

**Faculty of Health**  
**Department of Psychology**  
**PSYC 2022 3.0 Section B: STATISTICAL METHODS II**  
**Monday/2:30 – 5:30/CLH-F**  
**FALL/2019**

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**Instructor and T.A. Information**

Instructor: Ed Haltrecht

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STUDENTS	Last name: A to K	Last name: L to Z

**Course Prerequisite(s): Course prerequisites are strictly enforced.**

- HH/PSYC 2021 3.00 (Statistical Methods I)

**Course Prerequisite or corequisite(s):**

- HH/PSYC 1010 6.00 (Introduction to Psychology), with a minimum grade of C when used as a prerequisite.

**Course Credit Exclusions**

Please refer to [York Courses Website](#) for a listing of any course credit exclusions.

**Course website:** [Moodle](#)

**Course Description**

This course builds on material presented in Statistical Methods I. Students will gain a greater understanding of the the statistical procedures used by researchers in the behavioural sciences, in addition to the appropriate use and interpretation of statistical results. Topics that will be covered include: hypothesis tests using t-tests (for independent and related measures); Analysis of variance (ANOVA) for repeated measures, independent measures and two factors; multiple comparison procedures (post-hoc analysis), correlation and prediction, and non-parametric techniques. Students should be able to identify the correct statistical test to use. Mathematical competency gained from PSYC2021 is expected- see Appendix A in the text for a Basic Mathematics Review.

**Program Learning Outcomes**

Upon completion of this course, students should be able to:

1. Compute inferential statistics for univariate linear models (ANOVA, regression).
2. Interpret and report the results of inferential statistics for univariate linear models.

3. Recognize the limits of inferential statistics.

### Topics Covered

- Review of basic statistical concepts and review of t-tests.
- One-way Independent Groups ANOVA (with contrasts)
- Two-way Independent Groups ANOVA (with interaction and contrasts)
- One-way Repeated Measures ANOVA (with contrasts)
- Correlation (including partial correlation)
- Non-parametric tests
- Simple Regression
- Multiple Regression

*\*Effect size is included as part of all inferential statistics covered in this course.*

### Required Text

Four Course Text Options (PICK ONLY 1 OPTION).

- a. Paper Copy text: Gravetter, F.J. & Wallnau, L. (2016). Statistics for the Behavioral Sciences, 10th Edition + MindTap Belmont, CA: Wadsworth. ISBN: 9781305918542
- b. Loose-leaf Package -Statistics for the Behavioral Sciences, 10th Edition + MindTap ISBN: 9781337128995
- c. Ceb E-book MindTap ISBN: 9781305647312 (the bookstore can generate and sell a code on the spot for students that only want digital access – MindTap houses an eBook and all study tools)
- d. Use the 8th or 9th edition. Any of the 8, 9, or 10th edition will work fine. We will have answers to all of the end of chapter questions available for the 9th and 10th editions only. The text only gives the answers for half of the questions.

### Course Requirements and Assessment:

Assessment	Date of Evaluation (if known)	Weighting
Test 1	October 21, 2019 in class	50%
Test 2	Exam period Dec 5 – 20, 2019	50%
Total		100%

### Grading as per Senate Policy

The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Assignments and tests\* will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 90, B+ = 75 to 79, etc.)

(For a full description of York grading system see the York University Undergraduate Calendar - [Grading Scheme for 2019-20](#))

## Missed Tests or Exams

Students with a documented reason for missing a course test, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (Attending Physician Statement which can be found at: <http://myacademicrecord.students.yorku.ca/pdf/attending-physicians-statement.pdf>) may request accommodation from the Course Instructor. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

Students are expected to write each test on the dates specified. There will be **no make-up tests**, except under extraordinary documented circumstances. **If you miss a test for no documented reasons, you will receive a grade of zero.**

If you have a legitimate reason (e.g., death in the family, severe illness, etc.) for being excused from a test/exam, and have documentation to verify your absence (please see below), you may take a make-up test/exam in lieu of the missed test/exam. Please note that we are extremely strict about the conditions that will allow you to write a make-up examination – nonetheless, you should contact your TA regardless of your reason if you have or will miss an examination. You must contact your course TA, **at least one day in advance of the exam/test** and provide documentation in order to be permitted to take a make-up exam/test. In the case of an emergency, **contact your course TA, as soon as possible. In this email, please (a) outline the reason for your absence, and (b) confirm that you have medical or other relevant documentation to support this reason. Again, be sure to note your course section and your full name and student number in the subject header of your email.**

Please note that there will be *one* set date for the make-up test/exam. **If both exams are missed, students will have to retake the course unless they successfully petition.** Please also note that if you miss a test, regardless of your reason, you have waived the right to have a specific percentage of graded feedback available to you prior to the drop date.

Note also that deferred final exams are held on a single common date determined by the Department of Psychology. No individualized testing is available unless arranged formally through one of the offices at the University (e.g., Counselling and Disability Services (CDS)).

### Documentation when missing an exam/test

If you produce a valid medical document, signed by a physician, **stating that you were medically unable to take the exam/test for a specific time period**, you will be able to take a makeup exam/test. If you miss an exam/test for non-medical reasons, you still must produce supporting documentation (e.g., death certificate, obituary notice, automobile accident report, airline ticket for emergency travel, etc.). Missing an exam/test for a vacation, etc., is not an acceptable reason. If you are ill or facing extreme personal circumstances and are unable to get the required documentation, we highly recommend that you consider dropping the course.

Once you have contacted your TA, you will need to have completed the attending physician's statement. This should be brought to your TA's mailbox or faxed to the psychology department (with Attention *Ed Haltrecht*) at 416-736-5814. You will need to receive confirmation of the make-

up examination date from your TA; you should be back in touch within a few days with your TA if you have not heard back. It is your responsibility to find out the information about when the make up test/exam is and ensure that you are set to write the make-up test/exam.

### **Important New Information Regarding Missed Tests**

For any missed tests or late assignments, students **MUST** complete the following online form which will be received and reviewed in the Psychology undergraduate office.

[HH PSYC: Missed Tests/Exams Form](#). Failure to complete the form within 48 hours of the original deadline will result in a grade of zero for the test/assignment.

### **Add/Drop Deadlines**

For a list of all important dates please refer to: [Fall/Winter 2019-20 - Important Dates](#)

	<b>FALL (F)</b>
Last date to add a course <b>without permission</b> of instructor (also see Financial Deadlines)	Sept. 17
Last date to add a course <b>with permission</b> of instructor (also see Financial Deadlines)	Oct. 1
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 8
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	Nov. 9 - Dec. 3

**\*Note:** *You may withdraw from a course using the registration and enrolment system after the drop deadline until the last day of class for the term associated with the course. When you withdraw from a course, the course remains on your transcript without a grade and is notated as "W". The withdrawal will not affect your grade point average or count towards the credits required for your degree.*

### **Information on Plagiarism Detection**

Not applicable for this course.

### **Electronic Device Policy**

No policies in effect- just don't disturb other students.

### **Attendance Policy**

No policies in effect.

### **Academic Integrity for Students**

York University takes academic integrity very seriously; please familiarize yourself with [Information about the Senate Policy on Academic Honesty](#). It is recommended that you

review Academic Integrity by completing the [Academic Integrity Tutorial](#) and [Academic Honesty Quiz](#).

### **Test Banks**

The offering for sale of, buying of, and attempting to sell or buy test banks (banks of test questions and/or answers), or any course specific test questions/answers is not permitted in the Faculty of Health. Any student found to be doing this may be considered to have breached the Senate Policy on Academic Honesty. In particular, buying and attempting to sell banks of test questions and/or answers may be considered as “Cheating in an attempt to gain an improper advantage in an academic evaluation” (article 2.1.1 from the Senate Policy) and/or “encouraging, enabling or causing others” (article 2.1.10 from the Senate Policy) to cheat.

### **Electronic Devices During a Test/Examination**

Electronic mobile devices of any kind are not allowed during a test or examination. Students are required to turn off and secure any electronic mobile device in their bag which is to be placed under the chair while a test/exam is in progress. Any student observed with an electronic device during a test/exam may be reported to the Undergraduate Office for a potential breach of Academic Honesty.

### **Academic Accommodation for Students with Disabilities**

While all individuals are expected to satisfy the requirements of their program of study and to aspire to do so at a level of excellence, the university recognizes that persons with disabilities may require reasonable accommodation to enable them to do so. The [York University Accessibility Hub](#) is your online stop for accessibility on campus. The [Accessibility Hub](#) provides tools, assistance and resources. Policy Statement.

**Policy:** York University shall make reasonable and appropriate accommodations and adaptations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs.

The nature and extent of accommodations shall be consistent with and supportive of the integrity of the curriculum and of the academic standards of programs or courses. Provided that students have given sufficient notice about their accommodation needs, instructors shall take reasonable steps to accommodate these needs in a manner consistent with the guidelines established hereunder.

For Further Information please refer to: [York university academic accommodation for students with disabilities policy](#).

### **Course Materials Copyright Information**

Third party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.

Copying this material for distribution (e.g. uploading material to a commercial third-party website) may lead to a violation of Copyright law. [Intellectual Property Rights Statement](#).

### Course Schedule

DATE	TOPIC	TEXT CHAPTER
Sept 9	Intro to course; review of hypothesis testing, z-test, effect size, power, single sample t-test	8, 9
Sept 16	t-test for Two Independent Samples; t-test for Two Related Samples	10, 11
Sept 23	ANOVA - introduction and Single Factor Independent Measure Design	12
Sept 30	ANOVA - Repeated Measures	13
Oct 7	ANOVA – Two-Factor (Independent Measures)	14
Oct 14	<b><i>Thanksgiving - no classes</i></b>	
Oct 21	Test 1 (2¾ hours) worth 50% of final course grade - covering Chapters 8-14.  70% multiple choice (70 items); 30% problems where student must show work. (likely 6 items worth about 5 marks each) (No choices).	
Oct 28	Correlation (Pearson and Spearman)	15
Nov 4	Regression – Equations and Analysis of Regression; Multiple Regression	16
Nov 11	Non-parametric tests (Mann-Whitney; Wilcoxon)	Appendix E1,2,3
Nov 18	Choosing the right statistics	
Nov 25	Review of Chapters 15, 16, E1,2,3	14,16, App E1,2,3
Dec 2	Review of choosing the right statistics	
<b>Dec 5- 20</b>	Exam 2 (3 hours) Worth 50% of final course grade- covering all material covered since Test 1. Same format as Test 1. Check for new class room - Exact date during the final examination period to be determined by Registrar’s Office.	