

**Faculty of Health
Department of Psychology
HH/PSYC 2020 6.0 Section A
STATISTICAL METHODS I AND II
Fall/Winter 2016-17**

Instructor and T.A. Information

Instructor: Monique Herbert
Office: 332 BSB
Office Phone: 416-736-2100 x77186
Office Hours: In class and by appointment
Email: herbertm@yorku.ca

T.A.	Nikita Wong
Email	nwong227@yorku.ca
Office	1004 SHR
Office Hours	In class and by appointment

Emails to Instructor and Teaching Assistants: Please include PSYC2020 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 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

An introduction to the analysis of data from psychological studies. Fundamental concepts and techniques of both descriptive and inferential statistics and their application to psychological research.

Learning Outcomes

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

1. Describe, explain, and calculate descriptive statistics.
2. Distinguish between descriptive and inferential statistics.
3. Compute and interpret univariate inferential statistics.
4. Recognize limits of descriptive statistics.
5. Recognize limits of conclusions based on inferential statistics.

Specific Learning Objectives

1. Identify different scales of measurement
2. Demonstrate the ability to calculate descriptive statistics such as measures of central tendency and variability using the appropriate formulas
3. Choose descriptive 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 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 compute univariate inferential statistics and interpret and present the results for various research situations (i.e., t tests, ANOVAs)
9. Identify limits of conclusions based on inferential statistics (e.g., statistical vs practical significance)

Required Text

Textbook plus Online Supplement:
Statistics for The Behavioral Sciences, 10th Edition
Frederick J Gravetter & Larry B. Wallnau
ISBN-10: 1305504917
ISBN-13: 9781305504912

You can purchase a copy of the textbook plus MindTap from the bookstore which offers two options:

Hard copy book + MindTap: 1305918541

Loose Leaf + MindTap: 1337128996

If you do not prefer to have a hard copy you can purchase MindTap on its own as there is an e-copy embedded however you will not have access to the e-copy once your MindTap subscription expires.

MindTap Student Registration URL: <https://login.nelsonbrain.com/course/MTPN-V7TP-LP5K>

Course Requirements and Assessment

Students are required to complete all assignments, tests, and the final exam in order to receive a grade at the end of the course. The final grade for this course will be based on the components listed below. Please be sure to read my policy on late work, missed tests or exams.

In order for the instructor to review your work on weekly MindTap assignments in advance students are required to complete all weekly MindTap Assignments **2 days in advance** of the next class so that any questions/comments/concerns can be addressed.

Assessment	Date of Evaluation	Weighting
MindTap Assignments	Weekly	15%
Test#1	Sep 29	12%
Test#2	Nov 03	12%
Test#3	Dec 01	12%
Test#4	Feb09	12%
Test#5	Mar 23	12%
Final Exam (cumulative)	Apr 7-24	25%
Total		100%

Description of Assignments/Tests/Exam

MindTap Assignments: These are weekly assignments which will focus on course material covered in class on a given week. You will have three attempts to complete each question on the assignment and your best mark will be recorded out of these three attempts.

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 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

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>) may request accommodation from the Course Instructor. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

Missed Tests: If you miss a test you will need to provide the following in order to have an opportunity to take a make-up test or receive an appropriate accommodation:*

- (a) An email to me (herbertm@yorku.ca) within 48 hours of the missed test outlining the circumstances for missing the test and
- (b) Formal documentation to verify the circumstances for missing the test (e.g., completed Attending Physician's Statement Form - <http://registrar.yorku.ca/pdf/attending-physicians-statement.pdf>)

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

Upon receipt of the above documentation you will have two options:

(1) **one opportunity** to take 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 tests option 2 will take immediate effect provided the appropriate documentation was received.**

Missed Final Exam: If you miss your final exam please contact me via email (herbertm@yorku.ca) within 48 hours of the missed exam outlining the circumstances for missing the exam and provide formal documentation to verify the circumstances for missing the exam.

Test Information

- For tests you **must** bring York sessional and photo ID.
- You may bring writing tools, and a **basic** calculator (+, -, ×, ÷, and $\sqrt{\quad}$ only). Cell phones may NOT be used as a calculator.
- An equation sheet and statistical tables will be provided, where necessary.

Add/Drop Deadlines

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

Important dates	Fall (F)	Year (Y)	Winter (W)
Last date to add a course without permission of instructor (also see Financial Deadlines)	Sept. 21	Sept. 21	Jan. 18
Last date to add a course with permission of instructor (also see Financial Deadlines)	Oct. 5	Oct. 19	Feb. 1
Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 11	Feb. 10	March 10
Course Withdrawal Period (withdraw from a course and receive a "W" on the transcript – see note below)	Nov. 12 - Dec. 5	Feb. 11 - Apr. 5	March 11 - Apr. 5

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. In the event that a student is unable to attend a class please send an email to the

instructor/TA informing them about your absence either prior to the class or within 48 hours after the missed class.

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 PSYC 2020 6.0A 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
SEMESTER I			
1	Sep 8	<i>Course Overview</i> <i>MindTap Demo</i> <i>Introduction to Statistics</i>	1, Appendix A
2	Sep 15	<i>Frequency Distributions</i>	2
3	Sep 22	<i>Central Tendency</i> <i>Variability</i>	3, 4
4	Sep 29	Test#1 (12%)	
5	Oct 6	<i>z-Scores: Location of Scores and Standardized Distributions</i>	5
6	Oct 13	<i>Probability</i> <i>Probability and Samples: The Distribution of Sample Means</i>	6, 7
7	Oct 20	<i>Introduction to Hypothesis Testing</i>	8
	Oct 27	Fall Reading Day - NO CLASS	
8	Nov 3	Test#2 (12%)	
9	Nov 10	<i>Introduction to the t Statistic</i>	9
10	Nov 17	<i>The t Test for Two Independent Samples</i>	10
11	Nov 24	<i>The t Test for Two Related Samples</i>	11
12	Dec 1	Test#3 (12%)	
SEMESTER II			
1	Jan 5	<i>Semester I Review</i>	
2	Jan 12	<i>Introduction to Analysis of Variance</i>	12

Week	Date	Topic	Chapters
3	Jan 19	<i>Introduction to Analysis of Variance</i>	12
4	Jan 26	<i>Repeated-Measures Analysis of Variance</i>	13
5	Feb 02	<i>Two- Factor Analysis of Variance (Independent Measures)</i>	14
6	Feb 09	Test#4 (12%)	
	Feb 10	Last date to drop a course without receiving a grade	
7	Feb 16	<i>Correlation</i>	15
	Feb 23	Winter Reading Week - NO CLASS	
8	Mar 02	<i>Introduction to Regression</i>	16
9	Mar 09	<i>The Chi-Square Statistic: Test for Goodness of Fit and Independence</i>	17
10	Mar 16	<i>Binomial Test</i>	18
11	Mar 23	Test#5 (12%)	
12	Mar 30	<i>Techniques for Ordinal Data (Overview)</i> <i>Overall Course Review (prep for cumulative final)</i>	Appendix E
	Apr 7-24	Final Exam (cumulative) – 25%	