Psychology
UNIVERSITY OF TORONTO

PSY 202H1S: STATISTICS II

WINTER 2022

JANUARY 10 – APRIL 8

****All times are listed in local Toronto time (Eastern; GMT-5)****

INSTRUCTOR	VIRTUAL OFFICE HOURS	OFFICE	EMAIL
Dr. Molly Metz Pronouns: She/Her	BY APPT https://calendly.com/profmetz/office-hours	Zoom! PW: metz	molly.metz@utoronto.ca

TA + ZOOM ROOMS (PW: PSY202)	TUTORIAL	OFFICE HOUR	EMAIL
Carolyn (Guay) Davison (she/her)	T 2-3pm	Th 4-5pm	carolyn.guay@mail.utoronto.ca
Ann Zhang (she/her)	W 11am-12pm	Sun 9-10pm	angie.zhang@mail.utoronto.ca
Stephanie Simpson (she/her)	W 5-6pm	F 1-2pm	stephanie.simpson@mail.utoronto.ca
Rayane Tabbara (she/her)	Th 9-10am	Th 11am-12pm	rayane.tabbara@mail.utoronto.ca
Anisha Khosla (she/her)	Th 7-8pm	W 3-4pm	anisha.khosla@mail.utoronto.ca

COURSE EMAIL (FOR GENERAL INQUIRIES): psy202.uoft@gmail.com

PREREQUISITES: PSY201H1 (or exclusion) **COURSE WEBSITE:** Quercus, at https://q.utoronto.ca

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.

A brief note about the prerequisite: Psy 201 (or exclusion) truly is a prerequisite for this course; that is, we will be picking up where 201 left off. Lectures and tests will assume mastery of this material, so if you are at all unsure about it, please seek additional resources and support early and often.

COURSE MATERIALS

Gravetter, F. J., & Wallnau, L. B. (2017). *Statistics for the Behavioral Sciences* (10th Ed.). Boston, MA: Cengage Learning. ISBN: 978-1-337-36622-9 **(required)**

MindTap ® Psychology, ISBN: 978-1-337-28075-4 **(required)**
https://login.nelsonbrain.com/course/MTPPNMWQ7CJN

A note about our text: I encourage you to shop around for the best price, but I negotiated a special UofT price available at our bookstore – MindTap® alone (which includes an ebook version of our text) can be purchased for $64.95 (or $129.95 for loose-leaf bundled with Mindtap).

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

TUTORIAL MATERIALS (all free downloads)

Jamovi (data analysis) https://www.jamovi.org/ G*Power (power analysis) http://www.gpower.hhu.de/
More information available on Tutorial Guide

TECHNICAL REQUIREMENTS AND SUGGESTIONS FOR ONLINE LEARNING

https://www.viceprovoststudents.utoronto.ca/covid-19/tech-requirements-online-learning/

COURSE FORMAT

Lecture Online asynchronous, posted to Quercus almost weekly on Monday afternoon

Review Synchronous sessions held most weeks M 6-7pm
Live! With Dr. Metz (PW: Psy202)

Tutorial Online asynchronous, posted regularly on Monday afternoon
Synchronous Q&A held at assigned tutorial times and TA office hours (see above)
See Tutorial Guide for Zoom links for tutorials and TA office hours

COURSE COMMUNICATION

* ***General inquiries related to course content, policies, or assessments*** should first be posted to the **Quercus Discussion Board**. You are encouraged to both ask *and* respond to questions on the Q&A board, though the TAs and instructor will be monitoring the board.

* TAs will hold ***weekly office hours*** where you can ask about course content, assignments, or studying tips, for both lecture and tutorial. Your tutorial TA is to be your primary point person (as they will be the ones grading your assessments), but all TAs are happy to help.
  * ***Follow up on content, policies, major course assessments*** not addressed on the discussion board can be directed to the general course email: psy202.uoft@gmail.com
  * ***Tutorial-specific questions or requests for appointments*** should be directed to your TA's individual email (see above)

* ***Personal questions related to illness, accessibility, accommodations, class concerns*** – email the instructor directly at molly.metz@utoronto.ca

* ***EMAILS***: Please use a descriptive subject line, a greeting, complete and grammatically correct sentences, and a signature with your full name (in other words, think of email as professional communication; click here for a great how-to). **Please include "PSY202" in the subject line!** We will try to respond to all emails within 2 business days. Finally, we may not respond to emails between the hours of 8pm and 8am.

COURSE OVERVIEW & GOALS

"Statistics is the grammar of science." Karl Pearson *(founder of modern mathematical statistics)*

"Data is the sword of the 21st century; those who wield it well, the Samurai." Jonathan Rosenberg *(former Google Senior VP)*

Statistics are tools for organizing, summarizing, and interpreting data, and these tools play a central role in scientific research. The purpose of this course is to help you learn and apply the important concepts that you will need to understand and interpret statistics in the context of psychological research. This is not simply a math course that teaches you equations and computations. Although learning how to compute statistics will be important, this course will stress understanding of the basic *concepts* and *logic* underlying the use of statistics in scientific research.

By the end of this course, you will be able to[1]:

Goal One: Interpret basic statistical results

Goal Two: Apply appropriate statistical strategies to test hypotheses

Goal Three: Apply appropriate statistical and research strategies to collect, analyze and interpret data, and report research findings

Goal Four: Distinguish between statistical significance and practical significance

Goal Five: Evaluate the public presentation of statistics

[1] Adapted from the Undergraduate Learning Goals set forth by Society for Teaching Psychology's 2012 Statistical Literacy Taskforce

COURSE STRUCTURE

A. LECTURE MATERIAL

This is an *asynchronous course*, which means that lecture recordings and other videos will be posted each Monday afternoon, and you will be able to watch and read at your convenience. During these videos, we will introduce and expand on the important concepts of the course, as well as explore real-world applications related to these concepts. Lecture slides will be posted to the course site, but these slides will *not* include all of the information reviewed in the videos, and therefore are not a substitute for viewing the required content.

ACTIVE ENGAGEMENT

Playing the lecture videos is a great first step toward success, but learning doesn't happen by passively absorbing rogue information from the atmosphere. In order to get the most out of this (or any) class, *active engagement* is key. This may include: participation in learning checks or activities, taking notes on readings and videos, or even just actually thinking about questions that are posed. This definitely does not include: reading blogs, checking social media, doing other work, texting or engaging in side conversations, listening to your headphones, sleeping, etc.

Additional activities will not be assessed for marks, nor will attendance be formally recorded; however, in my experience, deeper engagement with activities is associated with deeper engagement with the material and a more fulfilling class experience. In addition, statistics is a truly cumulative course – it is difficult to be successful in week 5 if you do not give time and energy to weeks 1-4. If you are looking for a class where you can do all the reading and videos the night before a test and wing it, *this is not the class for you!*

FEEDBACK AND REVIEW

At the end of each module, you will be asked to submit a brief survey about what the most confusing or muddiest points were for you (as well as what you learned or enjoyed). Then, the following week on Monday 6-7pm, I will do a live review session hosted on Zoom of this material. In addition, with any time remaining, I will answer questions posed via the chat. If you are unable to attend these sessions, fear not, as they will be recorded and posted on the course site.

B. READING

The textbooks are a supplement to the video content; some assigned chapters will review or expand on what we discuss, while others will expose you to important topics that we will *not* be discussing together. The statistics book will be especially helpful for review and practice outside of class. To get the most out of lecture videos, I recommend completing readings before watching. However, if you do not find this helpful, try reading after lecture – some people find this to be more helpful. You will be responsible for assigned chapters for all tests, whether it was explicitly covered in lecture or not.

C. TUTORIALS (REQUIRED MATERIAL)

Tutorials provide a more intimate setting to gain additional hands-on experience with the course material, as well as to receive more small-group instruction and additional assistance mastering course concepts. You are expected to review all tutorials and use your classmates and TA as resources. The tutorials will also provide the structure and detail necessary to successfully complete your data analysis project, including foundational skills in Jamovi (data analysis software).

D. INDEPENDENT PRACTICE WITH MINDTAP®

As in most learning contexts, regular practice is critical to your success in this class. Lecture videos will provide some opportunities to apply concepts that are introduced, but this is not sufficient, neither for test performance nor for long-term retention and application (also called *learning*). I selected the MindTap® platform for this class because it provides multiple research-based methods of review that will support you through this course. I strongly recommend you familiarize yourself with the different types of activities and schedule them into your weekly study plan.
To encourage implementation of an effective regular study plan, you will complete Problem Sets for a grade. The remaining types of activities will not be graded *per se* (i.e., Mastery Training, End of Chapter Problems, Exam Reviews), though time spend on this type of practice will likely pay off in test performance.

ASSESSMENT

A. EXAMS – 70% OF COURSE TOTAL

There will be 1 term test and 1 cumulative final exam. The tests will be multiple choice, short answer, and brief essay/computations, and will cover information from lecture, tutorial, and readings. You should be prepared not only to perform calculations, but to provide definitions and explanations of concepts, make connections (across concepts, across texts, etc.), and apply the material to new situations. These exams will be open-book and open-note (but *not* open-classmate or open-Google!),and completed individually. You will have approximately 3 days to complete each assessment, but they will be written to take about 3 hours, assuming you study ahead of time as you would for an in-class assessment, and you can do the assessment at any time you wish within the testing window. Therefore, accessibility accommodations for extended time on testing do not apply. Please contact the instructor if you have any questions.

The midterm will count for 30%, and the final will count for 40% of your course total.

B. PROBLEM SETS – 5% OF COURSE TOTAL

Using your MindTap® subscription, you will complete Problem Sets for each of the assigned chapters. Problems sets will typically be due the first or second Sunday night *following* the week we cover the assigned chapters. Extensions for technical issues will only be given in the case of a system-wide error, so make sure you plan accordingly.

C. TUTORIALS – 25% OF COURSE TOTAL

a. PRACTICE – 5% OF COURSE TOTAL

During tutorials, you will learn new skills (including but not limited to data analysis) and prepare to apply them to a data analysis project. Tutorial videos will be posted online for asynchronous viewing, but your TA will be available to answer questions about the content and the associated assignment during your scheduled tutorial time. Data analysis homeworks will be graded for both quality and completion, and will make up 5% of your course total.

b. DATA ANALYSIS PROJECT – 20% OF COURSE TOTAL

With the goal of applying your new statistical skills and knowledge, you will be completing a data analysis project. For this project, you will complete a class survey; analyze your data; formally report the results in APA style; and respond to a few brief essay questions regarding the project. More details of this assignment will be posted to the course website and discussed in class.

FINAL GRADE CALCULATION

There are no extra credit opportunities, but fear not: there are plenty of regular credit opportunities!

All final grades will be rounded to the nearest tenth of a percent. Your grade will then be determined by the following scale, the official FAS grading scale. Final grades are non-negotiable. Grade changes will be made *only* to correct for grading errors.

Exams (70%)

Midterm – 30%
Final – 40%

Practice & Application (30%)

Data Analysis Project – 20%
Tutorials – 5%
Problem Sets – 5%

Note: Any grades posted in the Quercus gradebook are posted for your information only, so you can view and track your progress through the course. No grades are considered official, included any posted in Quercus at any point in the term, until they have been formally approved by the Course Instructor at the end of the course.

Pandemic Grade Insurance!

Even in the best of times, this class is a lot of work – I have carefully designed it based on pedagogical research and my teaching philosophy to provide you support in reaching our course learning goals, but as a result, there are a lot of moving parts!

Therefore, I am offering flexibility for you to choose to complete ***which type of homework you complete.***

- If you complete all of the homework assignments, your marking scheme will be as listed on Quercus.
- If you decide to complete JUST the Mindtap, the 5% from tutorial HW will be reweighted to your Data Analysis Project (i.e., it will be worth 25%).
- If you decide to complete JUST the Tutorial homework, the 5% from the Mindtap will be split between your midterm and final (i.e., your midterm will be worth 32.5% and your final will be worth 42.5%).

Important: Even if you do not complete the particular exercises, you are still responsible for the content and skills contained within them. This option does not exempt you from learning, but instead provides you more flexibility about how and when you do it.

You do NOT need to do anything to indicate your choice – at the end of the term, I will calculate grades each of these three ways, and you will get the one most favorable for you. I hope this flexibility in the grading scheme will help you manage your time this term, feel competent in this course, and support your success in achieving course learning goals.

COURSE POLICIES

LATE WORK AND MAKE-UP POLICIES

RELIGIOUS ACCOMMODATION

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 backgrounds, cultural traditions, and spiritual beliefs. 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 missing a major course assessment 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.

LATE WORK

As a rule, late assignments will not be accepted. Late assignments may only be accepted in the case of registered accommodations or extraordinary circumstances and may involve point deductions. Please alert me to these extraordinary circumstances by email within 12 hours of the missed deadline (or as soon as you can), and we will set up a time to discuss these on a case-by-case basis.

"Life Happens" Insurance: However, I definitely recognize that sometimes life happens; therefore, I have built some flexibility into the course to allow for illness, other obligations, and terrible, horrible, no good, very bad days, *no questions asked and no documentation necessary*.

Your Mindtap Problem Sets will be scheduled using what I call "**Best-By Deadlines**." Like milk or bread, your homework has a best-by date. This is functionally the established deadline, like you are used to working with. However, if you find yourself struggling to meet the deadline for *any* reason, you can still turn in the assignments up to 7 days late, with no penalty. Like other kinds of best-by dates, though, the longer you go past the target, the staler (or sour-er, ew!) things become – falling behind, such that you are not doing the problem sets around the same time as the relevant lectures, will make it harder (though not impossible) to stay on track for major assessments. (Please note, this only applies to the Mindtap problem sets, NOT the tutorial homework).

In addition, I will drop the lowest of your problem sets at the end of the term (just in case that bread goes TOTALLY moldy and you just can't bring yourself to dive in 😉). I will also drop the lowest of your tutorial homeworks at the end of the term, no questions asked.

MAKE-UP EXAMS

If you miss a term test or require a short extension, you must submit documentation that demonstrates your inability to complete that assessment (i.e., the ACORN illness self-declaration tool or an email from your college registrar or accessibility counselor). Documentation must be submitted to me via email within 7 calendar days of the missed test. If you do not provide appropriate documentation, you will receive a 0 for the missed test.
As a rule, makeup tests will not be issued. If you miss the term test, your final marking scheme will be reweighted : 60% final, 30% data analysis project, 5% Mindtap, and 5% tutorial homework.
If you miss the final assessment, you will need to contact your College Registrar to file a petition for late term work (https://www.artsci.utoronto.ca/current/faculty-registrar/petitions) or work out an alternative plan.

ACCOMMODATION FOR PERSONAL REASONS

There may be times when you are unable to complete course work on time due to non-medical reasons. If your "life happens" situation is larger or more extended than the above policy covers, contact Dr. Metz to discuss your situation.

I am here to support you and will help make accommodations where reasonable, possible, and in fairness to other students. It is also a very good idea to speak with an advisor in your College Registrar's office; they can support you in requesting extensions or accommodations, and importantly, connect you with other resources on campus for help with your situation.

Please do not feel like you need to perform or share your trauma in order to get the support you need. I *do* need to know when you are struggling and need some extra help, but you do not need to share private details of your life in order to qualify for a discussion of alternative arrangements that can be made

GRADE DISPUTE POLICY

24/14 Policy: You must wait for at least 24 hours following the return of an assignment/assessment before bringing a grade concern to me; use this time to reflect upon your performance and grade. Additionally, grade concerns must be brought to my attention within 14 days of the return of the assignment/assessment (the specific date will be provided upon release of the grades in question). Please write a short paragraph detailing your grade concern (including a) the question(s) in question; b) why you provided the answer you did and where in the course materials you learned this content, and c) why you think the marking is incorrect or incomplete and what in the course materials would support your request) and submit it to the required form. Grade disputes are not to be directed to your TAs. Only reasonable and well-justified concerns will be considered, and all decisions are final. By submitting a request, you are consenting to a full regrade of the assignment, and your grade may go up, down, or stay the same.

USE OF COURSE MATERIALS POLICY

Students are free to use all lecture video, slides, and other materials for their own use. Students are, however, NOT permitted to share lecture slides or recordings with others not enrolled in this course. ONLY the instructor has permission to record and post the live student hour.

Uploading course materials to the web or shared server is expressly prohibited. Lectures are the intellectual property of the instructor, and the slides and recordings should be respected thus. Specifically, 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 (this is a real thing that has happened). The University will support me in asserting and pursuing my rights, and my copyrights, in such matters.

WELLNESS STATEMENT[2]

As your professor, I value your health and well-being. In order to succeed in my class, in [university], and beyond, you must work hard AND balance the work with rest… and attention to your mental and physical health. Yes, I plan to challenge you… By the end of this class, I hope you will feel proud of your growth and learning much like the marathoner feels accomplished by their triumphs across the finish line.

However, this work cannot be at the expense of your well-being. **Working until exhaustion is NOT a badge of honour; it shows you are out of balance.**

Audre Lorde once said, "Caring for myself is not self-indulgence, it is self-preservation, and that is an act of political warfare." Please see your wellness as an act of power and perseverance. The core to your success. Hold each other accountable. Hold me accountable. I [want] to… change this "achievement-oriented" culture into one that embraces well-being and growth. Let's start a revolution together.

In addition to the many resources and supports available to you at UofT , you might find this self-care packet (with a self-assessment, advice, and worksheets) helpful in reaching your self-care goals.

[2] Excerpted from Dr. Nicole Gonzalez Van Cleeve of Brown University, from Twitter (full text here)

ADDITIONAL STUDENT RESOURCES

Peer Support: Connect with Your Classmates!

Recognized Study Groups: I encourage everyone to strongly consider joining or leading a study group. The Faculty of Arts and Science has a Recognized Study Groups (now fully online!) program that can help you facilitate this (particularly useful if you don't know anyone else in the class!). If you become a study group leader, you can also receive co-curricular credit. To learn more about the program and join or start a study group visit: https://sidneysmithcommons.artsci.utoronto.ca/recognized-study-groups/

Meet To Complete (MTC) Program: New this year, Meet to Complete drop-in sessions allow students across academic disciplines to work alongside peers to support motivation and community, set goals with the support of a student staff member, and earn a CCR credit after participating in 6 MTC sessions. Learn more by visiting: https://sidneysmithcommons.artsci.utoronto.ca/meet-to-complete/

Quercus Discussion Board: You are encouraged to both ask AND answer questions about course content and administration on the course discussion board. The TAs and course instructor will also monitor this board and provide answers or input when needed. For example, if you have any questions about the content presented in this syllabus, the discussion board is a perfect place to ask for clarification - that way everyone can benefit from the response. Before posting a question, please check to see whether it has already been answered/discussed.

Other Campus Resources

Accessibility Services (AS): Students with diverse learning and needs are welcome in this course. If you have an ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) (http://accessibility.utoronto.ca) at the beginning of the academic year. 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 then assess your medical 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 condition with any instructor, and your instructors will not reveal that you are registered with AS.

Mental Health and Well-Being: As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These factors may affect your academic performance and/or reduce your ability to participate fully in daily activities. All of us benefit from support and guidance during times of struggle. There are many helpful resources available through your college Registrar or through Student Life (for example, http://www.studentlife.utoronto.ca/hwc or https://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 as early as possible to inform yourself of available resources and do not hesitate to seek assistance from your Teaching Assistant or the Course Instructor to help learn what supports are available.

Academic Success Centre: "Academic Success professional staff are dedicated to helping you reach your highest learning potential. Every student is capable of achieving academic excellence, but not all learning takes place in the classroom, and not everyone learns in the same way. Your life is more complex than your academic responsibilities, so [they] look at the whole picture and take an individualized approach to supporting you. [They] know there is no 'right' way to get through university, and [they] welcome the opportunity to explore strategies that might help you find greater balance between life and learning." Check out their study spaces, attend a workshop or meet with a learning strategist here: https://www.studentlife.utoronto.ca/asc/about-us

English Language Resources: For anyone who would like to advance their understanding and command of English, there are many supports available at UofT. Two examples are:
http://www.artsci.utoronto.ca/current/advising/ell/resources-for-students
And http://www.writing.utoronto.ca/advice/further-resources/online-esl-resources . Your College Registrar will also be able to direct you to other resources.

Writing: As a student here at the University of Toronto, you are expected to write well (yes, even in a statistics class!). The university provides its students with a number of resources to help them achieve this. For more information on campus writing centres and writing courses, please check in with your College Registrar or visit http://www.writing.utoronto.ca/

Accessing the Course from Mainland China: https://isea.utoronto.ca/services/vpn/

BONUS SECTION ON ONLINE LEARNING

Getting Ready for Online from UofT Office of Online Learning: The University of Toronto is welcoming many of its new and returning students to online learning this year. Whether you are new to U of T or a returning student, you may be looking for advice on how to be successful while learning online. This resource has been developed to introduce you to some tips and strategies for success. Take a moment to read and take part in the activities on this page to help you prepare for your online learning experience. https://onlinelearning.utoronto.ca/getting-ready-for-online

South College Newsletter on Online Learning in a Pandemic (obviously the campus-specific stuff doesn't apply, but otherwise, this is one of the best, most comprehensive resources I've seen)

- https://sway.office.com/DI3EfuY4n5tZJI7n

Common Mistakes to Avoid as a New Online Student

- https://www.learnhowtobecome.org/career-resource-center/student-success-online-college/

Tips from Cognitive Educational Psychologist (and one of Dr. Metz's BFFs) on Success with Online Courses - https://www.youtube.com/watch?v=1IIUVU-d1DM

Advice for students new to remote coursework

- https://gcci.uconn.edu/2020/03/31/pass-it-on-advice-for-students-new-to-remote-coursework/

Check out this Study Skills Inventory – this will help you identify your strong and weak strategies, and offer things to focus on to up your studying game! https://students.iusb.edu/academic-success-programs/academic-centers-for-excellence/study-skills.html

An assignment calculator to help you break down projects into smaller, more manageable chunks: https://ctl.utsc.utoronto.ca/assignmentcal/

A NOTE ON TAKING NOTES

Research indicates that taking notes by hand results in significantly better retention of conceptual information than taking notes on a laptop, and this is partially explained by the necessity of summarizing and paraphrasing in order to take notes by hand and keep up with the lecture (see Mueller & Oppenheimer, 2014). However, a recent study indicates that even more important than the note-taking method is the presence of *digital distractions* (off-task texting or browsing) – digital distractions were a meaningful predictor of both note quality and learning, and were especially disruptive to laptop note takers (Flanigan & Titsworth, 2020). So, what does this mean?

1. Well, I recommend trying to take notes longhand (i.e., on paper), especially if you haven't tried it in awhile.
2. Whether you take notes on paper or on a laptop, be mindful of process. In other words, as tempting as it can be (especially now that you can pause the lecture video), don't write everything down word-for-word! Be careful to select key points, write things in your own words, and to organize your notes – all of these things will help you better learn the material and be able to retrieve it more effectively on later tests.
    - **a.** Note Taking 101 from Oregon State University
    - **b.** Note taking styles
        - **i.** One specific note-taking style to try: Cornell Notes
        - **ii.** Not sure which to try? Here are a bunch of templates!
3. Regardless of method, minimize distraction as much as possible. Close all other browser windows and turn off notifications on your phone, if possible.
    - **a.** https://getcoldturkey.com/
        - **i.** Can block yourself out of certain websites, the entire Internet, apps, etc., during specific time windows (e.g., when you have a class!)
    - **b.** http://selfcontrolapp.com/ (for Mac users)
    - **c.** StayFocusd (Google Chrome extension)
        - **i.** Limits time spent on distracting websites
    - **d.** Freedom (available in the app store) – same idea, works on your iPhone, iPad
    - **e.** Forest (https://forestapp.cc/, available for Android and Apple and as a Chrome extension) – While the app is open and you're focusing on your work, a tree grows!
    - **f.** https://www.boomeranggmail.com/
        - **i.** If you use Gmail and email is a major distraction during class/studying – pause your inbox!
4. If you need to take a break or you find you aren't focusing well, don't try to multitask while listening to lecture, just press pause and come back when you can! (Just make sure to come back 😊) This is one of the major benefits of asynchronous online learning, shaping it to fit your patterns and schedule.

SOME FINAL WORDS

WHAT ARE GRADES?

Before we get down to the business of the semester, I wanted to take a moment to tell you my thoughts on grades and what they represent (with some phrasing borrowed from Dr. Jordan Wagge of Avila University, because she captured just the right amount of sassiness that I feel about this subject).

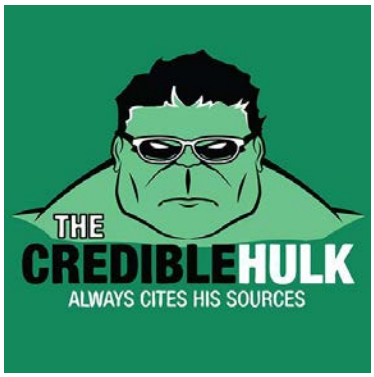
1. Grades are simply a type of measurement of a construct with one very specific operationalization. As with everything we'll discuss this term, it is important not to generalize too far and draw conclusions not warranted by the data.
2. Specifically, course grades are meant to be a measure of your understanding of *this* content at *this* point in time. However, grades aren't just predicted by knowledge! They share variance with a lot of other things – time, energy, resources, support, what you feel like you were able and willing to give during this, our fifth pandemic semester (6th, if we include summers).
3. Grades are NOT a measure of your worth as a person. Full stop.
4. A grade on one assignment, a handful of assignments, or even a whole course does not represent your overall ability or potential.
5. If other people treat you like your grades are a measure of your worth as a person, read 1-4 again, because I'm right, and they're wrong.

A WORD ABOUT ACADEMIC INTEGRITY

Academic Integrity is at the heart of the mission and values of University of Toronto and is an expectation of all students. Maintaining academic integrity is a means to ensuring that you are achieving the outcomes of this course and that your grades accurately reflect your learning and understanding of the course material. In addition, your performance in the next course in this series depends heavily on your ability to truly learn this material and apply it in future contexts. Ensure that the work you submit for grading represents your own honest efforts.

Academic misconduct will not be tolerated in any form. Academic misconduct includes, but is not limited to:

- Submitting the work of another (whether in part or in whole) as your own. This includes putting your name on group work that you did not contribute to.
- Possessing prohibited materials while writing tests and exams.
- Providing or receiving assistance from another student unless explicitly permitted to do so by the instructor. **In this class, this means that unless explicitly stated, all homework, problem sets, and writing submitted for a grade must be done independently.** You are, however, encouraged to study and practice with peers.

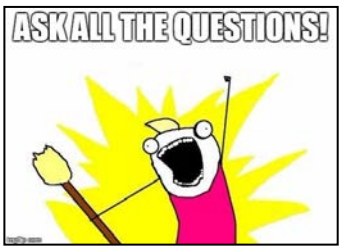


I strongly recommend you familiarize yourself with the *Code of Behaviour on Academic Matters*, posted and explained at http://www.artsci.utoronto.ca/osai/students . Ignorance of the policy is not a defense for violating it. If you are at all uncertain about what constitutes academic dishonesty, please see your TA or the instructor – do not risk your grade or integrity!

ADVICE FOR COURSE SUCCESS

It is important for all students to realize that there will be a distribution of grades in this class that reflects your mastery of some very technical and often-challenging concepts. Remember that your grade in this course is not a reflection of your general ability or your character.

This is a difficult, but not impossible course; it is my hope that you will find this class challenging but rewarding in terms of the knowledge you will walk away with. If you anticipate having difficulty (or when you are), I strongly urge you to do the following:



- Attend every lecture, and take good notes. While attendance will not be graded, per se, the ability to truly learn and use the material in this class is strongly related to attendance.
- Review lecture notes on the day of the lecture (before you go to bed). If you need clarification on anything, ask in the next lecture or post on the discussion board. Don't wait until right before the exams!
- Manage your time wisely. Familiarize yourself with the syllabus, put important dates in your calendars now, and space out your work – there is just too much to do it at the last minute.
- Use the resources available to you – that includes your course materials (especially this syllabus), the TAs, me, and the many amazing services offered on campus.
- Discuss the material with another student. Form a study group. Go to office hours. Ask the TA questions. Ask me questions. ASK QUESTIONS.

ADVICE FROM FORMER STATS STUDENTS *(FROM THE BEFORE TIMES)*

On studying…

I would advise future students that understanding the core concepts is fine, but it is much more important to practice. This does not only include practicing the computations that are learned, but also involves practicing how to choose and run statistical tests. This would include picking a test from a research question, stating hypotheses, and especially reporting and interpreting results.

I would suggest that future students focus on conceptual understanding rather than computations. Computations are very easy alone, and are even easier when you understand the concepts. I would also suggest practicing data graphing/visualization. It facilitates understanding and helps with remembering the materials.

Read the textbook before lecture - it helps with structuring and understanding information better. Give lectures priority when studying for the tests. Revise more theory rather than computations before a test. Approach stats class with a mindset of curiosity and looking forward to building competency.

On time management…

I'd recommend future students to really keep up with the Mindtap problems and readings - I'm saying it right now, book time every week in your calendar, your to-do lists, your notes app, anything at all that will allow you to keep up with them every single week. As midterm season comes it does get harder and harder to keep up with everything, but if you try your best to keep up with it, it will definitely save you when the final comes.

I would tell other students to do more spaced practice. I found that it helped me remember the material better when I studied multiple times, for short amounts of time. Before the midterm, I was studying for long periods of time only once each week. It would have been more helpful to space out my practice/study sessions

Keep up with your homework. It really is building blocks and you need to learn it slowly over time (and not do 4 chapters all in one night to try and catch up).

On class periods…

Handwrite your notes. This has been shown in studies to help with retention of information, but it also allows you to add notes in the margins. It also helps you with making sure you're taking notes based on the lecture instead of just the powerpoint because you can access the powerpoint online at any time. Finally, it allows you to make all kinds of drawings, which are super helpful in visualizing information and help with overall understanding, especially in this course.

I think it is important to attend every lecture and lab. Although the PowerPoint slides are posted, you gain a substantial amount of insight by hearing content from Dr. Metz. She provides valuable examples, personal stories and in-class worksheets. Sometimes it may seem like the topics being covered are repetitive or self-explanatory, but they are all very cohesive and it is surprising how hard it is to catch up if you just miss one class.

On asking questions…

Advice that I have for students in the future is to know that Dr. Metz and [the TAs] are open to questions at all times. If you have questions about course material they are willing to spend the extra time with you to work on material.

Ask questions whenever you have them. Sometimes material is covered quickly, but Dr. Metz is always willing to take time to go over parts that students have questions over.

Go to to office hours if you have questions. Professor Metz is the most compassionate and personable professor I have ever met. She is more than willing to help you with assignments and understanding concepts. There is no such thing as a "silly question," if you don't understand it, no matter how basic, she is willing to explain it to you in as many ways as she can and direct you to other resources that may also be of help.

On value…

Statistics is not as difficult or terrifying as people think it is (people often tell me they hate stats, or they stopped taking psychology because of stats, etc). In fact, it can be interesting - the ways in which we can take the world and model it with numbers and curves and so on is pretty amazing.

For future students I would suggest that they find a way to relate course content to everyday life or their intended career path. This course offers many great skills that will be needed later in life.

This has really been a great class--one of those college courses that will actually benefit us in daily life and will be of much use (consistently) in the future.

My advice to future students is don’t be discouraged if you are not “good” at this class. You may not be going into research for your whole career! Do the best you can but know just because you may not be great at this doesn’t mean Psychology is not for you.

Psychology
UNIVERSITY OF TORONTO

CLASS CALENDAR – WINTER 2022

Tentative schedule; I reserve the right to adjust this timeline based on course progress

WEEK	DATE	TOPIC	READING	MINDTAP	TUTORIAL	OTHER IMPORTANT DATES
1	1/10	INTRODUCTION FOUNDATIONS REVIEW				
2	1/17	INTRODUCTION TO ANOVA	CH 12	SET UP MINDTAP ACCOUNT		JAN 18 – LAST DAY TO ADD CR/NCR OR LWD FOR F COURSES
3	1/24	POST-HOC TESTS REPEATED-MEASURES ANOVA	CH 13	CH 12 & 13 PROBLEM SET DUE SUN JAN 30 11:59PM		JAN 23 – LAST DAY TO ENROL IN S COURSES
4	1/31	FACTORIAL ANOVA I	CH 14		JAMOVI HW 1 DUE SUN FEB 6 11:59PM	
5	2/7	FACTORIAL ANOVA II POWER		CH 14 PROBLEM SET DUE SUN FEB 13 11:59PM	JAMOVI HW 2 DUE SUN FEB 13 11:59PM	
6	2/14	***MIDTERM WILL BE POSTED TUESDAY FEB 15 9 AM AND DUE THURSDAY FEB 17 11:59PM***				
	2/21	*NO CLASS –READING WEEK*				
7	2/28	CORRELATION REVIEW	CH 15	CH 15 PROBLEM SET DUE SUN MAR 6 11:59PM	JAMOVI HW 3 DUE SUN MAR 6 11:59PM	
8	3/7	INTRODUCTION TO REGRESSION	CH 16.1 -16.2		JAMOVI HW 4 DUE SUN MAR 13 11:59PM	
9	3/14	MULTIPLE REGRESSION	CH 16.3	CH 16 PROBLEM SET DUE SUN MAR 20 11:59PM	JAMOVI HW 5 DUE SUN MAR 20 11:59PM	MAR 14 – LAST DAY TO DROP S COURSES
10	3/21	THE CHI-SQUARE STATISTIC	CH 17	CH 17 PROBLEM SET DUE SUN MAR 27 11:59PM	JAMOVI HW 6 DUE SUN MAR 27 11:59PM	
11	3/28	NON-PARAMETRIC TESTS AND OTHER ADVANCED TOPICS	APPENDIX E		FINAL PROJECT DUE SUN APR 3 11:59PM	
12	4/4	THE REPLICATION CRISIS (?) WRAPPING UP: REFLECTION & EVALUATION				APR 8 – LAST DAY TO ADD CR/NCR OR LWD FOR S COURSES
FINALS	APR 11-29	***CUMULATIVE FINAL ASSESSMENT WILL BE POSTED TUESDAY APR 12 9AM AND DUE THURSDAY APR 14 11:59PM***				

Note: Additional tutorial assignments related to the completion of the final project will be reviewed and assigned during tutorial sections