

PSY201H1S LEC5101 – Statistics I

July-August 2023 // Tuesdays and Thursdays at 6PM ET.

Course Format: Online asynchronous

Course Website:

- Quercus (<https://q.utoronto.ca>)
- MindTap (https://www.cengage.com/coursepages/UofT_Su23S_PSY201)

Instructor: Dr. Julie Sato (julie.sato@mail.utoronto.ca)

- Office hours by appointment only: please email to schedule an appointment.
 - Held on [Zoom](#) (Meeting ID: 836 8902 6502; passcode: psy201)

Teaching Assistants: Mo Cui, Kirk Geier, Leo Huang, Madeleine Yu, Ece Yucer.

TA course email: psy201.summer2023@gmail.com

Prerequisite: PSY100H1/ PSY100Y5/ (PSYA01H3 + PSYA02H3)

Exclusions: ECO220Y1/ EEB225H1/ GGR270H1/ IRW220H1/ POL222H1/ SOC202H1/ STA220H1/ STA238H1/ STA248H1/ STA288H1/ PSY201H5/ STA215H5/ STA220H5/ PSYB07H3/ STAB22H3/ STAB23H3/ STAB57H3

It is your responsibility to ensure that you have met all prerequisites listed in the Psychology section of the A&S Calendar for this course. If you lack any prerequisites, you will be removed from the course. No waivers will be granted.

Course Materials (required): We will be using the following textbook and MindTap® for this course – both are required materials.

- Gravetter, F. J., & Wallnau, L. B. (2017). Statistics for the Behavioral Sciences (10th Ed.). Boston, MA: Cengage Learning. ISBN: 978-1-337-28075-4.
- MindTap® Psychology, ISBN: 978-1-337-28075-4 (required)
 - Course link: https://www.cengage.com/coursepages/UofT_Su23S_PSY201

Note: I encourage you to shop around for the best price, but a special UofT price is available at our bookstore for \$64.95. You can purchase the *electronic* (e-book) version of our textbook and MindTap® directly from the University of Toronto bookstore: (<https://www.uoftbookstore.com/adoption-search-results?ccid=1410761&itemid=82989>).

MindTap® bundled with a *paperback* version of the text can be purchased for \$129.95. In addition, purchasing MindTap® through the bookstore will come with 12 months of access so this is something to consider if you will be taking PSY202 next term.

- **If the cost of this platform is prohibitive and will prevent you from participating in this class, please email Dr. Sato to help with a plan.**

Course description:

Statistics is the science of collecting, analyzing, interpreting, and presenting data. A fundamental knowledge of statistics is needed to practice and evaluate research through a critical lens. This knowledge will also allow you to recognize and evaluate different statistical claims in your everyday life. The goal of this course is to provide you with the fundamentals of descriptive and inferential statistics to better understand, assess, and apply different statistical arguments.

What will you learn?

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

1) Interpret basic statistical results

- a. Define key statistical terms, research method terms, and research designs,
- b. Calculate and interpret different measures of central tendency and variability,
- c. Interpret data displayed as statistics, figures, and tables.

2) Apply appropriate statistical and research methods to collect, analyze, interpret, and report research findings to test hypotheses

- a. Know how to formulate a hypothesis,
- b. Apply and identify appropriate research designs to tests given a certain hypothesis or set of data,
- c. Select and implement appropriate statistical tests to solve a given research problem or hypothesis,
- d. Calculate and interpret measures of statistical and practical significance,
- e. Produce and interpret reports of statistical analyses in APA format,
- f. Effectively communicate the results and meaning of statistical information to different audiences (e.g. layperson, scientists, etc.).

3) Evaluate the public presentation of statistics

- a. Recognize when statistics are presented in an inaccurate or misleading way (whether intentional or not),
- b. Assess the validity of statistical conclusions in popular science reporting (e.g. blogs, newspapers, etc.),
- c. Understand the limitations of hypothesis testing and identify some of the remedies recommended by the field,
- d. Understand the potential ethical implications of using statistics inappropriately,
 - e. Understand the subjectivity involved in research, including the decisions that researchers must make when analyzing data and reporting results.

Course Structure

Online Lectures

This course will be fully online – you will need access to a reliable computer and internet connection. More details on technical requirements and suggestions for online learning can be found [here](#).

Three hours of video lecture will be uploaded **every Tuesday and Thursday at 6 PM ET**. These will be available asynchronously, so you will be able to watch them at any time. Despite this, we will still be following a tight schedule and covering a wide range of material with many concepts building upon each other. This means that it is critical to stay on pace to succeed in this course. I strongly encourage you to take notes while watching the lecture videos and ask any questions you have to clarify and expand on the material covered.

Textbook Readings

The textbook is used to supplement the content that is covered in class. Assigned chapters will review or expand on concepts we cover during lectures – there may also be important topics that are not covered in class. You will be responsible for assigned chapters for all tests.

Independent Practice with MindTap®

Regular practice of the concepts learned in the class will be critical to succeed in this class. MindTap® was selected for this class because it provides multiple research-based methods of review to support you through this course. Only the Problem Sets will be completed for a grade in this course, but the remaining types of activities (Mastery Training, End of Chapter Problems, Exam Reviews) are recommended for extended practice.

Check-in Meetings

At the end of each week, you will be able to submit any feedback you have on the content (via the Discussion board – note this is optional). This can include questions you want answered, points you want additional clarification on, or topics you found to be interesting. Then, I will host a live check-in meeting (via Zoom) on the following **Monday at 3PM ET** to go over this content. If there is time remaining, I will answer questions posed via the chat. These check-in meetings will be recorded and posted on the Quercus page in case you are unable to attend.

- Zoom link: [here](#) (Meeting ID: 836 8902 6502; passcode: psy201).

Course Communication

With the course being fully online, we will unfortunately not have as much face-to-face communication. However, I will try to facilitate as much communication as possible. I encourage you to communicate openly—whether you want to clarify concepts you might not understand, further explore topics you are interested in, have questions about the real-world application of statistics, or have questions about grading.

- **General inquiries** related to course content, policies, or assessments should first be posted to the relevant **Quercus Discussion Board**. This will not only help yourself, but many of your classmates who will likely have the same question! You are encouraged to both ask and respond to questions on the Discussion Board. The TAs and I will also monitor the discussion board.
- **Scheduling appointments to review content, get study advice, or view tests** – email TAs directly at psy201.summer2023@gmail.com.
- **Personal questions related to illness, accessibility, accommodations, class concerns** – email the instructor directly at julie.sato@mail.utoronto.ca
- **EMAILS:** When emailing myself or the TAs, please include “PSY201” in the subject line. This will help make sure that your email doesn’t accidentally get lost in our inboxes. We will try our best to respond to all emails within 2 business days – responses may be delayed during busy times, so I recommend going over the syllabus, website, and Discussion Board first to see if your question has already been answered.
- **For technical or account assistance** related to our course platform (MindTap®), please contact the site’s Customer Support.

Course Assessments

Problem Sets – 10%

Using MindTap®, you will complete problem sets for each of the assigned chapters to practice the concepts covered in the course. **Problem sets will be due each week on Sundays, 11:59pm.** For some weeks, there will be multiple problem sets due. Problem sets submitted after the deadline (even by a few minutes) will be given a 0. So please plan accordingly and start well before the deadline. The problem sets are set up for three possible attempts and your grade will be calculated as the average of the attempts. The lowest **three** scores from your problem sets will be dropped when computing your final grade.

Statistical Literacy Assignment – 15%

The statistical concepts we learn in class are seen everywhere in our day-to-day lives. This project is designed as an opportunity to apply what we’ve learned in class to assess real-world concepts and build your statistical literacy. You will be given the opportunity to choose a popular news article related to psychology and describe the statistical approach you would take to support a claim from the article. Further details about this assignment will be provided later in the course.

Tests – 75%

There will be a total of 2 term tests (worth 22.5% each) and a final assessment (worth 30%). Each of these tests are cumulative and will consist of multiple choice, short answer, and long answer/computation questions covering all the lecture and textbook material up to the date of the test. The questions are designed to not only test your knowledge of the course material, but also your ability to apply the concepts in novel situations.

These exams will be open book – this does not mean open-classmate, open-Google, etc. – all assessments are to be completed individually, and you are expected to follow the University of Toronto’s Code of Behaviour on Academic Matters (found [here](#)). You will have 24 hours to complete each test starting from class time (**Tuesday or Thursday at 6 PM ET**) – you can complete the test at any time within the testing window. The tests will be untimed but should take approximately 3 hours to complete.

Note: The TAs and I will be available for contact via email from 6PM-9PM ET the day of and 9AM-12PM ET the day after the test has started to answer any questions you may have during the term tests. Email responses may not be as quick outside this time.

Course Policies and Resources

Academic Misconduct Policy

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else's work as your own (whether in part or in whole) or submitting work that you have previously submitted for marks in another class or program—is a serious offence that can result in sanctions. Additional serious academic offenses include possessing prohibited materials while writing tests and providing or receiving assistance from another student unless explicitly permitted to do so. Unless explicitly stated, all homework, writing, and assessments submitted for a grade for this class must be done independently. Speak to me or your TAs for advice on anything that you find unclear.

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 [here](#). Consult the Code of Behaviour on Academic Matters for a complete outline of the [University's policy and expectations](#). For more information, please see [here](#) and [here](#).

Any suspected cases of academic dishonesty will be investigated following the procedures outlined in the University of Toronto’s [Code of Behaviour on Academic Matters](#). If you have any questions or concerns regarding academic integrity, it is your responsibility to seek out the proper information either from the course instructor or other institutional resources (see [here](#)).

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 (e.g., Turnitin.com). 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>).

Missed Test Policy

If you miss a term test or require a short extension, you must submit acceptable documentation (e.g. ACORN absence declaration, registrar's letter, etc.) within a week of the missed test date (barring any extraordinary circumstances). In this case, your other tests will be reweighted to make up the missing part of your grade. If you miss one term test, your other term test and the final exam will be reweighted, with the term test weighted at 25% and your final assessment at 50%. If you miss both tests, your final exam will be weighted at 75%. Makeup exams will not be issued—if you do not submit the appropriate documentation, you will receive a 0 on your missed test.

Late and Extension Policy

MindTap problem sets submitted after the deadline (even by a few minutes) will be given a 0. *However, remember that your **THREE** lowest grades will be dropped.* Late assignments (not including tests) will be penalized by 5% per day, for up to 3 days (i.e., late assignments will not be accepted after 3 days – you will receive an automatic 0 on these assignments).

If you require an extension for any reason, please email me (julie.sato@mail.utoronto.ca) at least 72 hours *before* an assignment is due to request an extension.

Grading Dispute Policy

If you believe that your assignment was graded unfairly, please first wait for at least 24 hours following the return of the assignment before contacting us. Any grade concerns must be raised within 14 days of the return of the assignment.

Then contact the TA team (psy201.summer2023@gmail.com) with specific details on where you think something was overlooked to discuss reviewing your assignment. This may be able to be resolved via email, or you may decide to set up a meeting to discuss in more detail.

If you still feel as if your assignment was graded unfairly following a meeting with the TA, you can email me a short paragraph detailing your grade concern to request a regrade – grade disputes are not to be directed to your TAs. Only reasonable and well-justified concerns will be considered, and by submitting a request you are consenting to a full regrade of the assignment. Keep in mind that the regrade is final and your mark could go up, go down, or stay the same.

Audio Recording and Lecture Materials Usage Policy

Materials provided by me and the TAs (including, but not limited to, the syllabus, lecture slides, handouts, recordings, etc.) are to be used by yourself and the other class members only. They are not to be posted in any public access forum (i.e. online or on a shared server), shared with others not enrolled in this course, or otherwise distributed without explicit permission from your instructor. Students are not permitted to record or distribute review sessions.

Lectures, slides, and recordings are the intellectual property of the instructor, and non-compliance with these terms violates an instructor's intellectual property rights and the

Canadian Copyright Act. Students violating this agreement will be subject to disciplinary actions under the Code of Student Conduct.

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 [here](#). 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; your instructors will not reveal that you are registered with AS.

Verification of Illness

A Verification of Illness (or "doctor's note") is temporarily not required. Students who are absent from academic participation for any reason (e.g., COVID, flu and other illness or injury, family situation) and who require consideration for missed academic work should report their absence through the online absence declaration within one week of missing a test/assignment. The declaration is available on ACORN under the Profile and Settings menu. ***Students should also advise their instructor of their absence*** since the declaration is NOT automatically sent to your instructors. If an absence extends beyond 7 consecutive days, or if you have a non-medical personal situation preventing you from completing your academic work, you should connect with your College Registrar. They can provide advice and assistance reaching out to instructors on your behalf.

Accommodation for Personal Reasons

There may be times when you are unable to complete course work on time due to nonmedical reasons and require accommodations beyond what the general course flexibility policies cover. 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 accommodation. They may be able to provide you with a College Registrar's letter of support to give to your instructors, and importantly, connect you with other resources on campus for help with your situation.

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.

Course Schedule

Week	Date	Topic	Readings	Assignments
1	Tues, July 4 th	Lec 0: Welcome to the Course		Sign up for MindTap
	Thurs, July 6 th	Lec 1: Introductions, Variables & Measurement	Ch.1-2	Ch. 1-2 Problem Sets Due Sun, July 9, 11:59 PM
2	Tues, July 11 th	Lec 2: Frequency Distributions & Data Visualization	(Ch.2)	
	Thurs, July 13 th	Lec 3: Central Tendency & Variability	Ch.3-4	Ch.3-4 Problem Sets Due Sun, July 16, 11:59 PM
3	Tues, July 18 th	Lec 4: z-scores, Probability & Normal Distribution	Ch.5-6	
	Thurs, July 20 th	Term Test 1 (24 hrs)		Start July 20, 6:00 PM ET Due July 21, 6:00 PM ET Ch.5-6 Problem Sets Due Sun, July 23, 11:59 PM
4	Tues, July 25 th	Lec 5: Sampling & Intro to Hypothesis Testing	Ch.7-8	
	Thurs, July 27 th	Lec 6: Hypothesis Testing with the T-Statistic	Ch.9	Ch.7-9 Problem Sets Due Sun, July 30, 11:59 PM
5	Tues, Aug 1 st	Lec 7: T-test with Two Samples	Ch.10-11	Stats Literacy Outline Due Tues, Aug 1, 11:59 PM
	Thurs, Aug 3 rd	Term Test 2 Available (24 hrs)		Start Aug 3, 6:00 PM ET Due Aug 4, 6:00 PM ET Ch.10-11 Problem Sets Due Sun, Aug 6, 11:59 PM
6	Tues, Aug 8 th	Lec 8: One-way ANOVA	Ch. 12	
	Thurs, Aug 10 th	Lec 9: Correlations and Regressions	Ch. 15	Ch.12, 15 Problem Sets Due Sun, Aug 13, 11:59 PM
7	Tues, Aug 15 th	Statistical Literacy Assignment		Due Aug 15, 11:59 PM ET
	Aug 17th – 25th	Final Assessment (24 hrs)		Date: TBA

Other important dates to keep in mind:

- July 31, 2023 - Last day to drop S courses.
- Aug 17-25, 2023 – Final Assessment period