



## PSYCHOLOGY 300B – Section A01

### Statistical Methods in Psychology II Summer (July – August) 2016

<b>Time:</b> MW 10:30 – 12:20	<b>F</b> 10:30 - 11:20	<b>Room:</b> COR B135
<b>Instructor:</b> David Medler <b>Office:</b> COR A277 <b>Office Hours:</b> By Appointment <b>Phone:</b> 250-721-6108 (email is preferable) <b>Email:</b> <a href="mailto:dmedler@uvic.ca">dmedler@uvic.ca</a>		<b>Teaching Assistant:</b> Stacey Ross <b>Office:</b> T.B.A. <b>Office Hours:</b> By Appointment <b>Phone:</b> (email is preferable) <b>Email:</b> <a href="mailto:slross@uvic.ca">slross@uvic.ca</a>

#### Course Objectives

1. To gain conceptual understanding of statistical analyses to advanced research designs.
2. To gain practical experience in the interpretation and communication of statistical analysis in a manner appropriate for those involved in psychological research.

**Required Text:** Psyc 300B CoursePack, from the CourseSpaces website (may be available at Bookstore).

**Optional Text:** Howell, David C. (2007). *Fundamental Statistics for Behavioural Sciences* (7<sup>th</sup> Edition). Thomson Brooks/Cole Publishing, or 6th edition (2003). **Please Note:** the Howell text will be a reference text only. *No readings from the optional text will appear on exams.*

#### PREREQUISITES and REGISTRATION

The prerequisites for Ψ300B include:

1. The completion of Psychology 300A with a minimum grade of D. This is non-negotiable.
2. The completion of core requirements for Psyc majors & Honours.

**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. Priority for waitlisted students will be given to those students who have met all course pre-reqs and attended the first two class sessions. Students are responsible for checking their registration status before the end of the course change period (July 10, 2016). Students will **not be added** to the course after this time.

**It is highly recommended that you do not take any other courses while taking Psyc 300B**

#### COURSE MATERIAL for 300B on UVic's CourseSpaces site:

**All** course material, including detailed lecture notes and the full course syllabus, is available through CourseSpaces. This site will have all course lecture material with the accompanying overheads that are presented in class. It will also have class exercises and homework assignments and their respective answer keys. Files are in pdf format.

#### Topics Covered

Measurement (independent & dependent variables); Power; Inferential analysis for research designs under the Random Sampling Model of Hypothesis Testing. Research designs include related-samples, bivariate correlation, independent samples for  $k = 2$  &  $k > 2$ , & multi-factorial. Other topics include multiple comparisons, options for analyzing data when assumptions are violated, and analysis of frequency data.

#### Course Format

Course material will be presented in 3 discrete sections through text readings, lectures, graded in-class group activities, un-graded homework assignments, and a course research project. At the start of each new section, you will receive a **Class Prep** outline that will detail the text readings for each day and the material you are expected to know prior to the in-class exercises. Answer keys for exercises & homework will be available through the web site. **It is assumed that you have read the relevant course material prior to each lecture.**

### Course Evaluation

Comprehension of course material will be assessed through performance on...

- (a) 3 exams (each worth 20% of your final grade, 60% total),
- (b) a research report (20%),
- (c) graded in-class assignments (5%),
- (d) online quizzes (5%)
- (e) graded homework assignments (5%)
- (f) In-Class participation via iClicker (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 84.00). Rounding will only occur for the final grade.

\*A minimum grade of fifty-percent (50%) is required to get credit for Ψ300B for a psychology degree.

**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 exams. As noted above, the 3 exams will account for a total of 60% of your final grade.

#### Dates of Exams:

**Midterm 1:** July 15 (Friday)

**Midterm 2:** Aug 5 (Friday)

**Final Exam:** August 19 (Friday)

**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: Midterms.** You are responsible for attending exams as scheduled. NO make-up exams will be given. If you miss a midterm exam due to illness, accident, or family affliction, you must supply a written support for your absence (e.g., doctor's note) within 10 days of missing the exam. *Documentation should be dated on the day of the missed exam, or earlier indicating that you are ill for a couple of days.* If your documentation is accepted for the missing midterm, then a grade for that exam will be generated by weighting your grades from the remaining exams. For example, if you miss Midterm 1, a grade will be created for Midterm 1 by taking 50% of your grade for Midterm 2 & adding it to 50% of your grade for the Final Exam. If you miss both midterms, you will not be permitted to write the Final Exam and will receive an "N" in this course.

**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 midterms, will not be extrapolated and MUST be taken. 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.

**NOTE: The following are NOT acceptable excuses for missing the scheduled midterm exams, class exercises, or any other graded assignments:**

- a) **holiday trips,**
- b) **attendance at a wedding,**
- c) **taking more than the recommended course load,**
- d) **basically any ongoing life circumstance.**

**Acceptable excuses are for verifiable, documented, and incapacitating surprises.**

**TENTATIVE SCHEDULE: PSYC 300B**

Refer to the relevant Class Prep handout, and the CourseSpaces site, for updated information

WEEK	DATE	TOPIC
<b>Part 1 – Hypothesis testing with 1- and 2-Sample Designs</b>		
1	July 4 (Mon)	Review & 1. Independent & Dependent Variables
	July 6 (Wed)*	2. Hypothesis Testing: Related Samples Design
	July 8 (Fri)	<b>Class Exercise #1</b>
2	July 11 (Mon)*	3. Hypothesis Testing: Correlation Design / 4a. HT: Independent Samples Design
	July 13 (Wed)*	4b. Hypothesis Testing: Independent Samples Design / <b>Class Exercise #2</b>
	<b>July 15 (Fri)</b>	<b>EXAM #1 (Sections 1 — 4)</b>
<b>Part 2 – Variability Explained and Power</b>		
3	July 18 (Mon)*	5. Variability Explained ( $r^2$ )
	July 20 (Wed)*	6. Power
	July 22 (Fri)	<b>Class Exercise #3</b>
<b>Part 3 – Hypothesis testing with Multi-Group Designs; Multiple Comparisons</b>		
4	July 25 (Mon)*	7a. Hypothesis Testing: Multi-group Designs
	July 27 (Wed)*	7b. Hypothesis Testing: Multi-group Designs / 8a. Multiple Comparisons
	July 29 (Fri)	<b>Class Exercise #4</b>
5	Aug 1 (Mon)	<b>BC Day — No Class</b>
	Aug 3 (Wed)*	8a/8b. Multiple Comparisons
	<b>Aug 5 (Fri)</b>	<b>Exam #2 (Sections 5 — 8)</b>
<b>Part 4 – Hypothesis testing with Multi-Factorial Designs</b>		
6	Aug 8 (Mon)*	9. Hypothesis Testing: Multi-Factorial Designs
	Aug 10 (Wed)*	10. Interactions in Factorial Designs
	Aug 12 (Fri)	<b>Class Exercise # 5 / PROJECT DUE</b>
<b>Part 5 – Options for Violations &amp; Frequency Data</b>		
7	Aug 15 (Mon)*	11. Options When Assumptions are Violated / 12. Frequency Data
	Aug 17 (Wed)*	12. Frequency Data / <b>Class Exercise #6</b>
	<b>Aug 19 (Fri)</b>	<b>FINAL EXAM (Sections 9 — 12)</b>

\*iClicker responses will be assessed for marks on these days.

**ATTENDING CLASSES**

In accordance with the Academic Calendar attendance at and participation in all class sessions is assumed and expected.

## APPLICATION OF COURSE MATERIAL

**Homework:** You will be given 6-7 graded homework assignments over the term that will provide you with opportunities to test your mastery of the material. There is simply NO substitute for wrestling a statistics problem to the ground yourself in order to understand the material. I guarantee that those students who conscientiously do the non-graded homework will understand the material better when exam time comes. Answers for homework will be entered into CourseSpaces. We will drop the lowest homework score.

**Class Exercises:** To further facilitate your integration of the course material, you will be asked to participate in GRADED class exercises. (The total number of exercises will not be fixed before the course begins, and will be somewhat determined by how much time is needed to lecture on the material.) 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 s(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 lowest 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*. Keep in mind, you can still get full marks after missing one class exercise, since your lowest grade is dropped; but, this should not be used as a free pass to skip an assignment.

**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. Marks for iClickers per day will be 0 (no responses); 0.25 (50% or less answered correctly) or 0.5 (more than 50% answered correctly). iClicker responses will be assessed for marks on 12 days (see schedule), and the best 10 of 12 days will count towards your mark.

**Research Project Report:** An original research report is REQUIRED for successful completion of this course. This term you will have the opportunity to create your own study following the guidelines on CourseSpaces, “Research project”. You will be provided with a data set unique to your study. **If you do not turn in the research project paper you will receive an "N" in this course.**

## MISSED A CLASS?

Get notes from a classmate; lectures typically cover some, but not all, of the material in the CoursePack. All material distributed in class (e.g., homework assignments, class 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 scheduled office hours.

## COMPUTER SOFTWARE PROGRAM FOR STATISTICAL ANALYSIS

Some homework assignments require the use of computers. We will use SPSS (version 23.0) as the software program for statistical analysis. SPSS can be used with either a Mac or a PC. Work stations are available in the Computer labs in the B&E Building (basement), in Clearihue A105 and in the Human and Social Development building (basement). Additional support services for SPSS are available through the HELP menu function of the programme. Your TA & prof may also be able to provide some assistance during office hours on an “as available” basis. **It is essential that you gain some level of familiarity and comfort in using this computer software in 300B.**

## 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 requirements or activities that are intrinsic to Psyc 300B, please see me in the first week of the academic term.

**UNIVERSITY OF VICTORIA**  
**Department of Psychology**

**Important Course Policy Information**  
**Summer 2016**

**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 378-382 of the UVic Calendar 2015-16.

**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, 2015-16, p. 59)

- **What to do if you miss the final exam scheduled on the last day of classes**

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.

- **What to do if you miss an exam other than one scheduled on the last day of classes**

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).

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

<http://www.uvic.ca/registrar/home/news/current/academic-concession-forms.php>

- **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. 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/home/news/current/academic-concession-forms.php>

## 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 (<http://web.uvic.ca/calendar2016-01/FACS/UnIn/UARe/PoAcl.html> , p. 54-57, UVic Calendar 2015-16). 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. **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.
3. **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.
4. **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.
5. **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. 54-57 in 2015-16).

**The definitive source** for information on Academic Integrity is the University Calendar (p. 54-57 in 2015- 2016) ([web.uvic.ca/calendar2016-01/FACS/UnIn/UARe/PoAcl.html](http://web.uvic.ca/calendar2016-01/FACS/UnIn/UARe/PoAcl.html))

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

1. The Learning Skills program: <http://www.coun.uvic.ca/learning/index.html>
2. The Ombudsperson's office: <http://www.uvss.uvic.ca/ombudsperson/pubsquides/plagiarism.pdf>
3. The English Department: <http://web.uvic.ca/wguide/Pages/CitPlagiarism.html>