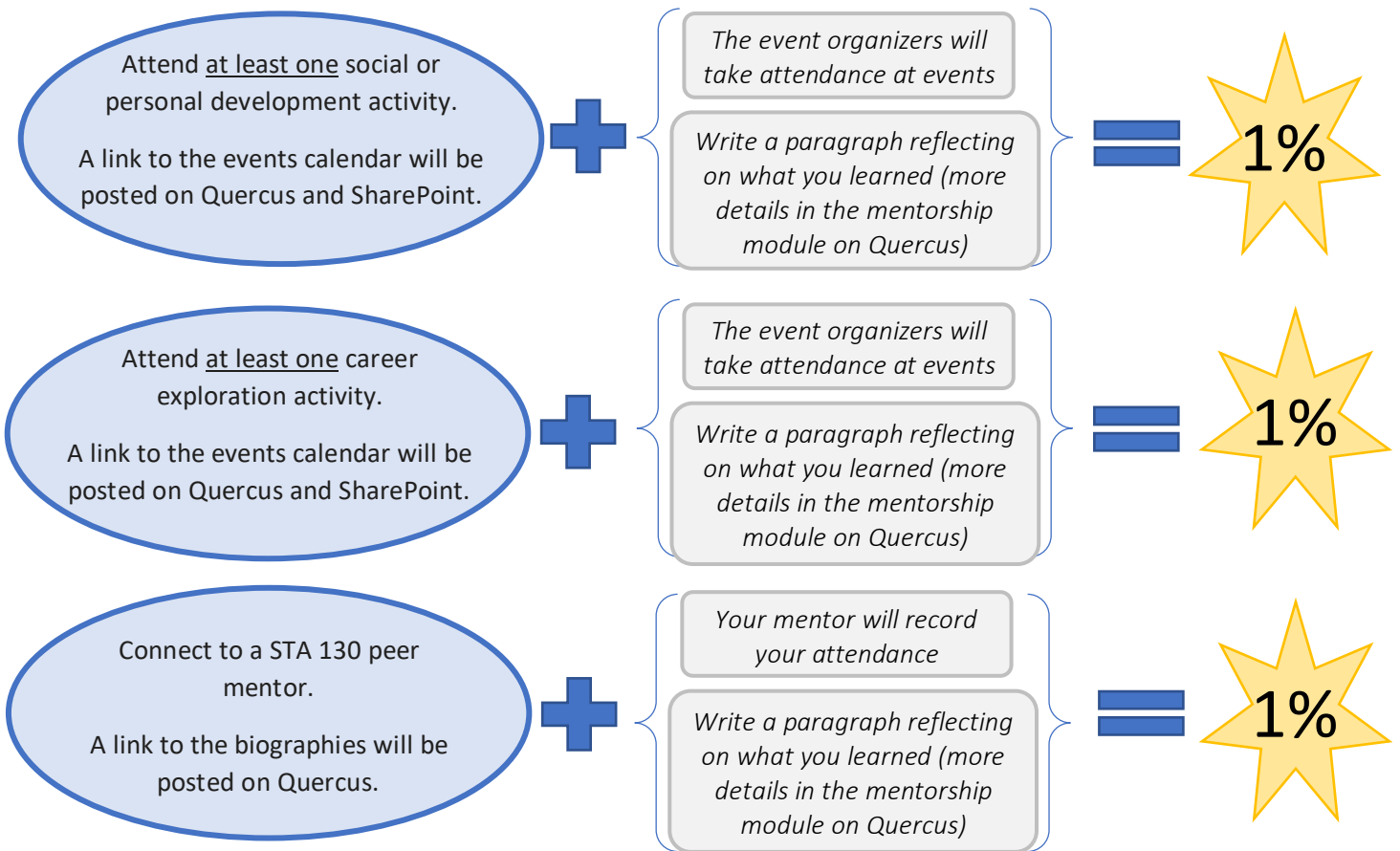
(3%) Mentorship program

Finding community and support on campus not only increases your chances of academic success but fuels your mental well-being and makes university life more fun. This program provides the foundation for success through your time at UofT by exposing you to **three pillars of learning and support**:

1. **social/personal development,**
2. **career exploration, and**
3. **peer-to-peer, 1:1 mentorship** from upper year students who know what you're going through.

It's also worth 3% of your mark (1% for each of the three pillars).

What do I need to do to get credit?



Grading will be ongoing, and it may take up to 2 weeks from the date of you submit your reflection for the grade to appear in Quercus.

Note: You will only get credit for attending one event/meeting from each of the three categories (social/personal, career exploration, and peer 1:1 mentorship). While you are encouraged to attend more than one event/meeting per category, you only need to submit a reflection for your first event/meeting from each category.



For questions about the program, please contact sta130@utoronto.ca and include "Mentorship program" in the subject line.

Missing Work Policies

Important note

If you have accommodation letters from an accessibility advisor, make sure you read the instructions in the “Accessibility” section below.

Problem Sets

As stated earlier, your final problem set score will be calculated based on the best 7 of 10 weekly problem sets. Because of this, no declaration of illness is required to be excused from a missed problem set as this calculation will be applied by the instructors at the end of the term, when the course grades are downloaded from Quercus and MarkUs to calculate your final scores. No further accommodations for missed problem sets will be given beyond this adjustment, so you are encouraged to submit problem sets (even if they are incomplete) in case circumstances later in the term make it difficult for you to complete problem sets at that point.

Tutorials

Only your top 7 of 10 tutorials will count towards your final tutorial score. Because of this, no declaration of illness is required to be excused from a missed tutorial as this calculation will be applied by the instructors at the end of the term, when the grades are downloaded from Quercus to calculate your final scores. No further accommodations for missed tutorials will be given, beyond this adjustment. Note that this means if you miss 3 tutorials earlier on in the term by choice and subsequently miss a tutorial later on due to illness or an emergency, we still will use your best 7 scores (which in this case would be the 6 you attended and one of the four that you missed - which would receive a 0).

Midterm

If you miss the midterm for a valid reason, you may ask for an accommodation via the “Declaration of Illness or Personal Emergency” form linked on the midterm page on Quercus within 1 week of the missed assessment (the earlier the better). If approved, the weight of your midterm will be shifted to your final exam.

Since the midterm is scheduled in the usual tutorial time, there should not be conflicts with assessments from other courses – midterms scheduled during class/tutorial time take priority over midterms outside of the regular schedule.

Final Project

Extensions for valid reasons may be granted for a *maximum* of 5 days for various written components of the final project; please email sta130@utoronto.ca as early as possible before the deadline to request an extension.

Attendance at the in-person poster fair is required. If you miss the poster fair for a valid reason, you may ask for an accommodation via the “Declaration of Illness or Personal Emergency” form linked on the midterm page on Quercus within 1 week of the missed poster fair (the earlier the better). If approved, the weight of the missed poster fair components (e.g. live Q&A and peer feedback) will be shifted to other parts of your project work.

Final Exam

If you are sick or have a personal emergency that prevents you from writing the final exam, you will need to submit a [petition to defer your exam](#). This process is managed by the Faculty of Arts and Science, so course instructors are not able to make any accommodations beyond this for missing the final exam.

Pre/Post Course Surveys

No late submissions will be accepted. Accommodations for missed work will be accepted only in extreme circumstances.

Mentorship Program

No late submissions will be accepted. Accommodations for missed work will be accepted only in extreme circumstances.

Marking Concerns

Any request to have an assessment remarked must be submitted to the correct form within ONE week of the grades being posted. Your request will be reviewed by the course instructors and head teaching assistant. In this form, you will be asked to provide your full name and student number and a detailed written justification referring to your answer and the relevant course material (if applicable). It will NOT be enough to simply say you believe your answer deserves higher credit, rather you must support your request with specific reference to relevant course material.

You'll find the forms on Quercus on the relevant page on Quercus (e.g. Tutorials, Midterm, Project).

If an insufficient request is submitted (i.e., there is no detailed written justification for the remark request), the request will be denied by default.

Please note that we reserve the right to review the grading of all questions or parts when you re-submit an assessment for reconsideration (i.e., your grade could go down).

Academic Integrity

You are responsible for knowing the content contained in the [University of Toronto's Code of Behaviour on Academic Matters](#).

As a general rule, we encourage you to discuss course material with each other and ask others for advice. However, **it is not permitted to share answers or to directly share R code or written answers for anything that is to be handed in (e.g., weekly problems and assessment)**. For example:

- "For question 2.1 what R function did you use?" is a fair question when discussing course material with others in the class.
- "Please show me your R code for question 2.1" is not an appropriate question.

If writing or code is discovered to match another student's submission or outside source, this will be reported as an academic offence. When asked to hand in code and a problem set or project document, the code you submit must have been used to generate the document. If it does not (i.e., the submitted code does not match the submitted output), this is also considered an academic offense. Academic offenses will be taken very seriously and dealt with accordingly. If you have any questions about what is or is not permitted in this course, please do not hesitate to ask your instructor and/or send an email to sta130@utoronto.ca.

Note that when an assignment is to be completed as a team (e.g., project), you may discuss and share answers and code with other members of your team but not with another team in the class or anyone outside the course.

Plagiarism

You may be at risk of plagiarising if you do not understand the rules and your responsibilities. You must not present the work of others as your own. This includes, but is certainly not limited to, copying text and including it in your writing without a citation and quotation marks.

There are many resources to help you learn more:

- <https://guides.library.utoronto.ca/plagiarism>
- <https://www.academicintegrity.utoronto.ca/smart-strategies/>

Use of Generative Artificial Intelligence Tools

Students may use artificial intelligence tools, including generative AI, in this course as learning aids. However, students are ultimately accountable for the work they submit. **If students use an artificial intelligence tool (e.g. ChatGPT) in an assignment, they must include, as an appendix, any content produced by an artificial intelligence tool and the prompt(s) used to generate the content. Any content produced by an artificial intelligence tool must be cited appropriately.** Many organizations that publish standard citation formats are now providing information on citing generative AI (e.g. MLA: <https://style.mla.org/citing-generative-ai/>.)

Students may not use generative artificial intelligence tools (e.g. ChatGPT and other AI writing and coding assistants) for the completion of, or to support the completion of invigilated, closed book assessment, including the midterm and final exam.

If you are unsure if a particular usage of a generative AI tool is appropriate, please ask your instructor for guidance. Note that policies for the use of these tools may be different across courses, and even for different assignments within a course.

Finally, it is almost always best to try completing an assignment without generative AI before turning to it, both from the perspective of mastering the material of the course, as well as from the perspective of querying generative AI effectively when you are at a point where it could be helpful.

Note: Be careful about private tutoring companies

You may have been contacted by private tutoring companies trying to sell their services to you for statistics courses. Please be extremely careful with these services as some forms of tutoring can pose an academic offence risk. A good tutor helps you understand the subject area and supports your learning.

A good tutor does not give you answers. **There are no shortcuts to learning. Learning takes time and effort.**

Be cautious giving money to companies whose motivation is profit. They may tell you they have insider information. They don't. They may even offer you the opportunity to commit academic offences. Please do not put your University of Toronto education at risk by participating in these kinds of unacceptable behaviours. If you have any questions or concerns about what is okay and what is not in your course, please ask us.

Remember, your teaching team (course instructors and TAs) know our course best and are here to help you! Please reach out to ask for course help and advice on how to learn the material.

Recognized Study Groups

[Recognized Study Groups \(RSGs\)](#) are small study groups of 3 to 6 students from the same course who meet weekly to learn course content in a collaborative environment.

Each group is made up of students from the same course. One student volunteers to be the RSG Leader and helps organize and plan weekly activities. The RSG Leader is a student who is trained in group facilitation and effective learning techniques. RSG Leaders are not tutors – they are learning along with group members.

A student staff member is also assigned to each group to help connect you to academic resources and support your group's goals.

While not compulsory for this course, we would highly recommend you [get involved with an RSG](#). Consider also inviting members of your tutorial group to join you!

Other resources

See the “Other Services and Supports” page on Quercus (linked in the Resources section of the course's homepage) for a range of helpful U of T and community resources.

Accessibility

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 via email at accessibility.services@utoronto.ca or visit their website at <http://accessibility.utoronto.ca>.



If you have an accommodation letter from your accessibility advisor that is relevant to this course, please do the following:

1. Email your letter to sta130@utoronto.ca with “Accommodation Letter” as part of the email subject, CC your advisor, and let us know anything else you wish us to know/any questions you have. Please do this as soon as possible after you enroll in the course/receive this syllabus.
2. Confirm any accommodations for each specific assessment at least 1 week before the assessment. (i.e. if you receive extra time for timed assessments, confirm this one week prior to the midterm assessment and final assessment, even if we have already discussed this at the beginning of the semester.)

Religious Accommodation

At the University of Toronto, we are part of a diverse community of students, staff and faculty from a wide range of cultural and religious traditions. For this course, we have sought to avoid scheduling compulsory activities in ways that will clash with religious holy days (not captured by statutory holidays). Further to University Policy, if you anticipate missing a course activity due to a religious observance, please let us know as early in the course as possible. With sufficient notice (in general, at least three weeks) we can work together to make alternate arrangements.

Intellectual Property Statement

Course material that has been created by your instructor (i.e. lecture slides, term test questions/solutions and any other course material and resources made available to you on Quercus) is the intellectual property of your instructors and is made available to you for your personal use in this course. Sharing, posting, selling or using this material outside of your personal use in this course is not permitted under any circumstances and is considered an infringement of intellectual property rights.

This course, including your participation, may be recorded on video and will be available to students in the course for viewing remotely and after each session. These are intended only for students registered in the course. Course videos and materials belong to your instructor, the University, and/or other source depending on the specific facts of each situation and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

Course Tools

Below, you'll find a list of some of the terms you will encounter in this course and more broadly at the University. You can find a more complete glossary at [here](#). You might also find the University of Toronto Student Union Handbook (<https://utsuhandbook.ca/>) helpful. Note that this is not an official UoT resource but is produced by the University of Toronto Student Union.

| | |
|-------------------------------|---|
| Quercus | <p>The online teaching and learning system where you will find your course homepages (including course materials, syllabi, announcements, and grades) and other resources. For STA130, you'll go to the course page on Quercus to access the following:</p> <ul style="list-style-type: none"> - Course materials (videos, slides, class recordings, syllabus, office hour schedule, etc.) - Announcements, messages, and course updates - Grades - Links through which you can submit problem sets, projects, etc. - Important announcements about the course |
| MarkUs | <p>Online platform where you will submit Part 1 of your weekly problem sets (R programming). You can run tests on this platform to check if your solutions are correct before officially submitting them for grading, so we recommend you start early</p> |
| Piazza | <p>Piazza is a free Q&A platform which is used in many courses. In this course, you'll use Piazza to post questions about course content or logistics (see "Getting your questions answered" for more guidance on how to join and use Piazza). There is a tab on Quercus that you can use to get started if you haven't already joined.</p> <p>For STA130, all questions about course logistics and content should be posted on Piazza (see "Getting your questions answered" section for clarification).</p> |
| utoronto Email Address | <p>We may sometimes send important emails to your utoronto email account. It is important that you check this account regularly to ensure you don't miss important information. Make sure you use this email when setting up Piazza or using Zoom.</p> |
| R/RStudio/ JupyterHub | <p>Free software for statistical computing. In this course, you'll learn to use R to produce visualizations, manipulate data, and conduct analyses. <u>No prior programming experience is assumed or required.</u></p> <p>JupyterHub allows you to work with this software without having to download anything to your computer. This is where we will provide you with the tasks and data you will need to complete your weekly problem sets.</p> <p>Technically, RStudio is an integrated development environment (IDE) for R, and JupyterHub is a University of Toronto server that allows students and faculty to access RStudio online. We will probably refer to R, RStudio, and/or JupyterHub interchangeably at various points throughout the course.</p> <p>For STA130, you'll need to sign into JupyterHub using your UoT credentials (utorid and password) and using a link provided to you by the instructors (on Quercus) to access and complete weekly problem sets.</p> |
| Zoom | <p>Zoom is a video conferencing tool. You will need to set it up with your utoronto email address. We will use Zoom for online office instructor and TA hours, as well as a backup in the event that the instructor cannot be present on campus in a given week or if you are given permission to attend tutorial remotely.</p> |

Getting your questions answered

Question(s) about course logistics? e.g.

- *Where do I submit this week's problem set?*
- *When is the midterm?*

Question(s) about course content e.g.

- *What is the the difference between mean and median? I don't understand.*
- *Why do we sometimes use `group_by()` with the `summarize()` function?*
- *My code won't run for question #1 in the problem set (please include screenshots of your code and the error message!).*

Information / resource to share with classmates e.g.

- *I have a link/resource/opportunity to share with my classmates!*

Question(s) related to your personal circumstances (i.e. something which is not appropriate to share with the whole class) e.g.

- *I would like question 2 on the midterm assessment to be regraded (be sure to include clear justification, as outlined in the "Marking Concerns" section)*
- *I missed the midterm exam due to a personal emergency (be sure to include the required elements as indicated in the "Missed Work" section)*

Questions about the mentorship program e.g.

- *Is this event/activity eligible for the mentorship program? (with details about the event/activity you are wondering about)*
- *Can you explain why I didn't get credit for one of my mentorship program reflections?*
- *It's been over two weeks but my grade hasn't been posted. When can I expect it to be up?*

WHERE TO GO: Piazza Forum

You can access Piazza through the link on the left side of the course Quercus page.

Posts can be anonymous for your classmates, but instructors and TAs will be able to see your name.



Before posting a question, search to see if someone else has already asked a similar question (you can edit the question to add yours or post a follow-up at the bottom).



Try to answer your classmates' questions – this is a great way to reinforce your own understanding while also helping your classmates! *Don't worry if you aren't 100% sure of the answer – all answers will be reviewed / endorsed / completed by TAs and instructors!*

WHERE TO GO: Course Email (sta130@utoronto.ca)

Please only send emails from your utoronto email address to ensure it doesn't automatically go to a Junk folder and to include your full name and student number.



This account will be monitored by the head TA and course instructors. *If you want to reach a specific instructor or TA, please include their name in the subject line; do not email them directly.*



Allow 24-48 hours for a response during the week (Monday to Friday, ET) and do not expect responses on the weekend.



If you cannot meet a deadline because you are ill, please refer to the "Missing Work Policies" section in this syllabus and submit all required information, if applicable, to this email account.



Questions about course content won't be answered here, but rather redirected to Piazza or office hours.