

# PSY201H1S: Statistics I — Online Asynchronous

Department of Psychology, University of Toronto

## 1 About this course

Fundamentals of descriptive and inferential statistics, including population and sampling distributions, simple association, probability, estimation, and hypothesis testing. Link to course description: <https://artsci.calendar.utoronto.ca/course/psy201h1> and link to course content: <https://q.utoronto.ca/courses/346413>

## 2 Contacts

### 2.1 Course Instructor (CI)

M. Eric Cui, Ph.D. candidate

Email: [mo.cui@mail.utoronto.ca](mailto:mo.cui@mail.utoronto.ca)

Virtual Office: <https://utoronto.zoom.us/j/9414318637>

Office Hours: *by appointment*

### 2.2 Teaching Assistants (TAs)

Ryan Barker, Abdullah Marei, Alex McArthur, Ece Yucer, Jennet Baumbach

Office Hours: <https://psy201s2024.youcanbook.me>

### 2.3 Methods

#### 2.3.1 Email

If you have questions about this course, please send an email to [psy201.summer2024@gmail.com](mailto:psy201.summer2024@gmail.com). In the email subject line, please make sure to include "PSY201" along with the topic of your inquiry. Please always use your UofT email addresses, as they are governed by the University's codes of conduct. We will do our best to respond to your emails within 2 business days; however, response times may vary depending on the volume of emails we receive. For instance, we are likely to receive more emails leading up to exam periods. If you do not receive a response within one week, please send a follow-up email, as your initial email may have been accidentally overlooked in the inbox.

### 2.4 Mandatory Textbook

Gravetter, F.J., Wallnau, L.B., (2020). Statistics for the Behavioral Sciences (10th Ed.). Boston, MA: Cengage Learning. ISBN-9781337280754. MindTap <sup>®</sup> Psychology, ISBN: 978-1-337-36622-9, MindTap Course Key: MTPN-Q003-BPR4

## 3 Course Descriptions and Goals

### 3.1 Description

Introduction to statistics is an essential course for psychology students who seek to understand how to collect, analyze, and interpret data. In psychology, statistics is used to make sense of the vast amount of data collected through experiments and studies. This course provides students with a fundamental understanding of statistical methods commonly used in psychological research. Overall, this course covers basic descriptive statistical methods and basic inferential statistical methods, such as mean and variance, z-score, t-tests and correlation analysis. This course is crucial for students to get familiar with their data analysis skills.

## 3.2 Goals

### 3.2.1 Goal 1: Knowledge Application

As a student taking this course, you can expect to gain a solid foundation in statistical analysis and learn how to apply these methods to psychological research. By the end of the course, you will be able to understand and conduct basic statistical analyses, interpret the results, and communicate them effectively.

### 3.2.2 Goal 2: Data Analysis

Another primary goal of this course is to develop your analytical skills. You will learn to identify research questions, design experiments and studies, and choose appropriate statistical methods to analyze data. You will also learn to evaluate the validity and reliability of research findings, as well as the strengths and limitations of statistical methods.

### 3.2.3 Goal 3: Scientific Communication

The third goal of this course is to develop your scientific and statistical communication skills. You will learn to effectively communicate your findings to others, both orally and in writing. You will learn to write clear and concise research reports, and to create compelling visualizations of data. Effective communication skills are essential for success in psychological research and are highly valued in many other fields as well.

### 3.2.4 Goal 4: Transitioning to Learning in a University

As a student taking this course, you will be provided with opportunities to enhance your ability to adapt to the university learning environment. This goal focuses on helping you develop essential skills such as time management, independent learning, and effective study habits through reflective learning. By the end of the course, you will be able to navigate the academic resources available, engage in collaborative learning activities, and apply strategies to overcome common challenges faced in higher education. These adaptive skills will not only support your success in this course but also in your overall university experience.

### 3.2.5 About this course

1. **A brief course description:** Fundamentals of descriptive and inferential statistics, including population and sampling distributions, simple association, probability, estimation, and hypothesis testing.
2. **Prerequisite:** PSY100H1/ PSY100Y5/ ( PSYA01H3 and PSYA02H3)/ COG250Y1
3. **Recommended Preparation:** Grade 12 Calculus
4. **Exclusion:** ECO220Y1/ EEB225H1/ GGR270H1/ IRW220H1/ POL222H1/ SOC202H1/ STA220H1/ STA238H1/ STA248H1/ STA288H1/ ECO220Y5/ PSY201H5/ STA215H5/ STA220H5/ PSYB07H3/ STAB22H3/ STAB23H3/ STAB57H3
5. **Breadth Requirements:** The Physical and Mathematical Universes (5)
6. **Additional Information:** <https://artsci.calendar.utoronto.ca/course/psy201h1>

## 3.3 Checklist

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

1. Understand and apply basic statistical concepts, including probability, z-score, hypothesis testing, and measures of central tendency and variability.
2. Use appropriate statistical methods to analyze data, correlation analysis and t-test.
3. Critically evaluate psychological research studies and their statistical analyses.
4. Communicate research findings effectively through formal reports using APA format.

## 4 Communication

### 4.1 Pre-recorded Lectures

PSY201H1S is an online course, including a 6-hour class per week in the summer. This course is delivered through online asynchronous lectures.

## **4.2 Additional Learning Materials**

There will be some pre-recorded additional learning materials posted on Quercus through the semester. However, the CI will clarify whether or not these materials will be tested on the mid-term or the final exam.

## **4.3 Term Tests**

The term tests will be delivered online. The time and location will be announced before the testing days.

## **4.4 Office Hours**

Office hours will take place primarily through Zoom.

## **4.5 Announcement on Quercus**

Important course updates will be sent out via the Announcements tool on Quercus. It is your responsibility to regularly check course announcements

## **4.6 Ongoing feedback**

I've created a survey that students can fill out anonymously after each class to provide me with feedback on lectures. This gives you the opportunity to let me know if I am going through the material too quickly, if there is a particular concept you are really struggling with, if there is something that could be improved about the structure of each class, etc. The link to this survey is available on Quercus. I cannot promise that I will be able to touch on every concern expressed in the feedback surveys. I will be looking for common concerns being expressed by students.

# **5 Inquiry and Request**

## **5.1 Content**

The best place to ask questions about the assignments, course material, or research in general is during class. Every class will include time for questions, and everyone will benefit from hearing the answers! Further questions can be posted to Discussion Boards on Quercus.

## **5.2 Course Administration**

Email the course email or the CI for administrative matters (e.g., missed deadlines, technical problems, remark requests). Please do not reach out to our personal emails, as the course email allows us to coordinate more effectively. Before you email, check if your question has been answered on this syllabus or discussion boards!

# **6 Evaluative Material (Max = 100 points)**

## **6.1 Evaluation Component A: Engagement (10 points)**

### **6.1.1 Mindtap (Max = 5 points)**

The daily engagement component involves consistent participation and ongoing learning throughout the course. Mindtap activities includes interactive online exercises related to each week's content from the course textbook (Gravetter, F.J., Wallnau, L.B., (2020). Statistics for the Behavioral Sciences (10th Ed.). Boston, MA: Cengage Learning), potentially helping reinforce key concepts and providing immediate feedback.

### **6.1.2 Discussion board - Muddy points (Max = 5 points)**

For the discussion board, students might be expected to post "muddy points" (unclear concepts) after each class and support each other in resolving these questions, with monitoring and assistance from the TA and Course Instructor. This collaborative approach could foster a supportive learning environment and help clarify complex statistical concepts. Regular participation in both Mindtap and discussion board activities could be crucial for success in this component.

## **6.2 Evaluation Component B: Writing Assignments (40 points)**

### **6.2.1 Reflective Learning Assignments (Max = 15 points)**

No one can write perfectly. The goal of these assignments is to evaluate the ability for students to improve their writing while thinking critically about statistical results, beyond mere significance values. Reflective Learning Assignments could be designed to deepen understanding of course concepts through critical thinking and self-assessment. Students might complete three assignments throughout the course, each limited to 2 pages, double-spaced, with 12-point font. These assignments might involve connecting course concepts to personal learning experiences. All Reflective Learning assignments would be due by the end of the day in the student's time zone. Feedback on these assignments might help students improve their reflective and analytical skills progressively throughout the course. More information will come on the Assignment specific module on Quercus. Assignments will be submitted through Quercus, and checked using Ouriginal.

### **6.2.2 RL1: Goal Setting for Statistical Success**

This initial reflection could focus on setting personal learning objectives for the course.

### **6.2.3 RL2: Strategies for Statistical Mastery**

This mid-course reflection might involve identifying and evaluating approaches to achieve the initially set goals.

### **6.2.4 RL3: Statistical Journey: Reflection and Future Directions**

This final reflection could involve reviewing the semester's learning journey and considering areas for future improvement.

### **6.2.5 Final Writing Project (Max = 25 points)**

No one can write perfectly. The goal of these assignments is to evaluate the ability for students to improve their writing while thinking critically about statistical results, beyond mere significance values. To this end, the evaluation of these assignments will be based on a student's ability to consider reviewer feedback and revise their work. More information will come on the Assignment specific module on Quercus. Assignments will be submitted through Quercus, and checked using Ouriginal. For ease of grading, accepted file types have been restricted to .PDF and Microsoft files (e.g., .DOCX). Standardizing the file format ensures that Ouriginal (see below) can proof your submissions and that there are no broken or unopenable files. The full suite of Microsoft products is free to you through UofT Libraries, please see the website to download: <https://onerearch.library.utoronto.ca/ic/microsoft-365-personal-workstations> APA Format: APA is the style of documentation of sources used by the American Psychological Association. This form of writing research papers is used mainly in the social sciences, like psychology, anthropology, sociology, as well as education and other fields. For more information, please check out APA resources at UofT libraries: <https://guides.library.utoronto.ca/c.php?g=250462&p=1670709>. OWL is also a good place to find examples: [https://owl.purdue.edu/owl/research\\_and\\_citation/apa\\_style/apa\\_formatting\\_and\\_style\\_guide/general\\_format.html](https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html). The Final Writing Assignment could be a collaborative project between students and their assigned TA. In this assignment, the TA might propose a research project with a provided dataset. Students could be expected to assist in analyzing the data and reporting the findings back to the TA in a formal research report format. This report should be less than 8 pages, double-spaced, and follow APA format. This assignment might assess students' ability to apply appropriate statistical tests, interpret data accurately, and communicate findings effectively in a scientific manner. The collaborative nature of this project could provide students with experience in real-world research scenarios and offer opportunities for mentorship from the TA. This assignment would be due by the end of the day in the student's time zone and might serve as a culminating task, potentially demonstrating students' overall grasp of the course material and their abilities to apply statistical concepts in research contexts.

## **6.3 Evaluation Component C: Online Tests (50 points)**

The two term tests could be designed to assess students' understanding and application of statistical concepts at different stages of the course. All tests would be conducted online. Both tests could include a mix of multiple-choice questions, short answer questions, and calculation problems. These tests might assess both theoretical understanding and practical application of statistical methods. The term test 2 will be comprehensive, potentially covering all course material with a focus on integration and application of concepts. All tests might require students to demonstrate their ability to interpret statistical data, perform calculations, and draw appropriate conclusions. Practice questions and review sessions could be provided to help students prepare for each test.

### **6.3.1 Term Test 1 (Max = 25 points) - Online**

Students can use a calculator. Practice questions might be shared before the test.

### 6.3.2 Term Test 2 (Max = 25 points) - Online

Content will be comprehensive. Practice questions might be shared before the test.

## 7 Grading Policies

### 7.1 Extensions

We all live busy lives and sometimes it is difficult to make deadlines even with fair notice. To aid you, all students get **two free, unquestioned 24-hour extensions** to be applied at any stage of the final projects or any other assignments. **Requests will be made via a dedicated Quercus submission.** This does not mean all due dates are automatically extended by 24 hours. The ability to request the extension expires after the deadline and late penalties will occur. For accessibility, illness, or any related reason, or if you require more than 24 hours, you need to provide the appropriate documentation for extension approval. Extensions do not apply to tests, exams, or quizzes.

### 7.2 Late Penalties

Submitting the written assignment late, without an approved extension, accrues a 10 percent penalty per day it is late. An assignment is deemed late the moment the clock strikes midnight and accumulates late days every midnight following. Please do not wait until the last minute to complete and submit your assignment. Be cognizant of increased Quercus traffic near midnight, and possible internet connectivity issues. After three late days have past, the student will no longer be allowed to submit the assignment and it will receive a final grade of zero.

### 7.3 Missed Assessments

If a student misses a quiz or the midterm due to illness or any other valid reason, please reach out to the instructor as soon as possible. Please refer to 9.5 Specific Medical and Personal Circumstances for more information. Missed tests will be accommodated on a case-by-case basis and may involve make-up assessments, reweighing grades, or alternative assignments. Students have no more than one week to get in touch with the course instructor and provide documentation for missing assessments (e.g., tests or quizzes).

### 7.4 Re-Grade Requests

Your TAs and I work very hard to grade assignments fairly and thoughtfully. If you believe an assignment has received a grade in error, you may submit an appeal. Write a brief cover letter or email explaining your concern and email it to the course email and CC the course instructor. Please submit appeals within two weeks after the graded assignment is made available to students. Documents submitted for an appeal will be re-graded in their entirety. As a result, your grade may increase, decrease, or stay the same.

### 7.5 Specific Medical and Personal Circumstances

If you become ill and it affects your ability to do your academic work, consult me right away. Please be reminded that the ACORN Absence Declaration (AD) has been updated and now you can only submit one AD per semester, in total. 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. 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. For more information on the VOI, please see <http://www.illnessverification.utoronto.ca>. For information on Absence Declaration Tool for 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.

### 7.6 Religious and Cultural Accommodations

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty with 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 (like 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). In such circumstances, we will evaluate whether offering an extension, assigning a makeup assignment, or reweighing remaining assignments is the most appropriate path.

## 8 Academic Integrity

### 8.1 What is Academic Integrity?

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 or work that you have previously submitted for marks in another class or program — is a serious offence that can result in sanctions. Speak to me or your TA 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 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 <https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity> and <http://academicintegrity.utoronto.ca>. Plagiarism is not necessary the textual copying of another's work. Using someone else's idea as your own is also a form of plagiarism.

### 8.2 Additional readings about Academic Integrity

Definition of Academic Integrity: <https://www.academicintegrity.utoronto.ca/> and University of Toronto Code of Behaviour on Academic Matters: <https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic>

### 8.3 Can I use Artificial Intelligence (AI)?

The use of artificial intelligence (AI) content creation tools/systems (e.g., ChatGPT, Jasper, etc.) is permitted in this class on certain conditions: 1) You consult me first on your plan for using AI with the assignment. I may offer you an alternative approach, or suggestions on how to appropriately use AI for the assignment. 2) You state explicitly at the beginning of the assignment when, why, and how you have used AI. This includes the prompts you used to generate the results. You also need to specify what elements of the AI-generated text you have used. 3) If your AI output matches data/information, you are responsible for verifying accuracy and providing sources. Note that AI does not always provide accurate information or sources. 4) If I or your TA detect AI plagiarism in your assignment, you will be found in violation of the Code of Behaviour on Academic Matters and the consequences of academic misconduct will be in effect. Keep in mind that you are ultimately responsible for your work, and it is always better, from a skill building perspective, to complete all work without the use of generative AI. However, I do understand that learning to use these kinds of tools is important.

### 8.4 What is Ouriginal?

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 and Innovation web site (<https://uoft.me/pdt-faq>).

### 8.5 What is Plagiarism?

There are many forms of plagiarism. Many people assume plagiarism occurs when one directly copies another authors' work as their own. However, rewording another's work without proper credit is also a form of plagiarism. This is because you are essentially taking another person's ideas and making them your own. Self-plagiarism occurs when you reuse your own work without acknowledgement. Thus, all student submissions should be the student's own fresh and original work, not used in other courses. They should be the ideas of the student submitting them, and not from another student, person, or computer/AI generated idea.

### 8.6 How to ensure Academic Integrity?

Here are three easy ways to ensure you meet academic integrity 1). Turn in original work. Do not copy/paste from any external source (including websites, encyclopedias). Do not use work you have submitted in other classes. Do not reword another source without citing it as the original author's intellectual property. 2). Do not use data analyses software, spreadsheets, or any other unauthorized software. The only exception is using JASP or software of your choice to analyze data for your written assignments. 3). All graded work, unless otherwise specified, should be completed independently. This includes assignments, quizzes, and assessments/tests/exams.

## 8.7 Repercussions for violating Academic Integrity

Academic misconduct may receive one or both of the following, and/or other consequences: 1) An assigned grade of zero to any graded material in the course. 2) Acceleration to the Department or other disciplinary action.

# 9 Support for Students

## 9.1 Accessibility Services

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 <http://www.studentlife.utoronto.ca/as/new-registration>. 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.

## 9.2 Mental Health

As a student, you may experience challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation, financial concerns, family worries and so forth. These factors may affect your academic performance and/or reduce your ability to participate fully in daily activities. Everyone feels stressed now and then – it is a normal part of university life. Some days are better than others, and there is no wrong time to reach out. There are resources for every situation and every level of stress. There are many helpful resources available through your College Registrar or through Student Life (<http://studentlife.utoronto.ca> and <http://www.studentlife.utoronto.ca/feeling-distressed>). An important part of the University experience is learning how and when to ask for help. Please take the time to inform yourself of available resources.

## 9.3 Writing Support

Developing your writing ability is a critical skill to take advantage of during your undergraduate career. A strong writing ability is crucial to communicate ideas. I often recommend students to re-read their first university writing assignment and their final university writing assignment to gauge how much they improve. The university offers writing support centers, which I encourage students to take advantage of: <https://writing.utoronto.ca/writing-centres/>. English language support is also offered through the Writing Center (<https://writing.utoronto.ca/support/english-language-support/>) and the Center for International Experience (<https://www.studentlife.utoronto.ca/cie/els>).

## 9.4 Other Support

The Center for International Experience offers support for students, especially international students (<http://www.studentlife.utoronto.ca/cie>). The University provides support for students with children or who have family responsibilities (<https://familycare.utoronto.ca/>).

## 9.5 Office of Academic Success

The university has a support center for students to engage in learning strategies and develop a roadmap for undergraduate success (<http://www.studentlife.utoronto.ca/asc>).

## 9.6 External Help with Statistics

Khan academy is an external source that has numerous resources pertaining to statistics: <https://www.khanacademy.org/math/statistics-probability>. Crash Course is a good YouTube series which condenses numerous topics: [https://www.youtube.com/playlist?list=PL8dPuuaLjXtNM\\_Y-bUAhblSAdWRnmBUcr](https://www.youtube.com/playlist?list=PL8dPuuaLjXtNM_Y-bUAhblSAdWRnmBUcr). Note that what we cover in this course is a small window of the overall Statistics field. These external resources contain much more information than will be covered in the course and thus should not be used as study material. However, I encourage students to continue expanding their knowledge base during and after the course. Understanding statistics is one of the most important life skills to acquire.

## 9.7 Lecture Capture by Instructor

If lecture recordings are provided, they are only for the exclusive use of enrolled students, for their personal learning. Lecture recordings are not to be shared in any way beyond enrolled students.

## 9.8 Privacy/FIPPA Statement

Personal information is collected pursuant to section 2(14) of the University of Toronto Act, 1971 and at all times it will be protected in accordance with the Freedom of Information and Protection of Privacy Act. Please note that this course requires presentations of one's work to the group. For more information, please refer to <http://www.utoronto.ca/privacy>.

## 9.9 Course Materials, Including Lecture Notes

Course materials are provided for the exclusive use of enrolled students. Do not share them with others. I do not want to discover that a student has put any of my materials into the public domain, has sold my materials, or has given my materials to a person or company that is using them to earn money. The University will support me in asserting and pursuing my rights, and my copyrights, in such matters.

## 10 Beyond PSY201

Many students in this class have a keen interest in psychological research, whether clinical or basic, and are considering a career in this field. Preparing for a career in psychological research can be approached in various ways. The foundational step is gaining a solid understanding of statistics. Beyond that, UofT offers numerous research and laboratory opportunities for students.

### 10.1 Additional Courses offered by Department of Psychology

#### 10.1.1 PSY202H1 - Statistics II

Fundamentals of statistical analysis of experimental and observational data including linear models, the analysis of variance, a priori contrasts, post-hoc tests, power analysis and effect size calculations.

#### 10.1.2 PSY203H1 - Psychological Research

This course provides an introduction to conceiving, designing, and conducting research in psychology. It prepares students to be both consumers and producers of scientific research, and also addresses basic issues related to the work of psychological scientists such as theory development, research ethics, and scientific writing. Students in this course will gain insight into the scientific process as a whole – its advantages, difficulties, and limitations. As such, students will be able to better evaluate the knowledge that psychological science can provide, and integrate that knowledge into a broader worldview.

#### 10.1.3 PSY305H1: The Treatment of Psychological Data

This course provides a practical yet intensive introduction to the research pipeline, with a focus on research data management and advanced statistical analysis and inference. Students learn how to find, organize, and analyze data sets in a transparent and reproducible way. Students also learn more about statistical inference, focusing on how the design and analysis of data shape the interpretation of results.

#### 10.1.4 PSY330H1 - Psychological Measurement

This course focuses on the development and evaluation of psychological measures, including the measurement of knowledge, abilities, attitudes, and personality traits. We will discuss theoretical and methodological issues in psychological measurement, covering important concepts such as reliability and validity and how these affect the interpretation of test scores and research findings. There will be some discussion of the application of psychological measures to various settings and the ethics of psychological assessment.

### 10.2 Research opportunities offered by Department of Psychology

#### 10.2.1 PSY299H1/Y1 - Research Opportunity Program

Credit course for supervised participation in faculty research project. Details at <https://www.artsci.utoronto.ca/current/academics/research-opportunities/research-opportunities-program>.

#### 10.2.2 PSY399H1/Y1 - Research Opportunity Program

Credit course for supervised participation in faculty research project. Details at <https://www.artsci.utoronto.ca/current/academics/research-opportunities/research-opportunities-program>.



### 10.2.3 PSY405H1/Y1 and PSY406H1/Y1 - Individual Projects

A single semester intensive laboratory or applied research project for students who seek hands-on research experience to complement our regular course offerings. Each project culminates in a scholarly paper and oral presentation. Students must secure a faculty supervisor from the Dept. of Psychology and submit a completed application form that includes details about the project before the start of the semester. Application forms are available on the Department's website (<https://psych.utoronto.ca/programs-and-courses/undergraduate-course-information>) and must be emailed to the undergraduate office ([psy.undergrad@utoronto.ca](mailto:psy.undergrad@utoronto.ca)) by the end of the first week of September for fall projects, the start of the second week in January for winter projects. If you're registering for a summer project, please submit it by the beginning of the first week in May. This course is open to all students.

## 11 Land Acknowledgement

I wish to acknowledge the 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. We recognize a legacy of broken treaties and covenants and the need to strive to make right with all our relations. For a map of the treaties, territories, and languages represented on this land, you can visit: <https://native-land.ca/>

## 12 Course Materials and Intellectual Property

Please keep in mind that all course materials (lecture slides, lecture recordings, assignments, etc.) are intellectual property. They are not to be posted anywhere (including social media, such as student created course Facebook pages) or sold to a third party. We work hard to create course content for you and sharing our intellectual property without permission is theft. Please don't do it. Please note posting, sharing, or viewing shared evaluation materials (such as test questions) is a violation of academic integrity, and will be penalized harshly. Please familiarize yourself with academic integrity policies and consequences at <https://www.academicintegrity.utoronto.ca>.

## 13 Equity, Diversity and Inclusion Statement

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities. Click this link for more information: <https://people.utoronto.ca/inclusion/edi-at-u-of-t/>

## 14 Credits for Course Development

The content and materials of this course have integrated materials from PSY201 from past years. I appreciate the support and generosity of the previous course instructors, Dr. Molly Meltz and Dr. Bruce Schneider. I also appreciate the course instructors who have shared their pedagogy and supported me in developing this course: Dr. Ali Hashemi, Grace Wang, Mahmoud Bitar, and Prateek Dhamija.

## COURSE CALENDAR – SUMMER 2024

Week	Learning Modules	Assessments	NOTES
<i>Review sessions and workshops are optional for students to attend</i>			
Week 1 2 <sup>nd</sup> – 7 <sup>th</sup> July	Module 1: Welcome & Introduction	Reading: Chapter 1	<i>First day of S classes: Mon. July 2, 2024; Last day of S waitlist: Fri. July 5, 2024</i>
Week 2 8 <sup>th</sup> – 14 <sup>th</sup> July	Module 2: Review and Introduction to Analysis Topic 1: Review of fundamental mathematics and statistics Topic 2: Measurements in psychological research	Reading: Chapter 2 – 5	<i>Last day to enrol in S courses via ACORN: Mon. July 8, 2024; 100% Refund S-term courses: Mon. July 8, 2024</i>
	Module 3: Descriptive Statistics Topic 1: Frequency distribution Topic 2: Descriptive statistics: central tendency and variability		
Week 3 15 <sup>th</sup> – 21 <sup>th</sup> July	Module 3: Descriptive Statistics Topic 3: Normal distribution & z-score Topic 4: Probability	Reading: Chapter 5 – 6 Reflective learning I	<i>75% Refund S-term courses: Fri. July 15, 2024</i>
Week 4 22 <sup>nd</sup> – 28 <sup>th</sup> July	Module 4: Motivations & Basis for Inferential Statistics Topic 1: Sampling Topic 2: Hypothesis and hypothesis testing	Reading: Chapter 7 – 8 Term test 1 (TBA)	<i>Last day to Drop Y courses: Mon. July 22, 2024</i>
Week 5 29 <sup>th</sup> of July – 4 <sup>th</sup> Aug.	Module 5: Inferential Statistics I Topic 1: t-test with one sample Topic 2: t-test with two samples	Reflective learning II Reading: Chapter 9 – 11	<i>50% Refund S-term courses: Mon. July 29, 2024; Last day to Drop S courses: Mon. July 29, 2024</i>
Week 6 5 <sup>th</sup> – 11 <sup>th</sup> Aug.	Module 6: Inferential Statistics II Topic 1: Correlation Topic 2: ANOVA	Reading: Chapter 14.1 – 14.4	<i>Civic Holiday: Mon. Aug. 5, 2024</i>
Week 7 12 <sup>th</sup> – 16 <sup>th</sup> Aug.	Module 6: Inferential Statistics II Topic 3: ANOVA II	Reflective learning III Writing assignment Term test 2 (TBA)	<i>Last day of S and Y classes: Mon. Aug. 12, 2024; make-up day (Monday classes): Tues. Aug. 13, 2024</i>