

**Faculty of Health
Department of Psychology
PSYC 2021 3.0 Section N
STATISTICAL METHODS I
W-2017 Tuesdays & Thursdays 2:30-4:00 PM**

Instructor and T.A. Information

Instructor: John A. E. Anderson

Office: 5030 Victor Phillip Dahdaleh Building

York University

4700 Keele St., Toronto, ON

M4P 1P3

Office Phone: NA

Office Hours: by appointment only (though of course I am usually available before and after class).

Please use the following link: <https://johnaeanderson.youcanbook.me/>

Email: statisticsyork2017@gmail.com

Please note I will not respond to student emails NOT sent to the email listed above.

T.A.	Matthias Berkes	Brittney Hartle
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Office	5030 DB	0001 LAS
Office Hours		

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](#)

Course Description

This course will focus on the fundamentals of the theory and the application of statistical procedures used in psychological research. Specifically, the Course will cover: fundamentals of descriptive and inferential statistics, including population and sampling distributions, simple association, probability, estimation, and hypothesis testing. A good working knowledge of algebra is assumed. As an addendum, given that psychology has been moving away from simple null hypothesis significance testing in recent years, we will conceptually cover modern techniques including: effect sizes, Bayesian statistics and issues currently plaguing 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. Recognize limits of descriptive statistics.

Specific Learning Objectives

When completing this course you should be able to do the following:

1. Define and show a good understanding of basic statistical concepts with their appropriate terms and formulas
2. Define inferential statistics
3. Identify which statistical tests are needed in particular basic research designs
4. Know how to describe, summarize and interpret basic statistics
5. Determine which statistical decision is appropriate based on obtained statistical results, and know the strengths and limitations of each test.
6. Display knowledge of the benefits and limitations of basic statistical tests
7. Calculate by hand a variety of statistical tests (e.g., z-scores, t-tests)
8. Explain and interpret several basic statistical tests step by step, and show you know the process involved in executing a hypothesis test.
9. Show a good understanding statistical appreciation of terms and relating terms that refer to: statistical significance, effect size, power and statistical error.

Required Text

- Gravetter, F. & Wallnau, L. (2012). Statistics for the Behavioral Sciences, 9th edition. Wadsworth Thompson Learning, New York. PLUS APLIA PIN CODE. You must have the Aplia pin code for on-line access for the weekly homework quizzes.
- It is possible that additional readings covering content not in your text will be posted on Moodle.

Please note that the textbook

Course Requirements and Assessment

Assessment	Date of Evaluation	Weighting
Aplia homework (x10)	Ongoing	25%
Term test 1	Feb. 2 nd	30%
Final Exam	TBA	45%
Total		100%

Description of Assignments

Note that Aplia assignments are due the week after they are assigned. Work submitted after this deadline will not be evaluated.

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.

In the event that you are legitimately ill or suffer unforeseeable circumstances that prevent you from sitting an exam or submitting an assignment, you must submit the APS within 48 hours. Should you suffer the death of a loved one, you must submit a copy of the death certificate within 72 hours. Please understand that this fast turnaround will help us reschedule your missed assessment.

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 Cheating

If you are caught cheating on a test, you will receive a mark of zero for that assessment.

Electronic Device Policy

During class, you may use whatever device you choose. Your instructor of course prefers any method that allows you to copy formulas & draw graphs. This might be as simple as a pencil and paper. During exams however you are allowed a simple scientific (non-graphing) calculator. You are not permitted to substitute a cellphone or other device.

Attendance Policy

Attendance during lectures is highly recommended. Note that as we will be meeting twice each week, the first meeting will be a lecture where I cover the concept for the first time, the second meeting will generally be a review of the content from the previous class with more in depth examples. We may also cover related extra content during these less formal meetings

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 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

These course materials are designed for use as part of the HH/PSYC 2021 3.0N 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](#)

Tentative Course Schedule:

Month	Week	Topic	Lecture/Review	Chapter(s)/Readings	Aplia Due*	
January	Thu Jan 5, 2017	Introduction Lecture: Introduction to Aplia & Frequency Distribution	L	1,2 & appendix		
	Tue Jan 10, 2017		R			
	Thu Jan 12, 2017	Central Tendency	L	3		
	Tue Jan 17, 2017		R		Quiz: Chapter 1	
	Thu Jan 19, 2017	Variability	L	4		
	Tue Jan 24, 2017		R		Quiz: Chapter 2	
	Thu Jan 26, 2017	Z-Scores	L	5		
	Tue Jan 31, 2017		R		Quiz: Chapter 3	
	Thu Feb 2, 2017	Term-Test 1	TEST	1-5		
February	Tue Feb 7, 2017	Probability 1	L	6	Quiz: Chapter 4	
	Thu Feb 9, 2017		R			
	Tue Feb 14, 2017	Probability 2	L	6	Quiz: Chapter 5	
	Thu Feb 16, 2017		R			
	Thu Feb 21 2017	<u>No Class: Reading week</u>				
	Thu Feb 23 2017	<u>No Class: Reading week</u>				
	Tue Feb 28, 2017	Probability and samples	L	7	Quiz: Chapter 6	
	Thu Mar 2, 2017		R			
	Tue Mar 7, 2017	Introduction to Hypothesis Testing I	L	8	Quiz: Chapter 7	
March	Thu Mar 9, 2017					
	Tue Mar 14, 2017	Introduction to Hypothesis Testing II	L	8	Quiz: Chapter 8	
	Thu Mar 16, 2017					
	Tue Mar 21, 2017	t-introduction	L	9	Quiz: Chapter 9	
	Thu Mar 23, 2017					
	Tue Mar 28, 2017	t-independent samples	L	10	Quiz: Chapter 10	
	Thu Mar 30, 2017					
	Tue Apr 4, 2017	t-related samples	L	11		
	April	Time, date, and location will be announced on Moodle once this is known April 7-24 is Exam Period)			Cumulative (Chapters 1-11)	
Final Exam						

* The 10 quizzes, together, are worth 25% of your course grade

The above schedule is designed to help you keep on top of readings & prepare for class. This schedule is subject to change.