PSYCHOLOGY 300A – Section A05
Statistical Methods in Psychology I
Fall (Sept. - Dec.) 2018 : CRN 14017

Time: TWF 1:30 pm – 2:20 pm
Room: COR B143

Instructor: David Medler
Office: COR A277
Office Hours: By Appointment
Phone: 250-721-6108 (email is preferable)
Email: dmedler@uvic.ca

Teaching Assistant: Tom Ferguson
Office: COR A051
Office Hours: By Appointment
Phone: (email is preferable)
Email: tomferg@uvic.ca

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. To maximize this process, text material and topic objectives have been established for each class session.

REQUIRED TEXT: Psyc 300A CoursePack available in electronic version on the CourseSpaces site. Previous editions can be used, but some information has changed.


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.

NOTE regarding registration. Registered students who do not attend at least one class during the first two scheduled class sessions may be dropped from the class (if you do not intend to complete the course, it is your responsibility to ensure you have dropped the class). Priority for waitlisted students will be given to those students who have met all course pre-requisites and attended the first two class sessions. Students are responsible for checking their registration status before the end of the course change period (Friday, Sept. 21, 2018). Students will not be added to the course after this time.

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 text readings, lectures, hand outs, graded in-class group activities, and ungraded homework assignments. At the start of each new section, a Class Prep outline is distributed that details the related text readings for each day and the material you are expected to review prior to class lectures and in-class exercises. Answer keys for exercises & homework are available through CourseSpaces.

CourseSpaces
All course material, including detailed lecture notes, is available through CourseSpaces, which you can access by logging in through U-Source. This site will have all course lecture material with the accompanying overheads that are presented in class. It will also have blank copies of class exercises and homework assignments and their respective answer keys. Most files are in pdf format.
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) graded in-class assignments (worth 5%)
(d) online CourseSpaces quizzes (worth 10%)
(e) In-class participation via iClicker (worth 5%)
(f) Homework (worth 5%)

GRADING (% of total marks)

Effective May 1, 2014, the letter grading system previously used at UVic was discontinued. Your final grade will be a straight percentage. Your final grade will be rounded at the 0.5% level (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 assignments, 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.

EXAMS: There are a total of three midterm exams, each worth 15%, and one cumulative final exam worth 30%. Midterm exams will be 45 minutes each (written on Tuesdays or Friday). All grades will be posted on CourseSpaces following each exam. It is your responsibility to check this posting to be sure the grade is correct. The final exam will be scheduled during the formal exam period in December.

Dates of Exams:  
Exam 1: Oct 2 (Tuesday)  
Exam 2: Oct 23 (Tuesday)  
Exam 3: Nov 16 (Friday)  
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, class exercises and relevant homework assignments.

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

Exams: You are responsible for attending exams as scheduled. NO make-up exams will be given. If you miss an exam due to illness, accident, or family affiliation, you must send me an email as soon as possible indicating that you have missed the exam, and the reason for it. You must then supply written support for your absence (e.g., doctor’s note) within 10 days of missing the exam.

In the case of illness, documentation should be dated within two days of the missed exam, or earlier indicating that you are likely ill for a couple of days, including the date of the exam. If you are too sick to attend the midterm, then you should see a doctor that day! Except in extreme circumstances (e.g., life-threatening illness) Medical Documentation dated more than two days after the exam date WILL NOT BE ACCEPTED.

If your documentation is accepted for the missing midterm, then a grade for that midterm will be generated by weighting your grades from the remaining exams. Students who miss two exams 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. The final, unlike the other three exams, will not be extrapolated and MUST be taken.

Link for RAC – https://www.uvic.ca/registrar/students/policies/appeals/rac-request.php
APPLICATION OF COURSE MATERIAL

Homework Assignments: You will be given approximately 12 graded homework assignments (as well as ungraded homework) 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. 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 CourseSpaces. Once you have entered your answers, answer keys will be provided. The lowest two homework grades will be dropped.

Class Exercises: To further facilitate your integration of the course material, you participate in GRADED class exercises. You will be assigned to groups with 5-6 members, and you will work together to complete these exercises over the term. Each group member is expected to contribute equally to the final product. If a person has concerns regarding the contribution of one or more members of the group she or he should speak to Dr. Medler; it is possible to request re-assignment to a different group. You are expected to be prepared for the class exercises. Each assigned exercise is worth equal points. Your worst exercise will automatically be dropped when computing the contribution of exercises to your final grade.

Note: If you miss a class exercise, there are NO “make-up” exercises, nor are there opportunities to complete an exercise on your own for a grade.

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 5%. It is expected that there will be approximately 60+ iClicker questions distributed throughout the term, which means that you should bring your iClicker to every class. As only the top 50 iClicker points count towards your final mark, there are no make-up questions, etc.

MISSED A CLASS?
Get notes from a classmate; lectures typically cover some, but not all, of the material in the CoursePack. Most material distributed in class (e.g., assignments, exercises) is also available on CourseSpaces.

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 PROGRAM FOR STATISTICAL ANALYSIS (R)
Some homework assignments require the use of computers. We will be using R for this class; please bear with me this term as I am adopting R in this class for the first time — there will likely be some bumps along the way. For those students who would like to learn how to program in R, it is anticipated that we will be offering some tutorial sessions dedicated to R. The majority of our computerized data analysis, however, will be conducted through a dedicated website for PSYC 300A which can be accessed via a standard web browser. It is essential that you gain some level of familiarity and comfort in using this computer software in 300A.

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.
**TENTATIVE SCHEDULE: PSYC 300A (A02)**

Refer to CourseSpaces site for updated information

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>05-Sep</td>
<td>Wednesday Course Introduction</td>
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<tr>
<td></td>
<td>07-Sep</td>
<td>Friday Lecture 1: Scales of Measurement</td>
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<td>2</td>
<td>11-Sep</td>
<td>Tuesday Lecture 1: Scales of Measurement</td>
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<td></td>
<td>12-Sep</td>
<td>Wednesday Lecture 2: Frequency Distributions</td>
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<td></td>
<td>14-Sep</td>
<td>Friday Lecture 2: Frequency Distributions</td>
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<td>3</td>
<td>18-Sep</td>
<td>Tuesday Class Exercise #1</td>
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<td></td>
<td>19-Sep</td>
<td>Wednesday Lecture 3: Measures of Central Tendency</td>
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<td></td>
<td>21-Sep</td>
<td>Friday Lecture 3: Measures of Central Tendency</td>
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<td>4</td>
<td>25-Sep</td>
<td>Tuesday Lecture 4: Measures of Variability</td>
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<td></td>
<td>26-Sep</td>
<td>Wednesday Lecture 4: Measures of Variability</td>
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<td>28-Sep</td>
<td>Friday Class Exercise #2</td>
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<tr>
<td>5</td>
<td>02-Oct</td>
<td>Tuesday Exam #1 over Lectures 1 - 4 plus assignments and homework</td>
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**PART 2 — BIVARIATE DESCRIPTION**

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>6</td>
<td>03-Oct</td>
<td>Wednesday Lecture 5: Correlation</td>
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<tr>
<td></td>
<td>05-Oct</td>
<td>Friday Lecture 5: Correlation</td>
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<tr>
<td>7</td>
<td>09-Oct</td>
<td>Tuesday Lecture 5: Correlation</td>
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<td></td>
<td>10-Oct</td>
<td>Wednesday Lecture 6: Regression and Defining the Regression Line</td>
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<tr>
<td></td>
<td>12-Oct</td>
<td>Friday Class Exercise #3</td>
</tr>
<tr>
<td>8</td>
<td>16-Oct</td>
<td>Tuesday Lecture 6: Regression and Defining the Regression Line</td>
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<tr>
<td></td>
<td>17-Oct</td>
<td>Wednesday Lecture 6: Error in Prediction &amp; Partitioning Variability</td>
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<td></td>
<td>19-Oct</td>
<td>Friday Class Exercise #4</td>
</tr>
<tr>
<td>9</td>
<td>23-Oct</td>
<td>Tuesday Exam #2 over Lectures 5 &amp; 6 plus assignments and homework</td>
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**PART 3 — PROBABILITY AND INFERENTIAL ANALYSIS**

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<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>9</td>
<td>24-Oct</td>
<td>Wednesday Lecture 7: The Normal Distribution &amp; Probability</td>
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<tr>
<td></td>
<td>26-Oct</td>
<td>Friday Lecture 7: The Normal Distribution &amp; Probability</td>
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<tr>
<td>10</td>
<td>30-Oct</td>
<td>Tuesday Lecture 8: Sampling Distributions</td>
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<tr>
<td></td>
<td>31-Oct</td>
<td>Wednesday Lecture 8: Sampling Distributions</td>
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<tr>
<td></td>
<td>02-Nov</td>
<td>Friday Lecture 9: Hypothesis Testing</td>
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<td>11</td>
<td>06-Nov</td>
<td>Tuesday Lecture 9: Hypothesis Testing</td>
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<tr>
<td></td>
<td>07-Nov</td>
<td>Wednesday Lecture 9: Hypothesis Testing</td>
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<tr>
<td></td>
<td>09-Nov</td>
<td>Friday Class Exercise #5</td>
</tr>
<tr>
<td>11</td>
<td>13/14-Nov</td>
<td>Tuesday/Wednesday Reading Week — No Classes</td>
</tr>
<tr>
<td>12</td>
<td>16-Nov</td>
<td>Friday Exam #3 over Lectures 7 - 9 plus assignments and homework</td>
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**PART 4 — INFERENTIAL ANALYSIS WHEN ESTIMATING POPULATION PARAMETERS**

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<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>12</td>
<td>20-Nov</td>
<td>Tuesday Lecture 10: Sampling Distribution of the Mean</td>
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<tr>
<td></td>
<td>21-Nov</td>
<td>Wednesday Lecture 10: Sampling Distribution of the Mean</td>
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<tr>
<td></td>
<td>23-Nov</td>
<td>Friday Lecture 11: Single Sample Hypothesis Testing</td>
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<tr>
<td>13</td>
<td>27-Nov</td>
<td>Tuesday Lecture 11: Single Sample Hypothesis Testing</td>
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<tr>
<td></td>
<td>28-Nov</td>
<td>Wednesday Lecture 12 : Theoretical Sampling Distributions</td>
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<tr>
<td></td>
<td>30-Nov</td>
<td>Friday Lecture 12 : Theoretical Sampling Distributions</td>
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<tr>
<td></td>
<td>04-Dec</td>
<td>Tuesday Class Exercise #6</td>
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<tr>
<td>14</td>
<td>05-Dec</td>
<td>Wednesday Class Cancelled — Day of Remembrance</td>
</tr>
</tbody>
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**ATTENDING CLASSES**

In accordance with the Academic Calendar, attendance at and participation in all class sessions is assumed and expected.
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 pages 313-317 of the UVic Calendar September 2018.

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 (See UVic Calendar, September 2018, p. 48-50)

- 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](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](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 [1], p. 45-47, UVic Calendar September 2018). 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. 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. 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. **Being an Accessory to Offences.** This means that helping another student to cheat (for instance, by showing or communicating to them answers to an assignment, or by allowing them to view answers on an exam) is an academic offence.

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 (on p. 46 in September 2018).

The **definitive source** for information on Academic Integrity is the University Calendar (p. 45-47 in September 2018)

(https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/academic-integrity.html#)

**Other useful resources on Plagiarism and Cheating include:**

1. The Study Solutions Office: [https://www.uvic.ca/services/counselling/success/study/index.php](https://www.uvic.ca/services/counselling/success/study/index.php)
2. The Ombudsperson’s office: [https://uvicombudsperson.ca/tips/plagiarism/](https://uvicombudsperson.ca/tips/plagiarism/)
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/