



**UNIVERSITY
OF ALBERTA**

PSYCH 413: Design and Analysis in Experimental Psychology 800 — Spring 2025

Instructor Information

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Office Hours: Mondays 12:00 - 13:00 (online)

Class Information

Class Dates: May 5 - June 11
Lecture Days and Times: Mondays and Wednesdays at 08:30 - 11:20 (2h 50m)
Lab Days and Times: Tuesday and Thursday at 08:30 - 11:20 (2h 50m)
Classroom: Zoom
Course Website: https://jpisklak.github.io/courses/PSYCH_413_sp2025/index.html

Teaching Assistant

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1 Territorial Acknowledgement

The University of Alberta, its buildings, laboratories, and research stations are primarily located on the territory of the Néhiyaw (Cree), Niitsitapi (Blackfoot), Métis, Nakoda (Stoney), Dene, Haudenosaunee (Iroquois) and Anishinaabe (Ojibway/Saulteaux), lands that are now known as part of Treaties 6, 7 and 8 and homeland of the Métis. The University of Alberta respects the sovereignty, lands, histories, languages, knowledge systems, and cultures of all First Nations, Métis, and Inuit nations whose cultures continue to influence our vibrant community.


2 Course Calendar Description

Provides the background necessary to design and analyze data in any area of experimental psychology and prepares students to conduct original research. Topics include sampling distributions and hypothesis testing; issues in and analysis of between-subjects, within-subjects, and mixed designs; trend analysis; planned and post hoc comparisons; fixed and random effects factors; and efficiency and power of various experimental designs.


Prerequisites

PSYCH 212, PSYCH 213 or STAT 151 or 161, and PSYCH 313 or STAT 252 or permission of the department. [Faculty of Science]

3 Course Objectives & Expected Learning Outcomes


This course provides an introduction to the statistical methodologies that support a wide range of experimental designs in Psychology. Particular emphasis is placed on understanding the underlying principles and assumptions of these methods, alongside guidance on best practices in modern research—such as the use of robust measures of central tendency. The course also introduces students to statistical computing using the  programming language, a key tool in contemporary scientific research across disciplines. This programming-based approach not only equips students with practical skills but also reflects a commitment to ethical, transparent research practices. In keeping with the ideals of [Open Science](#), the course avoids reliance on costly proprietary software or restrictive file formats, ensuring accessibility and reproducibility.

3.1 By the end of this course, you should . . .

- **Overcome statistical anxiety:** Develop confidence in working with data and understand how to leverage R as a user-friendly and powerful tool.
- **Master data handling:** Learn to manage, organize, and summarize large and diverse datasets effectively.
- **Understand behavioural research:** Appreciate core principles of data analysis and how they are applied to study human and animal behavior.
- **Design effective studies:** Gain the ability to create experiments and studies that are coherent, analyzable, and methodologically sound.
- **Build analytical foundations:** Acquire foundational skills to approach more advanced statistical methods in psychology and related fields.
- **Embrace robust science:** Appreciate the utility of robust statistical methods and lament at their lack of inclusion in a lot of modern research.
- **Enhance computer literacy:** Improve your ability to use computational tools to solve real-world problems.
- **Feel confident learning new statistical concepts:** Feel more confident that you have the tools and background to learn new statistical concepts when the need arises.
- **Worship at the altar of **: Give in to the majesty that is open-access statistical computing — an essential element of all modern research.


4 OMG! WHY DOES THIS COURSE USE R?!

(My friend didn't have to learn that in their stats course!)

The decision to use  (a programming language) in a Psychology focused course may seem strange, but there are many compelling reasons to learn it in place of the kinds of proprietary software (e.g., SPSS) that have been traditionally employed (and justifiably disliked by students) in these types of courses.

- **Free and Open Source:** R is open-source software, meaning students can not only access it for free, there is a wealth of complementary open-source packages freely available for specialized analyses and tasks.
- **Versatility in Data Analysis:** R is a powerful tool and was literally developed for conducting statistical analysis, data visualization, and data manipulation. It is used widely across academia and various other fields such as business, healthcare, and government.
- **Strong Community Support:** R has a large and active community that contributes to a vast array of impressive packages, tools, and resources. This means students can easily source help, tutorials, and code examples for almost any task.
- **Reproducible Research:** Aligned with [open-science](#) principles, R is built for reproducible research—a crucial aspect in both academic and professional environments. It enables students to create scripts that can be easily shared, reviewed, and rerun, ensuring their work is transparent, accurate, and reliable.
- **Integration with Other Tools:** R can easily integrate with other software and programming languages, such as Python, SQL, HTML, \LaTeX , and even (ugh) Excel. This makes it a valuable tool for working in diverse computational environments.
- **Growing Demand in the Job Market:** R is highly valued in the job market, especially in data science, analytics, and research roles. Learning R can open up numerous career opportunities for students.
- **Advanced Statistical Capabilities:** Many of R's packages make it easy to apply best practices in statistics (e.g., the use of robust methodologies) and can readily employ newer and more complex types of analyses.
- **Enhanced Data Visualization:** R offers powerful and intuitive packages like ggplot2 for sophisticated and customizable data visualizations, helping students communicate their findings effectively.
- **Learning Curve and Educational Value:** While R has a learning curve, it is no steeper than expensive proprietary point and click programs like SPSS. Moreover, working with R teaches valuable problem-solving and programming skills that generalize to (and thus are an excellent first step towards learning) other programming languages.

5 Minimum Technology Requirements


This course introduces students to both statistics and statistical computing using the  programming language for statistical computing. To successfully participate in this course, it is recommended that students have, at a minimum, access to a computer with an internet connection that can support the tools and technologies the University uses to deliver content, engage with instructors, teaching assistants, fellow students, and facilitate assessments. Student access of the UofA library computer laboratories is more than sufficient in this respect. For more details about technology access through the UofA libraries visit: <https://www.library.ualberta.ca/services/technology>

Please note that while tablets and Chromebooks can be used, they are not recommended, as they may impose limitations that make completing course tasks more challenging.

If students have questions or concerns about these requirements, they should reach out to the instructor at the start of the term. Not addressing these issues promptly may result in a zero for assessments requiring the specified technology.

6 Recommended Course Materials

1. Textbook: Discovering Statistics Using R by Andy Field

- Recommend hard copy (not eBook) – a second edition of the book is pending but not yet available (so it may be difficult to find hard copies).
- This book walks through many of the statistical methods we will discuss in class in a clear manner and works as an excellent reference that will serve you well throughout your university career. It covers many topics we will not have the time to cover. The book is also a hilarious read. A couple of the  functions at the start of the book are a bit outdated, though that shouldn't impact its usefulness to you.
- Note that the UofA library has many different introductory stats textbooks which are probably as good as this one in terms of the statistical information provided. Do not feel as though purchasing this book is a requirement for the course. Students often ask for a recommended textbook so they have easy access to supplementary explanations. There is no ideal book for this course, but if I have to recommend one to you, "Discovering Statistics" is the one I would. Other helpful statistics and R resources can be found on the course webpage "[Useful Student Links](#)" section.

2. Textbook: R for Data Science (2e) by Hadley Wickham & Garrett Grolemund

- Free (open source) eBook version available at <https://r4ds.hadley.nz/>
- A useful textbook for learning R and the tidyverse specifically. It's also free.

7 Tentative Lecture Schedule

| Week | Date | Topic |
|------|-------------|---|
| 1 | May 5 - 8 | Course Introduction Intro to R Central Tendency Spread |
| 2 | May 12 - 15 | The Normal Distribution Robust Outlier Detection Sampling Distributions One-Sample T-tests (classic and robust) Cohen's <i>d</i> and Hedge's <i>g</i> for a single sample |
| | May 19 | Victoria Day (no class) |
| 3 | May 20 - 22 | Error and Power Data organization/structuring Two-Sample T-test (classic and robust) Cohen's <i>d</i> and Hedge's <i>g</i> for two independent samples Paired T-test (classic and robust) Cohen's <i>d</i> and Hedge's <i>g</i> for a paired sample <i>Plotting Assignment Instructions</i> |
| | May 26 | Midterm Exam @ 08:30 (24hrs to complete) - No Lecture Note: Instructor at Conference |
| 4 | May 27 - 29 | "Simple" Ordinary Least-Squares Regression <ul style="list-style-type: none">• Intercepts and Slope• Pearson Correlation Coefficient• Method of Least-Squares• The model, comparisons, inferences, and assumptions Testing the Correlation Coefficient "Multiple" Ordinary Least-Squares Regression <ul style="list-style-type: none">• The logic, modelling in R, comparisons, assumptions, and outliers |

| | | |
|---|----------------|--|
| 5 | June 2 - 5 | <p>"Multiple" Ordinary Least-Squares Regression cont'd</p> <ul style="list-style-type: none"> • Robust Regression (M-estimation, IRLS, Bayes Factors) • Categorical Predictors <p>One-Way ANOVA</p> <ul style="list-style-type: none"> • As regression • Omnibus Variance-Ratio Logic • Planned Contrasts • Polynomial Contrasts (Trend Analysis) • Post-Hoc Pairwise Comparisons • Effect Sizes <p>Power and Sample Size Estimation</p> <p>Factorial ANOVA (Two-Way Independent)</p> <ul style="list-style-type: none"> • Modelling in R • Contrasts and Sum of Square Types • Simple Effects Analysis |
| 6 | June 9 - 11 | <p>Factorial ANOVA cont'd (Two-Way Independent)</p> <ul style="list-style-type: none"> • Effect Sizes <p>Robust ANOVAs</p> <p>Categorical Variable Analysis</p> <ul style="list-style-type: none"> • One-Dimension (Goodness-of-fit) • Two-Dimension (Pearson's χ^2 test of independence) • Odds Ratios as Effect Sizes |
| | June 12 | Final Exam @ 08:00 (24hrs to complete) |

Table 1: Tentative Lecture Schedule - Order and topics covered are subject to change

It is the student's responsibility to stay up to date with lectures to ensure they do not miss important announcements about upcoming assessments, deadlines, and schedule changes.

8 Important Dates

See the current Calendar for the Academic Schedule, Dates, and Deadlines, which include the Registration Add/Drop deadline and Withdrawal date: <https://calendar.ualberta.ca/content.php?catoid=44&navoid=13726>

- *May 5th*: Spring term classes begin
- *May 26th at 08:30*: Midterm exam begins
- *May 27th by 08:30*: Midterm exam due
- *June 6th by 23:59*: Plotting assignment due
- *June 11th*: Last day of spring term classes
- *June 12th*: Final exam

8.1 Midterm and Final Exam Conflicts with Regularly Scheduled Classes

Time conflicts between regularly scheduled class periods (as listed on BearTracks) and term exams from other courses will not be accommodated. If a term exam from another course overlaps with a scheduled class time, it is the student's responsibility to contact the instructor of the intruding course to request an accommodation. As noted in the University Calendar:

“...Students have the right to attend regularly scheduled class activities. Therefore, if a student has a conflict between a regularly scheduled class and a scheduled term examination, the instructor of the class in which there was a scheduled term examination will be required to make an accommodation for the student.”

9 Grade Evaluation

Final grades are based on each student's raw percentage scores for individual course components, weighted according to the breakdown shown in Table 3. These weighted scores are combined to produce an overall course percentage—an unscaled, raw mark. Letter grades are then assigned by ranking these overall scores and identifying appropriate grade boundaries. These boundaries are determined using a combination of historical student performance, the observed performance of the current cohort, and the instructor's expert judgment. Where appropriate, natural breaks in the score distribution will be used to guide boundary placement. Note that the specific percentage thresholds required for each letter grade may vary from year to year, as it is not feasible to design assessments that are exactly equivalent in difficulty across different offerings of the course.

Please be appreciative of the fact that grade boundaries will be set with care and fairness in mind. The goal is to ensure that final grades accurately reflect student understanding and achievement, even in cases where assessments may differ slightly in difficulty from year to year. To help students better interpret their current standing in the class, an updated overall *percentile rank* will be regularly provided throughout the term alongside each student's raw, unscaled course total.

| Letter Grade | Grade Points | Interpretation | Typical Percentile Rank (Approx.) |
|--------------|--------------|----------------|-----------------------------------|
| A+ | 4.0 | Outstanding | 98–100% |
| A | 4.0 | Excellent | 95–98% |
| A– | 3.7 | Very Good | 89–95% |
| B+ | 3.3 | Good | 79–89% |
| B | 3.0 | Above Average | 66–79 % |
| B– | 2.7 | Average | 50–66% |
| C+ | 2.3 | Satisfactory | 34–50% |
| C | 2.0 | Acceptable | 21–34% |
| C– | 1.7 | Marginal | 11–21% |
| D+ | 1.3 | Poor | 5–11% |
| D | 1.0 | Minimal Pass | 2–5% |
| F | 0.0 | Failure | 0–2% |

Table 2: Letter Grade Interpretation

The percentile ranges provided in Table 2 are approximate and offered as a simple heuristic for students to use. Actual grade boundaries are determined at the end of the term based on relative overall course performance and the instructor's judgment.

Grades are unofficial until approved by the Department and/or Faculty offering the course.

9.1 Components of Course Grade

| Assessment | Weight | Date Provided | Date Due |
|----------------------------|--------|--------------------------------|--------------------------------|
| Attendance | 2% | NA | NA |
| Homework Assignments (all) | 35% | Fridays by 17:00 | Fridays by 23:59 |
| Plotting Assignment | 8% | May 22 nd at 08:30 | June 6 th by 23:59 |
| Midterm | 25% | May 26 th at 08:30 | May 27 th by 08:30 |
| Final Exam* | 30% | June 12 th at 08:00 | June 13 th by 08:00 |

Table 3: Assignment and Exam Dates

- *Students must verify this date on BearTracks when the Final Exam Schedule is posted.
- Unless otherwise specified by the instructor, exams will cover all content completed up to the date of the exam.
- Deadlines marked as “by” a specific time mean that submissions must be completed before that time. Any submission made at the specified time or after it will be considered late.
- The relative weight of individual homework assignments may vary based on the estimated workload involved.

9.2 Re-examination

There is no possibility of a re-examination in this course.

10 Format of Assessments

10.1 Attendance

To support your learning and help you succeed in this fast-paced spring term course, all lectures will be recorded and (barring any technical issues or forgetfulness on the part of the instructor) will be made available on the course website. These recordings are intended as a supplement to your in-class experience—useful for reviewing complex material, improving your notes, or catching up if you miss a class due to unforeseen circumstances. However, the availability of recordings should not be seen as a substitute for regular attendance. Because the course moves quickly, students who rely solely on recordings and fall into the habit of procrastination are likely to fall behind.

To encourage consistent engagement, attendance will be monitored at random points throughout the term. Each attendance check contributes to your overall attendance mark. If, for example, you attend 10 out of 13 checks, your attendance score would be approximately 77%. That said, you are allowed up to **three free passes**—these missed checks will not count against you. Any absences beyond that will reduce your attendance score accordingly.

Students with specialized, ongoing commitments (e.g., work obligations during lecture hours) may appeal to have the full attendance component reallocated to the final exam. Such appeals must be made as soon as the commitment is known, and approval is at the discretion of the instructor.

Attendance checks will begin following Spring Term Registration Deadline on May 8th.

10.2 Format of Weekly Homework Assignments

Homework assignments will be posted each Friday by 17:00 (often earlier) in the homework section of the course website. These will consist of take-home questions and datasets designed to reinforce key concepts from lectures. Completed assignments must be submitted via the Canvas portal (linked on the course website) by 23:59 the following Friday.

Individual questions within each assignment may carry different weights, reflecting their ability to differentiate levels of student understanding. Similarly, the weight of each assignment toward your final grade may vary depending on the scope and workload involved. Collectively, homework accounts for 35% of your overall course grade.

Mastering statistics requires consistent, hands-on engagement. These assignments are your primary opportunity to apply what you've learned, diagnose areas needing improvement, and stay aligned with the pace of the course. Regular completion is not only recommended—it is essential for success.

10.2.1 Late Penalties

Be aware that there are no late penalties for assignments in this course. Failing to submit before a due date will result in a mark of 0. For details surrounding missed deadlines, see section 12 of the syllabus.

10.3 Format of Exams

Both the midterm and the final will consist of take-home questions and data provided to students via the exam section of the course website. Questions will be made available to the student at the appointed exam time listed on the syllabus. Students will be permitted 24 hours to complete and submit the exam. Exams should be submitted via the Canvas link provided on the course website, in a similar manner to that of homework assignments. Questions may carry different weights based on their significance in evaluating student performance within the course.

The take-home nature of the exams does not permit collaboration with other students. You are expected to produce your own code and results. Violation of this will constitute a form of academic misconduct.

Should technical issues arise with eClass, the student's computer, or their internet access, it is recommended that students *share* their completed exam (using Google Colaboratory's share function) with the instructor along with a detailed explanation and corroborating photo or video evidence of the issue (as taken with a cell phone). In these instances, late penalties incurred will be at the discretion of the instructor.

Unless specified otherwise by the instructor, the exams will cover all content completed up to the date of the exam.

10.3.1 Representative Evaluative Material

Homework assignments offer the most accurate preview of the question formats and material that students can expect on both the midterm and final exams.

11 Statement of Expectations for the use of Artificial Intelligence (AI)

In this course, we are dedicated to the ethical and transparent use of advanced machine learning models (GPT-4, DALL-E, Stable Diffusion, etc.), commonly referred to as "Artificial Intelligence." It is necessary to clearly attribute and cite any AI-generated content in their work when appropriate. As an example, in the acknowledgments section of a project, they might indicate that *"This text underwent review and editing with*

the support of the artificial intelligence language model GPT 4o (OpenAI, 2025)."

Be appreciative of the fact that, while AI is a powerful and highly useful tool, it does have many limitations. It may not always fully “understand” context or nuance, and all its outputs should be critically reviewed to ensure accuracy and relevance to the task at hand. This means that, while AI can enhance our capabilities, it should be used judiciously to maintain the integrity and quality of a person's academic work. Please note that students will be held responsible for any confusing, erroneous, false, offensive, plagiarised, or unethical content provided by AI within their work, so exercise caution and diligence in its use.

- For details on how to cite and reference generative AI systems please see <https://libguides.mcmaster.ca/cite-gen-ai/apa>

11.1 Using AI in This Course: Guidelines and Best Practices

AI tools can be valuable resources for learning, but it is important to use them effectively and responsibly.

The Wrong Way to Use AI

Using AI solely to “find an answer” for coding, math problems, or homework in order to secure a good grade is counterproductive. This approach bypasses the opportunity to truly engage with the material, which can:

- Lead to gaps in comprehension, making the content increasingly difficult over time.
- Prevent you from gaining the necessary practice for high-stakes assessments, such as exams, where AI tools are not permitted.
- Leave you unable to recognize or correct errors generated by AI, further harming your performance.

You should be focused on **learning**, not getting a good grade.

The Right Way to Use AI

AI is most effective as a tutor, helping you understand concepts and guiding you through problem-solving. For instance, if you need help creating a dataframe in R, you could ask an AI tool: “*Can you explain how to create a dataframe in the R programming language?*”

This kind of targeted use can help clarify concepts, reinforce your learning, and build your skills.

Remember, genuine effort and practice now will pay off in the long run. Use AI thoughtfully to support—not replace—your learning process.

Important

Please note that AI use is strictly prohibited in assessments and assignments not approved by the instructor. Failure to abide by this guideline may be considered an act of cheating and a violation as outlined in the relevant sections of University of Alberta's [Student Academic Integrity Policy](#).

*While the use of AI is not strictly prohibited in this course, students are nonetheless expected to submit work that genuinely reflects their own efforts and abilities. If, during the marking process, it becomes evident that AI has completed most or all of a submission, the student will receive a reduced mark, potentially even a zero. If a student believes this determination is incorrect and that the submission is their own work, they may request an opportunity to recover marks. In such cases, the student must meet with the instructor or marker **in person** to demonstrate their understanding of the material. This ensures that the student has actively engaged with the content and can independently explain and apply the concepts.*

12 Policies for Missed Term Work

Failure to submit homework assignments or course projects through the designated channels by the specified due dates will result in a grade of 0. However, students unable to complete these tasks due to incapacitating illness, severe domestic circumstances, or other compelling reasons may apply for an excused absence. To apply for an excused absence, a student must contact the instructor in a timely manner (see section 12.1 and 12.2 below). If an excused absence is granted, then the weight of the assessment will be transferred to the final exam. Should a shift in weighting to the final exam increase its weight to > 40%, this does not change the original 'syllabus weight', meaning the student does not now qualify for possible re-examination. This also means that the cumulative weight of the assessment will be lower than the percentage stated in Table 3 above.

Please be aware that transferring the weight of missed work to the final exam might disqualify a student from being eligible for a deferred final examination if they have not completed at least 50% of the term's coursework.

In all cases, instructors may request adequate documentation to substantiate the reason for the absence, at their discretion. Deferral of term work is a privilege and not a right; there is no guarantee that a deferral will be granted. Misrepresentation of Facts to gain a deferral is a serious breach of the [Student Academic Integrity Policy](#).

Deferral of term work/tests is under the discretion of the instructor; however, deferral of a final exam is determined at the Faculty level. A student must apply to their home Faculty for a deferral of a final exam, not the Faculty the course is listed in (see section 16).

12.1 Exemption Requests Relating to Non-technical Issues

Barring extreme circumstances (e.g., unexpected hospitalization or immediate death in the family), requests for exemptions related to known chronic or prolonged conditions and events (e.g., depression, anxiety, mourning, recuperation, general illness, etc.) must be submitted to the instructor at least **24 hours** before the specified due date for consideration. i.e., students are expected to be proactive about notifying the instructor in a timely manner when the circumstances allow it.

With rare exception, requesting exemptions moments before or after a deadline is unacceptable behaviour. People are rarely so incapacitated that they cannot send an email.

It is important to note that it is neither within the purview nor the responsibility of the instructor to verify or handle claims related to enduring physical or psychological medical conditions (e.g., ADHD, clinical anxiety, etc.). Students seeking accommodations for such reasons must do so through appropriate university channels (i.e., [Academic Success Centre](#)).

12.2 Exemption Requests Relating to Technical issues

If students experience technical issues in the process of submitting an assignment, they are expected to document the issue by taking an appropriate video or photo with their phone or computer. Do not expect clemency for technical issues without providing at least this. They must ensure that the photo or video provides reasonable evidence of the date and time in addition to the technical issue.

A generous time frame is allotted for assignment submissions. Exemption requests related to technical issues made within the last 12 hours before a deadline will not be deemed reasonable, regardless of circumstances such as internet outages, computer crashes, or hardware failure. Assignments are expected to be completed in a timely fashion with due precautions taken, such as file backups.

Procrastination and last-minute completion carry inherent risks, for which responsibility rests with the student.

13 Missed Midterm

Students are required to complete the midterm exam as scheduled. If a student is unable to complete the midterm for any reason, they need to notify the instructor within ± 48 hours of the exam deadline. If an exemption is granted then the weight of the assessment will be transferred to the final exam.

As with term work, the instructor may request adequate documentation to substantiate the reason for the absence, at their discretion. Deferral of term work is a privilege and not a right; there is no guarantee that a deferral will be granted. Misrepresentation of Facts to gain a deferral is a serious breach of the [Student Academic Integrity Policy](#).

14 Missed Term Work or Final Exam Due to Non-medical Protected Grounds (e.g., religious beliefs)

When a term assessment or final exam presents a conflict based on [non-medical protected grounds](#), students must apply to the Academic Success Centre for accommodations via their [Register for Accommodations website](#). Students can review their eligibility and choose the application process specific for **Accommodations Based on Non-medical Protected Grounds**.

It is imperative that students review the dates of all course assessments upon receipt of the course syllabus, and apply **AS SOON AS POSSIBLE** to ensure the timely application of the accommodation. Students who apply later in the term may experience unavoidable delays in the processing of the application, which can affect the accommodation.

15 Re-evaluation of Term Work

Students who wish to request a re-evaluation of their graded term work must do so in a timely manner after the grade has been posted and *before* final course grades are submitted.

Requests must include a clear and specific justification. Re-evaluations will only be considered if the rationale provided is deemed reasonable by the marker. General requests for “another look” without a substantive explanation will not be granted.

16 Deferred Final Examination

A student who cannot write the final examination due to incapacitating illness, severe domestic affliction or other compelling reasons can apply to their Faculty for a deferred final examination. Such an application must be made to the student's Faculty office within **two** working days of the missed examination and must be supported by appropriate documentation or a Statutory Declaration (see University Calendar for information on [Attendance](#)).

Students who cannot write a final exam due to non-medical protected grounds (e.g., religious beliefs), must apply to the Academic Success Centre **AS SOON AS POSSIBLE** for accommodations via their [Register for Accommodations website](#).

Deferred examinations are a privilege and not a right; there is no guarantee that a deferred examination will be granted. The Faculty may deny deferral requests in cases where less than 50% of term work has been

completed. Misrepresentation of Facts to gain a deferred examination is a serious breach of the [Student Academic Integrity Policy](#).

17 Math, Stats, and Programming Help

If you need assistance, many resources are available to support you, but it is up to you to take the initiative to seek them out. Your primary point of contact is the instructor. If you are facing challenges, do not hesitate to attend office hours or send an email. It is important to address any issues, whether course-related or not, *as soon as they arise*. If you cannot attend office hours, reach out via email to arrange an alternative meeting time.

With respect to R programming specifically, the most time efficient way to seek help is to email the instructor with a brief description of the problem you are having and ensure that you have shared a copy of your R code (i.e., the .IPYNB file). This will allow the instructor to quickly run and spot issues with the code.

18 Student Responsibilities

18.1 Guidelines for Respectful Online Engagement

Students from many different backgrounds participate in courses at the University of Alberta. Sexist, racist, homophobic comments and other inflammatory remarks are not conducive to learning in our courses, and are absolutely not permitted. All participants are governed by the [Student Academic Integrity Policy](#). Be mindful when discussions involve controversial topics or issues, and consider the possibility that members of our community have themselves experienced some of these issues and/or very different realities because of these issues. Participate in a respectful and considerate manner.

If you are witness to or the target of abusive or offensive behaviour in any course, please inform your instructor immediately. You may also contact the Psychology Undergraduate/Graduate Advisor, Associate Chair of Undergraduate/Graduate, or Chair.

18.2 Academic Integrity and Student Conduct

The University of Alberta is committed to the highest standards of academic integrity and honesty, as well as maintaining a learning environment that fosters the safety, security, and inherent dignity of each member of the community, ensuring students conduct themselves accordingly. Students are expected to be familiar with the standards of academic honesty and appropriate student conduct, and to uphold the policies of the University in this respect.

Students are particularly urged to familiarize themselves with the provisions of the [Student Academic Integrity Policy](#) and the [Student Conduct Policy](#), and avoid any behaviour that could potentially result in suspicions of academic misconduct (e.g., cheating, plagiarism, misrepresentation of facts, participation in an offence) and non-academic misconduct (e.g., discrimination, harassment, physical assault). Academic and non-academic misconduct are taken very seriously and can result in suspension or expulsion from the University.

All students are expected to consult the [Student Academic Integrity Policy](#) for clarification on the various academic offences. All forms of academic dishonesty are unacceptable at the University. Unfamiliarity of the rules, procrastination or personal pressures are not acceptable excuses for committing an offence. Listen to your instructor, be a good person, ask for help when you need it, and do your own work – this will lead you toward a path to success. Any academic integrity concern in this course will be reported to the College of Natural and Applied Sciences.

Suspected cases of non-academic misconduct will be reported to the Dean of Students. The College, the Faculty, and the Dean of Students are committed to student rights and responsibilities, and adhere to due process and administrative fairness, as outlined in the [Student Academic Integrity Policy](#) and the [Student Conduct Policy](#). Please refer to the policy websites for details on inappropriate behaviours and possible sanctions.

The College of Natural and Applied Sciences (CNAS) has created an [Academic Integrity for CNAS Students eClass site](#). Students can self enroll and review the various resources provided, including the importance of academic integrity, examples of academic misconduct and possible sanctions, and the academic misconduct and appeal process. They can also complete assessments to test their knowledge and earn a completion certificate.

"Integrity is doing the right thing, even when no one is watching" – C.S. Lewis

18.3 Contract Cheating and Misuse of University Academic Materials or Other Assets

Contract cheating describes the form of academic dishonesty where students get academic work completed on their behalf, which they submit for academic credit as if they had created it themselves. Contract cheating may or may not involve the payment of a fee to a third party, who then creates the work for the student.

Examples include:

- Getting someone to write an essay or research paper for you.
- Getting someone to complete your assignment or exam for you.
- Posting an essay, assignment, or exam question to a tutorial or study website; the question is answered by a "content expert", then you copy it and submit it as your own answer.
- Posting your solutions to a tutorial/study website, public server, or group chat and/or copying solutions that were posted to a tutorial/study website, public server, or group chat.
- Sharing your login credentials to the course management system (e.g., Canvas) and allowing someone else to complete your assignment or exam remotely.
- Using an artificial intelligence bot or text generator tool to complete your essay, research paper, assignment, or exam solutions for you (without the instructor's permission).
- Using an online grammar checker to "fix" your essay, research paper, assignment, or exam solutions for you (without the instructor's permission).
- Contract cheating companies thrive on making students believe that they cannot succeed without their help; they attempt to convince students that cheating is the only way to succeed.

Uploading the instructor's teaching materials (e.g., course outlines, lecture slides, assignment, or exam questions, etc.) to tutorial, study, or note-sharing websites or public servers is a copyright infringement and constitutes the misuse of University academic materials or other assets. Receiving assignment solutions or answers to exam questions from an unauthorized source puts you at risk of receiving inaccurate information.

19 University Policy

19.1 Withdrawals

See the University Calendar for the relevant [add/drop deadlines](#) for each term.

19.2 Course Outlines

Policy about course outlines can be found in the [Academic Regulations, Evaluation Procedures and Grading section](#) of the University Calendar.

19.3 Student Academic Integrity

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Academic Integrity Policy and the Student Conduct Policy (on the [University of Alberta Policies and Procedures Online](#) (UAPPOL) website) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

19.4 Recordings

Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content authors.

19.5 Accommodations for Students

In accordance with the [University of Alberta's Discrimination, Harassment, and Duty to Accommodate policy](#), accommodation support is available to eligible students who encounter limitations or restrictions to their ability to perform the daily activities necessary to pursue studies at a post-secondary level due to medical conditions and/or non-medical protected grounds. Accommodations are coordinated through the [Academic Success Centre](#), and students can learn more about eligibility on the [Register for Accommodations website](#).

It is recommended that students apply **AS SOON AS POSSIBLE** in order to ensure sufficient time to complete accommodation registration and coordination. Students are advised to review and adhere to published deadlines for accommodation approval and for specific accommodation requests (e.g., exam registration submission deadlines). Students who request accommodations less than a month in advance of the academic term for which they require accommodations may experience unavoidable delays or consequences in their academic programs, and may need to consider alternative academic schedules.

20 Student Supports

20.1 The Student Service Centre

The [Student Service Centre](#) provides students with information and access to services to support academic, financial, mental, and physical well-being. Information about various student resources, including academic, financial, and health and wellness, can also be found on the [Campus Life website](#).

20.2 Academic Success Centre

The [Academic Success Centre](#) provides professional academic support to help students strengthen their academic skills and achieve their academic goals. Individual advising, appointments, and group workshops are available year round in the areas of Accessibility, Communication, Learning, and Writing Resources. Modest fees may apply for some services.

20.3 Writing Services

[Writing Services](#) offers free one-on-one writing support to students, faculty, and staff. Students can request a consultation for a writing project at any stage of development. Instructors can request class visits and presentations.

20.4 Feeling Stressed, Anxious, or Upset?

It's normal for us to have different mental health experiences throughout the year. Know that there are people who want to help. You can reach out to your friends and access a variety of supports available on and off campus at the [Need Help Now webpage](#) or by calling the 24-hour Distress Line: 780-482-4357 (HELP). [The Health and Wellness Support for Students website](#) also contains mental and physical health resources, which are offered on-campus and in the community.

20.5 Student Self-Care Guide

This [Self-Care Guide](#), originally designed by the Faculty of Native Studies, has broader application for use during students' learning. It provides some ideas and strategies to consider that can help navigate emotionally challenging or triggering material.

20.6 First Peoples' House

[First Peoples' House](#) provides an environment of empowerment for First Nations, Métis, and Inuit learners to achieve personal and academic growth.

20.7 Office of the Student Ombuds

[The Office of the Student Ombuds](#) is a confidential service that strives to ensure that university processes related to students operate as fairly as possible. They offer information, advice, and support to students, faculty, and staff as they deal with academic, discipline, interpersonal, and financial issues related to student programs.

21 Learning and Working Environment

The Department of Psychology, Faculty of Arts, and Faculty of Science are committed to ensuring that all students, faculty and staff are able to work and study in an environment that is safe and free from discrimination, harassment, and violence of any kind. It does not tolerate behaviour that undermines that environment. This includes virtual environments and platforms.

The Department of Psychology believes that organizational diversity and excellence go hand-in-hand. We are committed to identifying our limitations as a department in terms of equity, diversity, and inclusion and making actionable changes to overcome these limitations. We want all of our constituents to feel welcome, safe, and valued in the core activities of teaching, research, and administration. Please visit our [Commitment to EDI and Indigenization in Psychology website](#) for more information.

If you are experiencing harassment, discrimination, fraud, theft or any other issue and would like to get confidential advice, please contact any of these campus services:

- [Office of Safe Disclosure & Human Rights](#): A safe, neutral and confidential space to disclose concerns about how the University of Alberta policies, procedures or ethical standards are being applied. They provide strategic advice and referral on matters such as discrimination, harassment, duty to accommodate and wrong-doings. Disclosures can be made in person or online using the [Online Reporting Tool](#).

- [University of Alberta Protective Services](#): Peace officers dedicated to ensuring the safety and security of U of A campuses and community. Staff or students can contact UAPS to make a report if they feel unsafe, threatened, or targeted on campus or by another member of the university community.
- [Office of the Student Ombuds](#): A confidential and free service that strives to ensure that university processes related to students operate as fairly as possible. They offer information, advice, and support to students, faculty, and staff as they deal with academic, discipline, interpersonal, and financial issues related to student programs.
- [Office of the Dean of Students](#): They can assist students in navigating services to ensure they receive appropriate and timely resources. For students who are unsure of the support they may need, are concerned about how to access services on campus, or feel like they may need interim support while you wait to access a service, the Dean of Students office is here to help.

21.1 Disclaimer

Any typographical errors in this syllabus are subject to change and will be announced in class and/or posted on the course website. The date of final examinations is set by the Registrar and takes precedence over the final examination date reported in the syllabus.

21.2 Copyright

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