

**PSYCHOLOGY 400A**  
**Advanced Statistical Methods**  
**Fall (Sept. - Dec. ) 2022 : CRN 13608**

**Time:** MR 8:30 am – 9:50 am

**Room:** Clearihue A326

**Instructor:** David Medler

**Teaching Assistant:** Andrew Switzer

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**Office:** COR A270

**Office Hours:** By Appointment

**Office Hours:**

**COURSE DESCRIPTION AND OBJECTIVES**

An introduction to advanced research designs and their underlying rationale. Extensive treatments are applied to the use of the general linear model. This class will be more of an exploration of statistics as opposed to formula memorization. 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, as well as readings. I want this class to be an exploration of statistics and what it means to actually conduct statistics. Therefore, we will be reading some original papers to see what was actually meant (and perhaps compare that to recent interpretations).

**TECHNOLOGY REQUIREMENT**

If possible, **it would be good to bring a laptop to class** as we will be analyzing data. I will be using *R* and Microsoft Excel in the class. All of these programs are free (as a UVic student you have access to Excel for free). This is not necessary, however. But... at the very least, you should have a calculator.

**PREREQUISITES AND REGISTRATION**

The prerequisites for !400A include:

1. A minimum grade of 80% in both PSYC 300A and PSYC 300B.
2. Concurrent registration in PSYC 499.

**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  $F$ -test and  $t$ -tests to single sample designs; communication of statistical findings. Examines designs having multiple independent variables and a single dependent variable. Topics covered include correlation, multiple regression, analysis of variance and Sampling.

**GENERAL FORMAT**

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

**BRIGHTSPACE )**

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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)

**NOTE:** All deadlines & grades submitted for exams & class exercises are final. There are **no** make-up labs, **no** make-up exams, **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.

## **COURSE EVALUATION**

Comprehension of course material will be assessed through:

- (a) Performance on 2 exams (one worth 25%, one worth 15%; 40% total)
- (b) Article Critique (15%)
- (c) Final Project (worth 20%)
- (d) Group Discussions on BrightSpace (worth 10%)
- (e) In Class/Take-home R Labs (worth 15%)

Students who have completed the following required course elements will be considered to have completed the course:

- Both Exams (worth 40%)
- Final Project (worth 20%)

Failure to complete one or more of these elements will result in a grade of “N” regardless of the



**UNIVERSITY OF VICTORIA**  
Department of Psychology  
Important Course Policy Information  
Winter Session 2022

**Accessible Learning**

The University of Victoria is committed to creating a learning experience that is as accessible as possible. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me. If requirement set by the instructor for lectures, lab3.4 (u)1e.1 (e)TJ0 Tc 0 T7 (u)1e.1 TJ0 Tc 0 Tw 23.566 0 Td( )Tj-0.004 Tc 0.004 Tw 0.2

## Copyright

All course content and materials are made available by instructors for educational purposes and for the exclusive use of students registered in their class<sup>1</sup>. The material is protected under copyright law, even if not marked with ©. Any further use or distribution of materials to others requires the written permission of the instructor, except under fair dealing or another exception in the Copyright Act. Violations may result in disciplinary action under the [Resolution of Non-Academic Misconduct Allegations policy \(AC1300\)](#) or the [Academic Integrity Policy](#), whichever is more appropriate for the situation.

## Course Experience Survey (CES)

I value your feedback on this course. Toward the end of term, you will have the opportunity to complete a confidential course experience survey (CES) regarding your learning experience. The survey is vital to providing feedback to the instructor regarding the course and their teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey, you will receive an email inviting you to do so. If you do not receive an email invitation, you can go directly to

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## 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](#). 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

**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](#).

**Registration Status**

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# 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/](http://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/](http://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/](http://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/](http://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/](http://www.uvic.ca/mentalhealth/undergraduate/)