

**Faculty of Health
Department of Psychology
PSYC 2022 Section N
Statistical Methods II
W 2017
Thursday 14:30---17:30, CLH D**

Instructor and T.A. Information

Instructor: Heather Jenkin

Office: 254 BS

Office Phone: x22542

Office Hours: M, W & F 10:15---11:10 or by appointment

Email: hjenkin@yorku.ca

Please always put PSYC2022N in the subject header and include your full name and student number in the body of any email to either the Instructor or TA.

T.A. Taylor Brin

Email tbrin@yorku.ca

Office TBA

Office Hours In class or by appointment

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 website: [Moodle](#)

Course Description

This is a continuation of the study of fundamental concepts and techniques of descriptive and inferential statistics (PSYC2021). Topics include power, correlation, regression, analysis of variance and non---parametric statistics. The course involves formal lectures by the instructor on topics outlined below in the reading schedule. The required readings are central to the course.

Online Mastery Quizzes will provide students with opportunity to work on course content on an almost weekly time schedule through self directed multiple choice tests. Multiple attempts are permitted (with a 3 hour refraction period to allow revision of content before further attempts).

Class time will also include tutorial/Q&A time that will serve to enrich, clarify, and illustrate assigned topics with the completion of homework problems in class. This is important as they provide useful experience with more complex statistical calculations. Suggested problems will be posted on moodle. It is advisable that students complete these problems and then difficulties can be discussed on the appropriate day.

Learning Outcomes

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

1. Compute and interpret univariate inferential statistics.
2. Recognize limits of conclusions based on inferential statistics.

Specific Learning Objectives

Students should be able to:

1. Correctly identify which inferential statistical test is appropriate given information of a research design.
2. Generate the statistical hypotheses (H_0 and H_1) that are applicable to various research situations
3. Demonstrate the ability to calculate the appropriate test statistic applicable to various research situations
4. Conduct any appropriate post-hoc tests as required
5. Communicate the results effectively within APA literature reporting style

Required Text

- Gravetter, F.J. & Wallnau, L. B. (2016) Statistics for the Behavioural Sciences. 10th Ed. Belmont CA: Thomson/Wadsworth
- Supplemental Chapter 20 from the 8th edition package required (see York Bookstore)

Course Requirements and Assessment

| Assessment | Date of Evaluation (if known) | Weighting |
|------------------------------|-------------------------------|-----------|
| Mastery Online Quizzes | as scheduled | 8% |
| In-class Quizzes | as scheduled | 8% |
| Term Test 1 (non-cumulative) | January 26 | 20% |
| Term Test 2 (non-cumulative) | March 2 | 28% |
| Final (cumulative) | scheduled in the exam period | 36% |
| Total | | 100% |

Description of Assignments

Mastery Quizzes are online multiple choice tests that require 15/20 to show mastery for credit. If 15.20 is not reached then grade is zero. They will be available for one week and multiple attempts can be made (with a 3 hour breathing space between attempts). Each mastered quiz counts as 1% of final grade. There will also be eight in class pop quizzes, each will be worth 1%. Term Test 1 is worth 20%, Term test 2 is worth 28%. Term tests are held in class time. Questions may be in true/false, multiple choice, paragraph and short answer calculation format. A formulae sheet will be given as will any required statistical tables needed. The cumulative final has paragraph and short answer calculation formats covering the entire course content and is worth 36%.

- For the term tests/final you must bring York sessional and photo ID.
- You may bring writing tools, and a basic calculator (+, -, ×, ÷, and $\sqrt{\quad}$ only). Any calculator more sophisticated will be confiscated until the test is over (Easy to check – does your calculator have any symbols such as these on it ΣX , ΣX^2 , σ^2 , σ , S-SUM, S-VAR, sx, σx). Your cell phone may NOT be used as a calculator.

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 --- calendars.students.yorku.ca/2016-2017/academic-and-financial-information/academic-services/grades-and-grading-schemes)

Late Work/Missed Tests or Exams

There are no extensions for Mastery Quizzes.

Missed Test/Final:

Students **must email the instructor** (hjenkin@yorku.ca) **within 48 hours** of a **missed test** outlining the circumstances for missing the test (if non---medical circumstances I can advise the appropriate documentation required: such as death certificate, arrest report...).

ALSO IMPORTANT NEW INFORMATION REGARDING MISSED TESTS:

For any missed tests, 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 7 calendar days of the original deadline will result in a grade of zero for the test/assignment.

****Failure to provide the email and appropriate documentation will result in a 0 for any missed tests.**

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://registrar.yorku.ca/pdf/attending---physicians---statement.pdf>). With appropriate **documentation** you can request a re---weighting onto the cumulative final.

If a term test is missed then be aware that you may not have a true understanding of your performance in the course before the drop deadline.

Note that when Term Test 1 is missed with documentation the final is then weighted at 56%, if Term Test 2 is missed with documentation then the final would be weighted 64%. If your health is so severely compromised that you miss more than one test in a half course you should consider dropping the course as you will also be missing too much lecture time to do well in the course. If you have documented reasons for missing both Term Test 1 & 2 then the cumulative final will be weighted at 84%.

A missed final will require documentation along with a Deferred Standing Agreement in order for course completion. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

Add/Drop Deadlines

For a list of all important dates please refer to: [Important Dates](#)

| Important dates | Winter (W) |
|--|------------------------|
| Last date to add a course without permission of instructor (also see Financial Deadlines) | Jan. 18 |
| Last date to add a course with permission of instructor (also see Financial Deadlines) | Feb. 1 |
| Last date to drop a course without receiving a grade (also see Financial Deadlines) | March 10 |
| Course Withdrawal Period (withdraw from a course and receive a "W" on the transcript – see note below) | March 11 --- Apr. 5 |

Information on Plagiarism Detection

You are responsible for your own answers when submitting for grade. Do not show other students your answers or look at another students answers if you are expecting the work to be graded.

Electronic Device Policy

While I provide some of my slides as .pdf files before lecture I feel that you printing them out then writing supplemental notes in lecture is the best way to work through course content. Often I will leave space for the calculations to be completed in class during Q&A time. Students using electronic devices in class are asked to do so only for course---related purposes.

Attendance Policy

Students are expected to attend all classes as homework and Q &A sessions provide opportunities to discuss errors before they become problematic during tests. Attendance is recommended and occasionally will be taken through in class moodle spot quizzes.

Academic Integrity for Students

York University takes academic integrity very seriously, please visit [an overview of Academic Integrity at York University](#) from the Office of the Vice---President Academic.

The following links will assist you in gaining a better understanding of academic integrity and point you to resources at York that can help you improve your writing and research skills:

- [Information about the Senate Policy on Academic Honesty](#)
- [Online Tutorial on Academic Integrity](#)
- [Information for Students on Text-Matching Software: Turnitin.com](#)
- [Beware! Says who? A pamphlet on how to avoid plagiarism](#)
- [Resources for students to help improve their writing and research skill](#)

Test Banks:

The use of test banks is not permitted in this course and may be considered a potential breach of academic honesty. This includes but is not limited too; buying or selling test banks.

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 devise 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

These course materials are designed for use as part of the HH/PSYC 2022 3.0 course at York University and are the property of the instructor unless otherwise stated. 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:

| <u>Date</u> | <u>Topic</u> | <u>Readings</u> |
|--------------|---|-------------------|
| Jan 5 | Review of Power, Hypothesis testing with t, confidence intervals and effect size | 8.6, 9-11 |
| Jan 12 | in class lecture cancelled - lecture online TA available for homework and Q&A in class | 9 - 11 |
| Jan 19 | Fmax and non-parametric Mann-Whitney and Wilcoxon | 10; Supplement 20 |
| Jan 26 | Term Test 1 | 20% |
| Feb 2 | ANOVA - Hypothesis test and effect size | 12 |
| Feb 9 | ANOVA Post Hoc tests; Kruskal- Wallis | 12, Supplement 20 |
| Feb 16 | Repeated measures ANOVA; Friedman | 13, Supplement 20 |
| Feb 23 | Reading Week - no class | |
| Mar 2 | Term Test 2 | 28% |
| Mar 9 | Two factor ANOVA | 14 |
| Mar 16 | Hypothesis tests with Spearman and Pearson correlation | 15 |
| Mar 23 | Linear regression equations and Analysis of Regression | 16 |
| Mar 30 | The Binomial Test Statistics Organizer: Finding the Right Statistics for your Data | 18 p701-715 |
| April 7 - 24 | Cumulative Final scheduled in the SU exam period | 36% |