Faculty of Health
Department of Psychology
PSYC 2021 3.0 B: STATISTICAL METHODS I
Friday/2:30-5:30p.m./CLH-F
Fall 2017

Instructor and T.A. Information
Instructor: Monique Herbert, PhD
Office: BSB 332
Office Phone: 416-736-2100 x 77186
Office Hours: In class and by appointment
Email: herbertm@yorku.ca

T.A.	**Marie Hooper**	**Bri Darboh**
Email	mcauch@yorku.ca	bdarboh@gmail.com
Office	BSB 043	SHR 1006
Office Hours	By appointment only	By appointment only

Emails to Instructor and Teaching Assistants: Please include PSYC2021B in the Subject box and your full name and student number in the signature of the message. This is important information as it helps us to match a student to a specific course and provide the most relevant feedback.

Course Prerequisite(s) or corequisite: Course prerequisites are strictly enforced.

- 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 (please sign up for a Moodle account as soon as possible as course materials and announcements will be posted to this site)

Course Description

The fundamental concepts and application of descriptive statistics. An introduction to probability and inferential statistics, including hypothesis testing with the normal- and t-distributions.

Program Learning Outcomes

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

1. Compute descriptive statistics and inferential statistics.
2. Interpret and report the results of descriptive statistics and inferential statistics.
3. Distinguish between the role of descriptive statistics and inferential statistics.

Topics Covered

- Defining Key Statistical Terms
- Frequency Distributions
- Central Tendency
- Variability
- z-Scores/Normal Distribution
- Probability
- Sampling Distribution
- Confidence Intervals
- Power
- Effect Size
- Hypothesis Testing
- Correlation (Pearson at minimum)
- χ^2 Goodness of Fit
- χ^2 Test of Independence
- One-sample t test
- Two independent samples t-test
- Paired samples t-test

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

Specific Learning Objectives

1. Identify the different scales of measurement.
2. Demomstrate the ability to calculate descriptive statistics such as measures of central tendency and variability using the appropriate formulas.
3. Choose descriptives statistics that are appropriate for summarizing and organizing variables with different scales of measurement.
4. Demonstrate the ability to summarize, organize, and present the essential features of data numerically and graphically.
5. Identify the differences between descriptive and inferential statistics (e.g., summarize sample data vs use sample data to make inferences about the population).
6. Identify limitations of descriptive statistics (e.g., cannot be used to test hypotheses about the population under study).
7. Demonstrate the ability to generate statistical hypotheses (i.e., null and alternative) that are applicable to various research situations.
8. Demonstrate the ability to formulate and perform hypothesis tests that are applicable to various research situations (i.e., *z* test, *t* tests, correlations).

Required Text

Custom Ll Pkg Stats For The Behavioral Sciences 10Th W/Chap 20
Mindtap (6 MonthGravetter)
ISBN 9780176794828

**Please note it is important that you purchase this 10th edition with MindTap as you will be completing weekly online assignments based on the information provided in this package. A copy of the above text can be purchased from the bookstore.

MindTap Student Registration URL:

https://login.nelsonbrain.com/course/MTPP65KPM4HD

Course Requirements and Assessment:

Assessment	Date of Evaluation (if known)	Weighting
MindTap assignments	Weekly	15%
Test#1	Sep 29	15%
Test#2	Nov 10	15%
Test#3	Dec01	15%
Final Exam (cumulative)	Dec 6-21	40%
Total		100%

Description of Assignments

MindTap Assignments: These are weekly assignments which will focus on course material covered in class on a given week. **Only the Problem Sets associated with the chapters from the text we covered in this course count toward your final grade.** However, there are other activities (e.g., End-of-chapter problems, exam) available for you to practice course material.

Tests: Tests will be non-cumulative and cover the material from lectures, readings, and MindTap assignments preceding the test. The format of the tests will be a mix of multiple-choice and open-ended/short-answer questions (e.g., defining concepts or responses to analysis questions).

Final Exam: The final exam will be cumulative and covers all course material.

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 89, B+ = 75 to 79, etc.)

(For a full description of York grading system see the York University Undergraduate Calendar - Grading Scheme for 2017-18)

Late Work/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.

Important Information Regarding Missed Tests/Assignments/Final Exam

For any missed tests, assignments, or exams students MUST complete the following online form **within 48 hours of the missed test**: HH PSYC: Missed Tests/Exams Form. This form will be received and reviewed in the Psychology undergraduate office. Failure to complete the form within 48 hours of the original deadline will result in a grade of zero for the test/assignment.

Missed Tests: Please note in completing the online form you will also need to include formal documentation to verify the circumstances for missing the test (e.g., completed Attending Physician's Statement Form) – this documentation should be submitted **within 7 days of the missed test.**

Upon completion of the online form and after receipt of your supporting documentation you will have two options:

(1) **one opportunity** to write a make-up tests (this will be scheduled at a day and time to be announced by the instructor and may take a different form from the original test)**
   OR
(2) opt to have the weight of the missed test added to your cumulative final exam

**Note: If you miss your make-up test option 2 will take immediate effect provided the appropriate notification and documentation were received.

Missed Final Exam: If you miss your final exam please also complete the online form **within 48 hours of the missed exam** and provide formal documentation (i.e., Attending Physician Statement and Final Exam Deferred Standing Agreement Form) **within 7 days of the missed final exam**.

Add/Drop Deadlines

For a list of all important dates please refer to: Fall/Winter 2017-18 - Important Dates

	FALL (F)	**YEAR (Y)**	**WINTER (W)**
Last date to add a course **without permission** of instructor (also see Financial Deadlines)	Sept. 20	Sept. 20	Jan. 17
Last date to add a course **with permission** of instructor (also see Financial Deadlines)	Oct. 4	Oct. 18	Jan. 31
Drop deadline: Last date to drop a course without	Nov. 10	Feb. 9	March 9

	FALL (F)	YEAR (Y)	WINTER (W)
receiving a grade (also see Financial Deadlines)			
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	Nov. 11 - Dec. 4	Feb. 10 - Apr. 6	March 10 - Apr. 6

*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

Turnitin will be used to detect any evidence of plagiarism.

Electronic Device Policy

Students who wish to use an electronic device (e.g., tablets, laptops) during class time are asked to do so only for course-related purposes.
See also policy on use of electronic mobile devices during tests and exams.

Attendance Policy

Students are expected to attend all classes as weekly class activities builds on the previous week's material.

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 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 **PSYC2021B: Statistical Methods I** 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 (tentative):

Week	Date	Topic	Chapters
1	Sep 08	*Course Overview* *MindTap Demo* *Introduction to Statistics*	1, Appendix A
2	Sep 15	*Frequency Distributions* *Central Tendency*	2, 3
3	Sep 22	*Variability* *z-Scores: Location of Scores and Standardized Distributions*	4, 5
4	Sep 29	**Test#1 (15%)**	
5	Oct 06	*Probability* *Probability and Samples: The Distribution of Sample Means*	6, 7
6	Oct 13	*Introduction to Hypothesis Testing*	8
7	Oct 20	*Introduction to the t Statistic*	9
	Oct 27	**Fall Reading Day - NO CLASS**	
8	Nov 03	*The t Test for Two Independent Samples* *The t Test for Two Related Samples*	10, 11
9	Nov 10	**Test#2 (15%)** **Last date to drop a course without receiving a grade**	
10	Nov 17	*Correlation*	15
11	Nov 24	*Chi-square Statistic: Tests for Goodness of Fit and Independence*	17
12	Dec 01	**Test#3 (15%)**	
	Dec 6-21	**Final Exam (cumulative) – 40%**	