

PSYC 300-02		Research Methods and Data Analysis in Psychology I		Fall 2023
Instructor:	Dr. Claire Midgley	Lecture Location:	CHC 119	
Phone:	N/A	Lecture Days/Time:	TR 9:30 – 10:45	
Email:	claire.midgley@ucalgary.ca	Lab Location:	SS 18	
Office:	AD 126	Lab Days/Time:	Variable, see your schedule	
Office Hours:	M 1-2 (in person) F 1-2 (on Zoom, link below)	TAs:	Variable, see your schedule	

One-on-one meetings: Book [here](#)

Zoom link for drop-in office hours & one-on-one meetings (same across all courses):

<https://ucalgary.zoom.us/j/5757736564?pwd=cFQwQlpwS1UvRnZwdVUvdm4yYTNSdz09>

Zoom link for class recordings (specific to course & lecture section; p: PSYC300F23):

<https://ucalgary.zoom.us/j/92709745836?pwd=SkVJeU5DSUtSZEJoMDZib0JQR1FTZz09>

Course Description

This course aims to help you to develop the skills required to (a) conduct and analyze scientific research in psychology, (b) communicate your research to others, and (c) evaluate research by other psychologists. These skills are central to success as a psychology major (not to mention as a research psychologist). At a more general level, this course is designed to help you develop methodological, analytical, and communication skills that are invaluable in a wide range of everyday applications and in numerous lines of work. The laboratory component of the course is designed to facilitate experiential learning (learning by doing) of the material, and hence the lab assignments are integrated with the lecture schedule.

NOTE: This course focuses on quantitative approaches. Students interested in qualitative psychological research should consider PSYC 415 - *Qualitative Inquiry in Psychology* upon completion of this course.

Course Learning Outcomes

The Department of Psychology is committed to student knowledge and skill development. The table below lists the key learning outcomes for this course, the program-learning outcomes they facilitate (see <https://live-arts.ucalgary.ca/psychology/about#program-learning-outcomes>), and the expected level of achievement.

Course Learning Outcomes	Assessment Methods	PLO(s)	Level(s)
Contrast research methodologies for strengths and weaknesses.	Multiple choice exams	2	C
		7	C
		8	C
Identify ethical issues in research	Multiple choice exams	2	I
		6	I
		8	I
Use PSYCINFO to locate primary research relevant to a specific topic	Lab assignments	5	A
Design research using appropriate methodology to test a research question	Lab assignments	1	C
		2	C
		3	C
		4	C
		5	C
		6	C
		7	C
Apply principles of null hypothesis testing	Multiple choice exams	3	I
		7	I
Conduct and interpret numerical and graphical methods of summarizing data	Multiple choice exams, lab assignments	2	C
		3	C
		4	C
Effectively communicate research findings	Lab assignments	3	C
		4	C
		5	C
		7	C
		8	C
Write all elements of a laboratory report in APA format	Lab assignments	3	C
		4	C
		5	C
		8	C

Notes. PLOs = Program-Learning Outcomes: 1 = demonstrate knowledge of psychological sciences, 2 = think critically and solve problems, 3 = conduct research and analyze data, 4 = communicate effectively, 5 = demonstrate information literacy, 6 = understand and implement ethical principles in a diverse world, 7 = apply psychological knowledge and skills, 8 = Demonstrate multicultural competence and awareness of issues related to equity, diversity,* and inclusion. Level of PLO achievement facilitated by this course: I = introductory, C = competency, A = advanced.

Acknowledgments and Respect for Diversity

Our classrooms view diversity of identity as a strength and resource. Your experiences and different perspectives are encouraged and add to a rich learning environment that fosters critical thought through respectful discussion and inclusion. The Department of Psychology would also like to acknowledge the traditional territories of the people of the Treaty 7 region in southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III.

Course Format

This is an in-person class held on campus.

Prerequisites

One of MATH 30-1, 30-2, 31, or MATH 2 (offered by Continuing Education); PSYC 200 and one of PSYC 201 or NEUR 201.

Required Text: Research Methods in Psychological Science (Freberg & Thomson; Top Hat Bundle)

We will be using Top Hat (www.tophat.com) to access the digital interactive textbook that we will be using in this class. For instructions on how to create a Top Hat account and enroll in our Top Hat course, please refer to the invitation sent to your school email address or consult Top Hat's Getting Started Guide (<https://bit.ly/31TGMlw>).

If you already have a Top Hat account, go to <https://app-ca.tophat.com/e/089032> to be taken directly to our course. If you are new to Top Hat, follow the link in the email invitation you received or...

- Go to <https://app.tophat.com/register/student>
- Click "Search by school" and input the name of our school
- Search for our course with the following join code: **089032**

Should you require assistance with Top Hat at any time please contact their Support Team directly by way of email (support@tophat.com), the in-app support button, or by calling 1-888-663-5491. Specific user information may be required by their technical support team when troubleshooting issues.

Assessment Methods

Course Outline Quiz & Midterm Check-In (1% of final grade)

After reading the course outline and attending the first class, students will have access to the 'Course Outline Quiz' on D2L (Assessments > Quizzes). The quiz is not timed and students can take this quiz an unlimited number of times before the due date (see table below).

Mid-way through the semester, students can complete the 'Midterm Check-In' via D2L (location/format TBA) for an automatic 0.5% towards the final grade (i.e., graded for thoughtful completion rather than correctness) as long as it is submitted by the due date listed below.

Assessment	Date	Format
Course Outline Quiz (0.5%)	Sept. 12 th , 11:59pm	Untimed, unlimited attempts quiz submitted via D2L
Midterm Check-In (0.5%)	Oct. 17 th , 11:59pm	Untimed, single-submission via D2L

Top Hat Questions (4% of final grade)

Each of the 18 content classes will have associated Top Hat questions that may be submitted anytime up until 11:59pm the day *after* the lecture (e.g., questions assigned for the lecture given on Tues. Sept. 5th may be submitted anytime before Wed. Sept. 6th at 11:59pm). You will have two attempts for each question and your 16 highest grades across the 18 question sets will count towards your final grade ($0.25\% \times 16 = 4\%$). As with the Course Outline Quiz and Midterm Check-In, the due dates for these Top Hat questions are final.

In-Class Tests (55% of final grade)

There will be three in-class tests during this course. Tests 1 and 2 will be non-cumulative insofar as they will be limited to material covered since the previous exam. However, many of the concepts in this course are inherently cumulative in that they assume knowledge and understanding of material introduced earlier. Test 3 will be cumulative with an emphasis on material since Test 2. Tests in this course are closed book. The use of resources, including class notes, the textbook, online resources, and calculators is prohibited during the exams in this course. Students may not communicate with others about course material or the exam either in person or electronically during exams. Please see 'Absence From Test/Exam' for information on what to do if you are unable to attend a test.

Assessment	Date	Format	Topics
Test 1 (20%)	Sept. 26 th	During class; multiple-choice	Modules 1-8 (see class schedule)
Test 2 (20%)	Oct. 24 th	During class; multiple-choice	Modules 9-13
Test 3 (15%*)	Nov. 28 th	During class; multiple-choice	All material from the course, with a focus on Modules 14 & 15
Makeup Test 3, if needed	Dec. 5 th	TBD (will be announced within 48 hours of Test 3)	All material from the course, with a focus on Modules 14 & 15

*Will increase if miss Test 1 and/or Test 2. See section titled 'Absence From Test/Exam' for more details.

Group Test Review: In the class following each test, students will, in small groups, complete the same test from the previous class again, submitting a single test for each group. For any student who wrote the original test AND whose group grade on the test is higher than their individual average, their final test score will be a weighted average of their individual score (90%) and their group score (10%). Any questions/concerns groups have about the test should be noted on the submitted group test for instructor review. In the week following, the instructor will hold a recorded zoom session to address all submitted questions/concerns. If a student is unable to attend the test review class, there will be opportunity to review the test at other times (see D2L for information on these additional review sessions), but not to complete the test in a group and receive the 90-10 individual-group weighted average.

Lab Assessments (40% of final grade)

There are ten lab assessments, outlined in the Lab Schedule below. Note that all assessments before term break are either assessed in lab or due before YOUR lab begins on the week indicated. The assessment due after term break is due on the same date and at the same time for all students. More information about each lab assessment will be provided in class and available on D2L.

Tentative Lab Schedule

Date	Topic/Activity	D2L Submission Deadlines
Week of Sep 5-8	NO LABS	
Week of Sep 11-15	Lab 1: Choosing a construct of interest, finding recent articles, reading academic articles. LA1 (1%) assessed in lab*	
Week of Sep 18-22	Lab 2: Writing a literature review, prosing a research question, and APA formatting. LA2 (1%) assessed in lab	
Week of Sep 25-29	Lab 3: Observational data collection exercise. LA3 (1%) assessed in lab	
Week of Oct 2-6	Lab 4: Creating survey questions in Qualtrics. LA4 (1%) assessed in lab	Lab Report, Pt I (based on Labs 1-2; 10%) due before lab
Week of Oct 10-13	NO LABS	
Week of Oct 16-20	Lab 5: Writing methods, results, and discussion sections; Time to complete (or review) survey. LA5 (1%) assessed in lab	
Week of Oct 23-27	NO LABS	
Week of Oct 30-Nov 3	Lab 6: Intro to SPSS; Creating new variables in SPSS. LA6 (1%) assessed in lab	Lab Report, Pt II (based on Lab 5; 8%) due before lab
Week of Nov 6-10	Lab 7: Generating descriptive statistics in SPSS. LA7 (1%) assessed in lab	
Week of Nov 12-18	NO LABS (Term break)	
Week of Nov 20-24	Last-minute lab report questions and/or grade queries from previous assignments (drop-in; first come, first served).	Final Lab Report (15%) due MONDAY Nov. 20th, 11:59pm
Week of Nov 27-Dec 1	NO LABS	
Week of Dec 4-6	NO LABS	

* In case of a missed in-lab assessment students will have the opportunity to submit a makeup worksheet by the start of the following lab.

Extensions & Late Penalties: In this course, all assessment dates have been carefully set to space out the work evenly throughout the semester and, when applicable, to ensure that you receive your grades/feedback in time for it to be useful in future related assessments. Thus, it is in your best interest to plan to a) attend labs and b) aim to complete take-home assessments before the due dates indicated in the above table. However, I understand that sometimes life events (e.g., technological issues, pet-/child-/family-care, mental/physical illness) can pose challenges to meeting academic deadlines. **Thus, in case of a missed in-lab assessment students will have the opportunity to submit a makeup worksheet by the start of the following lab. In addition, all D2L submissions in this course come with a built-in, automatic 1-week extension period. At the end of these extension periods, assessments worth 1% or less will no longer be accepted. For assessments worth more than 1%, submissions will be accepted for an additional week after the end of the extension period, but penalized 5% per day elapsed after the extended deadline, including weekends/holidays.** See table below for due dates, extension periods, and, when different from the extension deadline, final submission deadlines for all D2L submissions. For all assessments in the course, if no submission is received by the last day to submit, you will receive a grade of zero for that assessment.

D2L Submission	Due Date	End of penalty-free extension period	Last day to submit with penalty (-5%/day after end of extension period)
Course Outline Quiz (0.5%)	Sept. 12 th , 11:59 pm	Sept. 19 th , 11:59pm	n/a
Lab Report, Pt I (10%)	Before start of lab in week of Oct. 2-6	Before start of lab in week of Oct. 9-13	Before start of lab in week of Oct. 16-20
Midterm Check-In (0.5%)	Oct. 17 th , 11:59pm	Oct. 24 th , 11:59pm	n/a
Lab Report, Pt II (8%)	Before start of lab in week of Oct. 30-Nov. 3	Before start of lab in week of Nov. 6-10	Before start of lab in week of Nov. 13-17
Final Lab Report (15%)	MONDAY Nov. 20 th , 11:59pm	MONDAY Nov. 27 th , 11:59pm	MONDAY Dec. 4 th , 11:59pm

Unless explicitly invited by the instructor or TA, email submissions will not be graded. Additionally, email requests for extensions will not be answered – except for instances in which a student includes a) their letter from Student Accessibility Services (SAS) listing extensions as an required accommodation (see section on ‘Academic Accommodations’ for more details) and b) a suggestion for a new deadline. In the event of an unforeseen, acute, and serious illness/injury/other event that you believe warrants special consideration, please book a meeting with the instructor using the link provided at the top of this document. Note that the instructor is not able to grant any extensions past the end of the semester and may not accept any late work beyond 5 days of the end of the semester.

Once approved by the course instructor, and at their discretion, alternative arrangements for missed assessments may be considered <https://www.ucalgary.ca/pubs/calendar/current/g-1-2.html>. Students may be asked for documentation <https://www.ucalgary.ca/pubs/calendar/current/m-1.html>.

Tentative Class Schedule

Date	Topic/Activity
T Sep 5	Course intro; M1: What is Science
R Sep 7	M2: The Scientific Enterprise; M3: Communicating Science
T Sep 12	M4: Conducting Ethical Research Course Outline Quiz Due (0.5%)
R Sep 14	M5: Research Fundamentals; M6: Measurement <i>Last day to drop a class without financial penalty</i>
F Sep 15	<i>Last day to add or swap a course</i>
T Sep 19	M7: Observation
R Sep 21	M8: Surveys
F Sep 22	<i>Fee payment deadline for Fall Term full and half courses.</i>
T Sep 26	Test 1 (M1-8; 20%)
R Sep 28	Group Test Review for Test 1
S Sep 30	<i>UNIVERSITY CLOSED National Day for Truth and Reconciliation</i>
T Oct 3	M9: Independent Groups
R Oct 5	M9: Independent Groups, cont.
M Oct 9	<i>UNIVERSITY CLOSED Thanksgiving Day</i>
T Oct 10	M10: Repeated Measures
R Oct 12	M11: Complex Experimental Designs
T Oct 17	M12: Qualitative Methods Midterm Check-In Due (0.5%)
R Oct 19	M13: Single-case Designs, Quasi-experiments, and Program Evaluation
T Oct 24	Test 2 (M9-13; 20%)
R Oct 26	Group Test Review for Test 2
T Oct 31	M14: Descriptive Statistics
R Nov 2	M14: Descriptive Statistics, cont.
T Nov 7	M14: Descriptive Statistics, cont.
R Nov 9	M15: Inferential Statistics
S Nov 11	<i>UNIVERSITY CLOSED Remembrance Day (Observed Monday Nov 13).</i>
Nov 12-18	<i>Term Break No Classes</i>
T Nov 21	M15: Inferential Statistics, cont.
R Nov 23	M15: Inferential Statistics, cont.
T Nov 28	Test 3 (Cumulative; 15%)
R Nov 30	Group Test Review for Test 3
T Dec 5	Makeup Test 3, if needed <i>Fall Term Lectures End.</i>
W Dec 6	<i>Last day to withdraw with permission from Fall Term half courses.</i>
Dec 9-20	<i>Fall Final Exam Period</i>

University of Calgary Academic Integrity Policy

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity.

Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional code of conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. It is your responsibility to ensure that you have read and are familiar with the student academic misconduct policy:

<https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Academic-Misconduct-Policy.pdf>.

Department of Psychology Criteria for Letter Grades

Psychology course instructors use the following criteria when assigning letter grades:

A+ grade: *Exceptional Performance*. An A+ grade indicates near perfect performance on multiple choice and short answer exams. For research papers/essays/course projects/presentations, an A+ grade is awarded for exceptional work deserving of special recognition and is therefore not a common grade.

A, A- Range: *Excellent Performance*. Superior understanding of course material. Written work is very strong in terms of critical and original thinking, content, organization, and the expression of ideas, and demonstrates student's thorough knowledge of subject matter.

B Range: *Good Performance*. Above average understanding of course material. Written work shows evidence of critical thinking and attention to organization and editing but could be improved in form and/or content.

C Range: *Satisfactory Performance*. Adequate understanding of course material. Knowledge of basic concepts and terminology is demonstrated. Written work is satisfactory and meets essential requirements but could be improved significantly in form and content. Note: All prerequisites for courses offered by the Faculty of Arts must be met with a minimum grade of C-.

D range: *Marginally meets standards*. Minimal understanding of subject matter. Written work is marginally acceptable and meets basic requirements but requires substantial improvements in form and content. Student has not mastered course material at a level sufficient for advancement into more senior courses in the same or related subjects.

F grade: *Course standards not met*. Inadequate understanding of subject matter. Written work does not meet basic requirements. Student has not demonstrated knowledge of course material at a level sufficient for course credit.

Grading Scale

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

It is at the instructor's discretion to round off either upward or downward to determine a final grade when the average of term work and final examinations is between two letter grades. To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (e.g., 89.5% will be rounded up to 90% = A but 89.4% will be rounded down to 89% = A-).

Course Credits for Research Participation (Max 2% bonus toward final grade)

Students in most psychology courses are eligible to participate in Departmentally approved research and earn credits toward their final grades. **A maximum of two credits (2%) per course, including this course, may be applied to the student's final grade. Students earn 0.5% (0.5 credits) for each full 30 minutes of participation.** The demand for timeslots may exceed the supply in a given term. Thus, students are not guaranteed that there will be enough studies available to them to meet their credit requirements. Students should seek studies early in the term and should frequently check for open timeslots. Students can create an account and participate in Departmentally approved research studies at <http://ucalgary.sona-systems.com>. The last day to participate in studies and to assign or reassign earned credits to courses is **Dec 9, 2023**.

Seating During Tests/Exams

Instructors and exam invigilators are free to ask students to move seats before a test/exam begins or even during a test/exam. Students must comply with this request and refusal to do so may warrant a charge of academic misconduct.

Absence From Test/Exam

In this course, students do not require permission from the instructor to miss a test. Emails to the instructor asking for permission to miss a test will not be answered; rather, the following protocol will automatically activate:

- In the case of missed Test 1 and/or 2, there will NOT be an opportunity to make up the test; instead the final (cumulative) test will be re-weighted to account for the missing test(s).
- In the case of a missed final test (Test 3), students will write a makeup up test in the last class (see course schedule). This makeup final, like the original, will be cumulative, but may or may not be administered in the same format. Details for the format of this makeup final will be posted within 48 hours after the original sitting of the test.
- In the case of a missed makeup final test, students must submit a request for a deferral of term work form (https://www.ucalgary.ca/sites/default/files/teams/14/deferral-of-term-work_weighting.pdf) with section 1 completed. Once the form is received by the instructor, information about a date for a deferred makeup test will be sent within 48 hours; however, students should be aware that this deferred makeup test may not be scheduled until the beginning of the following semester, thus delaying finalizing of their final grade in the course.

Reappraisal of Graded Term Work <http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

Reappraisal of Final Grade <http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

Academic Accommodations

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/. Students who require an accommodation in relation to their coursework

based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>.

Academic Misconduct

For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>

Instructor Intellectual Property

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments, and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed, or copied without the explicit consent of the professor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright

(https://library.ucalgary.ca/services/copyright?_gl=1*bcjlpn*_ga*OTY1ODc0Njg0LjE2NjkxNTA1NTM.*_ga_X4GN9Y4W7D*MTY3Nzc5MjM3Ni4xNy4xLjE2Nzc3OTI4MDYuMC4wLjA) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Freedom of Information and Protection of Privacy

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary

Student Support and Resources

<https://www.ucalgary.ca/registrar/registration/course-outlines>

Important Dates

The last day to drop this course with no "W" notation and **still receive a tuition fee refund** is **Thursday, September 14th, 2023**. Last day add/swap a course is **Friday, September 15th, 2023**. The last day to withdraw from this course is **Wednesday, December 6th, 2023**.