



PSYCHOLOGY 300A – Section A01
Statistical Methods in Psychology I
Fall (Sept. - Dec.) 2021 : CRN 12823

Time: MWTh 2:30 pm – 3:20 pm	Room: David Strong Building (DSB) C103
Instructor: David Medler Email: dmedler@uvic.ca Office: COR A270 Office Hours: Tuesday 1:00 - 2:00 Friday 11:00 - 12:00	Teaching Assistant: Josh Palmer; COR B327 Email: jmpalmer@uvic.ca Teaching Assistant: Michaela Trites; COR B329 Email: mtrites@uvic.ca Office Hours: By Appointment

COURSE DESCRIPTION AND OBJECTIVES

To provide a conceptual and practical understanding of descriptive and inferential statistical analysis as applied to experimental research in Psychology. Because I believe that learning and teaching is a bi-directional process between student and instructor, I anticipate that we will both prepare for each class.

REQUIRED TEXTBOOK

There is no required textbook for this class. I will make all slides available prior to lectures. Over the years, I have found that students do just as well from studying from the lecture slides as they do from additional notes. That being stated, you may find old versions of 300A CoursePacks available (which are fine to use, but some information has changed), and I am working on a new e-pub that will be released as it is completed (hopefully).

PREREQUISITES AND REGISTRATION

The prerequisites for Ψ300A include:

1. PSYC 201 and the Academic Writing Requirement (AWR) fulfilled.
2. It is *highly recommended* that you have completed the degree MATH requirement, or that you have Math 12 (Pre-Calculus) or its equivalent (e.g. Math 120 at UVic) *before attempting this course*.

TOPICS COVERED

Visual & numerical description of univariate & bivariate data, including correlation and regression; probability theory as it relates to inferential analysis; hypothesis testing; application of z-test and t-tests to single sample designs; communication of statistical findings.

GENERAL FORMAT

Course material will be presented in 4 sections through (potential) e-pub readings, lectures, quizzes, graded labs, and homework assignments. Please try to keep up with each topic.

BRIGHTSPACE

All course material, including detailed lecture notes, is available through BrightSpace, which you can access by logging in through MyPage or directly through bright.uvic.ca. This site will have all course lecture material with the accompanying overheads that are presented in class, as well as the recorded lectures. It will also have blank copies of homework assignments and their respective answer keys. Most files are in pdf format.

IMPORTANT UVIC DATES

Date	Event
Sept. 21, 2021	Last day for 100% reduction of tuition fees for standard first term and full year courses
Sept. 24, 2021	Last day for adding courses that begin in the first term
Oct 12, 2021	Last day for 50% reduction of tuition fees for standard courses
Oct 31, 2021	Last day for withdrawing from first term courses without penalty of failure

COURSE EVALUATION

Comprehension of course material will be assessed through:

- (a) performance on 3 midterm exams (worth 15% each , 45% total)
- (b) performance on a cumulative final exam (worth 30%)
- (c) Labs (worth 10%)
- (d) online BrightSpace quizzes (worth 10%)
- (e) Homework (worth 5%)
- (f) In-class participation via iClickers (worth up to 3% in bonus marks)

GRADING (% OF TOTAL MARKS)

Your final grade will be a straight percentage rounded at the 0.5% level to provide a whole number for your grade (e.g., 84.50 will be rounded to 85; 84.49 will be rounded to 84)

****A minimum grade of fifty-percent (50%) is required to continue on to Ψ300B.**

NOTE: All deadlines & grades submitted for exams & class exercises are final. There are **no** make-up labs, **no** exam alternatives, **no** bonus or extra assignments that you can do *post hoc* to alter your grades. The time to invest in achieving the best possible grade is during the course, not afterward.

EXAMS: There are a total of three midterm exams, each worth 15%, and one cumulative final exam worth 30%. All exams will be written online and will be timed; to reduce load on the BrightSpace servers, you will be given a window of time in which to start your exam, including the scheduled course time. All grades will be posted on BrightSpace following each exam. It is your responsibility to check this posting to ensure the grade is correct. The final exam will be scheduled during the December formal exam period.

Dates of Exams:

- Exam 1: Oct 4 (Monday)
- Exam 2: Oct 25 (Monday)
- Exam 3: Nov 15 (Monday)* NB: ***This is the Monday after Reading Break***
- Exam 4: T.B.A. (During Formal Final Exam Period)

Exam Format: Short answer and computational with emphasis on conceptual mastery of statistical material. Each exam will cover material from the text, class lectures, labs, and relevant homework assignments.

Policy on missed midterms: (Please read as this is important!)

You are responsible for attending midterms as scheduled. If you miss a midterm due to illness, accident, or family affliction, you must send me an email as soon as possible indicating that you have missed the midterm, and the reason for it. For the 2021 Fall term, students are not required to provide documentation to support their request for academic concession (e.g. medical notes), but it is appreciated. A make-up midterm will be scheduled to be completed within 7 days of the missed midterm. If the make-up midterm is not completed within that timeframe, a score of 0 will be assigned to the midterm, unless there are exceptional circumstances.

Students who miss two midterms will receive a grade of “N” in the course as they will be deemed to have missed too much of the course material to have met course completion requirements.

Final Exam: If you are unable to attend the final exam you must apply to Records Services for a “Request for Academic Concession”, typically within 10 working days of the exam date. If an academic concession is granted for the final exam, an alternative date to write the make up exam **MUST** be arranged with the instructor. **Any student who does not take the final exam will receive an “N” in this course.** Link for RAC – <https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php>

ACADEMIC INTEGRITY

With the move to the online environment last year, there was a large increase in academic integrity violations, including in PSYC 300A/B. **I have a zero tolerance policy towards academic integrity violations.** I reserve the right to use cheating detection software or other platforms to assess the integrity of student work. **Do not cheat in this class!**

APPLICATIONS OF COURSE MATERIAL

Homework Assignments: You will be given 11 graded homework assignments worth a total of 5% of your final grade. The homework will provide you with opportunities to test your mastery of the material as well as to introduce you to *R* and/or *JASP*. There is simply NO substitute for wrestling a statistics problem to the ground yourself in order to understand the material. You will be required to enter your answers to the homework questions on BrightSpace. Answer keys will be provided once the homework closes. Please pay attention to closing dates and times, especially around exams. The lowest two homework grades will be dropped.

Labs: To further facilitate your integration of the course material, you will participate in GRADED lab exercises worth 10% of your final grade. There will be a total of 9 labs (7 regular labs and 2 *R/JASP* labs), with the lowest regular lab mark and lowest computer lab mark being dropped. Further information is provided in the Lab Document provided on BrightSpace. Please note, ***Labs are mandatory, and you must attend them.*** You must get a passing grade (minimum 50% average) on the labs, or you will receive an “N”, in the course. As we drop the two lowest labs, there are no make-up labs, etc.

iClicker Responses: In order to assess concept attainment in class, iClickers will be used during the lectures. You will be graded on your correct responses. Each correct iClicker response will be worth 0.1% of your total grade, to a maximum of 3%. It is expected that there will be approximately 40+ iClicker questions distributed throughout the term, which means that you should bring your iClicker to every class. As only the top 30 iClicker points count towards your final mark, there are no make-up questions, etc.

STUDY GROUPS?

Working together in groups of 2 to 4 people on a regular basis (not just the day before the exam!) is helpful for some people. It is perfectly acceptable for a study group to come for assistance “en masse” during pre-arranged office hours.

COMPUTER SOFTWARE FOR STATISTICAL ANALYSIS (*R* / *JASP*)

Some homework assignments require the use of computers. We will be using *R* and/or *JASP* for this class; please bear with me this term as I am slowly integrating *R* and *JASP* into the class after using SPSS for many years — there will likely be some bumps along the way. The advantage of *R* / *JASP* is that they are free, and can easily be installed on a home computer/laptop.

GENERAL STATEMENT OF BEHAVIOURAL EXPECTATIONS

The University of Victoria is committed to promoting, providing & protecting a positive, supportive, and safe learning and working environment for all its members and so am I. If you have any concerns regarding the activities that are intrinsic to Psyc 300A, please see me in the first week of the term.

Respect for Diversity: It is my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socio-economic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

STATEMENT OF COPYRIGHT NOTICE

All lecture notes and course materials provided to you including all exams and quizzes are my intellectual property, and are made available to students for instructional purposes only. You do not have my permission to distribute my lecture notes or any exams or quizzes from the course,. Such distribution, through note-sharing sites or other means, violates the Policy on Academic Integrity.

TENTATIVE SCHEDULE: PSYC 300A (A01)

Week	Date	Topic	Lab
PART 1 — UNIVARIATE DESCRIPTION			
1	08-Sep Wed	Course Introduction	No Lab
	09-Sep Thurs	Lecture 1: Scales of Measurement	
2	13-Sep Mon	Lecture 1: Scales of Measurement	Orientation / Scales of Measurement
	15-Sep Wed	Lecture 2: Frequency Distributions	
	16-Sep Thurs	Lecture 2: Frequency Distributions	
3	20-Sep Mon	Lecture 2: Frequency Distributions	Frequency Distributions
	22-Sep Wed	Lecture 3: Central Tendency & Variability	
	23-Sep Thurs	Lecture 3: Central Tendency & Variability	
4	27-Sep Mon	Lecture 3: Central Tendency & Variability	No Formal Lab
	29-Sep Wed	Review / Catch-Up	
	30-Sep Thurs	National Day for Truth and Reconciliation - No Class	
5	04-Oct Mon	Exam 1 : Lectures 1 - 3, plus labs and homework	R / JASP Basics
PART 2 — BIVARIATE DESCRIPTION			
	06-Oct Wed	Lecture 4: Correlation	
	07-Oct Thurs	Lecture 4: Correlation	
6	11-Oct Mon	No Class	Correlation
	13-Oct Wed	Lecture 4: Correlation	
	14-Oct Thurs	Lecture 5: Regression	
7	18-Oct Mon	Lecture 5: Regression	Regression
	20-Oct Wed	Lecture 5: Regression	
	21-Oct Thurs	Review / Catch-Up	
8	25-Oct Mon	Exam 2 : Lectures 4 - 5, plus labs and homework	R / JASP Basics
PART 3 — PROBABILITY AND INFERENCE ANALYSIS			
	27-Oct Wed	Lecture 6: Empirical Distributions	
	28-Oct Thurs	Lecture 6: Empirical Distributions	
9	01-Nov Mon	Lecture 7: Probabilities	Distributions
	03-Nov Wed	Lecture 7: Probabilities	
	04-Nov Thurs	Lecture 8: Hypothesis Testing	
10	08-Nov Mon	Lecture 8: Hypothesis Testing	No Formal Lab
	10/11-Nov Wed/Thur	Reading Week — No Classes	
11	15-Nov Mon	Exam 3 : Lectures 6 - 8, plus labs and homework	No Lab
PART 4 — INFERENCE ANALYSIS WITH GROUP DATA			
	17-Nov Wed	Lecture 9: Sampling Distribution of the Mean	
	18-Nov Thurs	Lecture 9: Sampling Distribution of the Mean	
12	22-Nov Mon	Lecture 10: Single Sample Hypothesis Testing: z-test	Error Detection
	24-Nov Wed	Lecture 10: Single Sample Hypothesis Testing: z-test	
	25-Nov Thurs	Lecture 10: Single Sample Hypothesis Testing: z-test	
13	29-Nov Mon	Lecture 11: Single Sample Hypothesis Testing: t-test	Hypothesis Testing - z-test
	01-Dec Wed	Lecture 11: Single Sample Hypothesis Testing: t-test	
	02-Dec Thurs	Lecture 11: Single Sample Hypothesis Testing: t-test	
14	06-Dec Mon	Review/Catch-Up	
	TBA	FINAL EXAM : Cumulative with heavier emphasis on Lectures 9 - 11	

UNIVERSITY OF VICTORIA
Department of Psychology

Important Course Policy Information
Fall 2021

Prerequisites

Students who remain in courses for which they do not have the prerequisites do so at their own risk. Students who complete courses without prerequisites ARE NOT exempt from having to complete the prerequisite course(s) if such courses are required for the degree program.

Program Requirements

For more information see the UVic Calendar September 2021.

Registration Status

Students are responsible for verifying their registration status. Registration status may be verified using My Page, View Schedule. Course adds and drops will not be processed after the deadlines set out in the current UVic Calendar.

Commitment to Inclusivity and Diversity

The University of Victoria is committed to promoting, providing and protecting a positive and supportive and safe learning and working environment for all its members.

In the Event of Illness, Accident or Family Affliction

• ***What to do if you miss the final exam scheduled during the formal exam period***

Apply at Records Services for a "Request for Academic Concession", normally within 10 working days of the date of the exam. Records Services will forward the form to the instructor. If the concession is granted, the instructor will determine how to deal with the situation (for example, a deferred exam). Where a concession is not applied for or where such application is denied, an N grade will be entered on the student's academic record.

OR, you can download the Request for Academic Concession form here:

<http://www.uvic.ca/registrar/assets/docs/record-forms/rac.pdf>

• ***What to do if you miss an exam other than one scheduled during the formal exam period***

Do not apply at Records Services for a "Request for Academic Concession". Instead submit documentation of the illness, accident or family affliction directly to your course instructor (or designated teaching assistant).

• ***What to do if you require additional time to complete course requirements***

Apply at Records Services for a "Request for Academic Concession", normally within 10 working days of the end of the course. Records Services will forward the form to the instructor. If the concession is granted, the instructor will determine how to deal with the situation (for example, a deferred exam). Where a concession is not applied for or where such application is denied, an N grade will be entered on the student's academic record.

OR, you can download the Request for Academic Concession form here:

<http://www.uvic.ca/registrar/assets/docs/record-forms/rac.pdf>

Policy on Academic Integrity including Plagiarism and Cheating

The Department of Psychology fully endorses and intends to enforce rigorously the Senate Policy on Academic integrity

https://www.uvic.ca/calendar/future/undergrad/#/policy/Sk_0xsM_V?bc=true&bcCurrent=08%20-%20Policy%20on%20Academic%20Integrity&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies. It is of utmost importance that students who do their work honestly be protected from those who do not. Because this policy is in place to ensure that students carry out and benefit from the learning activities assigned in each course, it is expected that students will cooperate in its implementation.

The offences defined by the policy can be summarized briefly as follows:

1. **Plagiarism.** You must make sure that the work you submit is your work and not someone else's. There are proper procedures for citing the works of others. The student is responsible for being aware of and using these procedures.
2. **Unauthorized Use of an Editor.** The use of an editor is prohibited unless the instructor grants explicit written authorization.
3. **Multiple Submission.** Only under exceptional circumstances may a work submitted to fulfill an academic requirement be used to satisfy another similar requirement. The student is responsible for clarifying this with the instructor(s) involved.
4. **Falsifying Materials Subject to Academic Evaluation.** This includes falsification of data, use of commercially prepared essays, using information from the Internet without proper citation, citing sources from which material is not actually obtained, etc.
5. **Cheating on Assignments, Tests, and Examinations.** You may not copy the work of others in or out of class; you may not give your work to others for the purpose of copying; you may not use unauthorized material or equipment during examinations or tests; and you may not impersonate or allow yourself to be impersonated by another at an examination. The Department of Psychology has a policy of not making old examinations available for study purposes. Therefore, use of old exams without the express written permission of the instructor constitutes cheating by the user, and abetting of cheating by the person who provided the exam.
6. **Aiding Others to Cheat.** It is a violation to help others or attempt to help others to engage in any of the conduct described above.

Instructors are expected to make every effort to prevent cheating and plagiarism. This may include the assignment of seating for examinations, asking students to move during examinations, requests to see student identification cards, and other measures as appropriate. Instructors also have available to them a variety of tools and procedures to check for Internet and electronic media-based cheating. In instances of suspected or actual plagiarism or cheating, instructors, following prescribed procedures, are authorized to take steps consistent with the degree of the offence. These measures will range from a zero on the test or assignment or a failing grade for the course, probation within a program to temporary or even permanent suspension from the University.

Rights of Appeal are described in the Policy on Academic Integrity in the University calendar September 2021.

The definitive source for information on Academic Integrity is the University Calendar

Other useful resources on Plagiarism and Cheating include:

1. The Ombudsperson's office: <https://uvicombudsperson.ca/tips/plagiarism/>
The [Office of the Ombudsperson](#) is an independent and impartial resource to assist with the fair resolution of student issues. A confidential consultation can help you understand your rights and responsibilities. The Ombudsperson can also clarify information, help navigate procedures, assist with problem-solving, facilitate communication, provide feedback on an appeal, investigate and make recommendations. Phone: 250-721-8357; Email: ombuddy@uvic.ca; Web: uvicombudsperson.ca.
2. UVic Library Resources: <http://www.uvic.ca/library/research/citation/plagiarism/>
3. https://www.uvic.ca/library/research/citation/documents/avoiding%20plagiarism%20guideUpdate_Sept_2013.pdf

BE WELL



A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

Social Life, Friends, & Community at UVic:

Having a social network is an extremely important foundation for positive mental health. There are lots of benefits to joining clubs, course unions, intramurals and teams on campus.

<https://www.uvic.ca/mentalhealth/undergraduate/connecting/index.php>

Counselling Services:

Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students. www.uvic.ca/services/counselling/

Health Services:

University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives.

www.uvic.ca/services/health/

Centre for Accessible Learning:

The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations www.uvic.ca/services/cal/. The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

Elders' Voices:

The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.

www.uvic.ca/services/indigenous/students/programming/elders/

Mental Health Supports and Services:

Mental health supports and services are available to students from all areas of the UVic community: www.uvic.ca/mentalhealth/undergraduate/

Sexualized Violence Prevention and Response at UVic

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR, Sedgewick C119

Phone: 250.721.8021

Email: svpcoordinator@uvic.ca

Web: www.uvic.ca/svp