

Faculty of Health
Department of Psychology
HH/PSYC 2020 6.0 Section G
STATISTICAL METHODS I AND II
Fall/Winter 2023-2024; Wednesdays 11:30-2:30 in VH 1152A

Instructor and T.A. Information

Instructor: Alistair P. Mapp

Office Hours: See eClass

Email: amapp@yorku.ca

T.A.	Gary Bold
Email	gary.bold@gmail.com
Office Hours	See eClass

Course Prerequisite: Course prerequisites are strictly enforced

- HH/PSYC 1010 6.00 (Introduction to Psychology).

Course Credit Exclusions

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

Course website: [eClass](#)

The course eClass site will be your central access point for course materials.

Course Description

This course provides an introduction to the analyses of data from psychological studies. Fundamental concepts and techniques of both descriptive and inferential statistics and their application to psychological research are discussed.

Course content is delivered via weekly, in-person lectures and tutorials. Additionally, online problem sets, and demonstrations provide the opportunity to gain hands-on experience with course content and enhance experiential learning of course concepts.

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.
4. Compute inferential statistics for univariate linear models (ANOVA, regression).
5. Interpret and report the results of inferential statistics for univariate linear models.
6. Recognize the limits of 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
- χ^2 Goodness of Fit
- χ^2 Test of Independence
- One-sample t-test
- Independent samples t-test
- Dependent samples t-test
- 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)
- Simple Regression
- Multiple Regression
- **Effect size is included as part of all inferential statistics covered in this course.*

Required Text

- Gravetter, F. J., & Wallnau, L. B. (2017). Statistics for the Behavioral Sciences (10th ed.). Boston, MA: Cengage Learning.
- MindTap is required for this course.

Course Requirements and Assessment:

Assessment	Date of Evaluation	Weighting
MindTap Assignments	Weekly. See MindTap website for specific deadlines.	20%
Test 1	October 18, 2023	20%
Test 2	November 29, 2023	20%
Test 3	February 14, 2024	20%
Test 4	April 3, 2024	20%
Total		100%

Description of Tests and Assignments

There are **four tests** in this course, each one of which is worth 20% of your final grade. The format of each test is multiple choice and data analysis/interpretation questions. The tests are noncumulative and are based on materials covered both in class and in the readings. Additionally, there are **weekly MindTap assignments**. The average (mean) of your best 11 out of 15 assignments is worth 20% of your final grade. **You are expected to work on these assignments independently**. It is your responsibility to access MindTap and complete assignments by the posted deadlines. The assignment deadlines are hard deadlines, which means no extensions are possible and missed assignments will receive a grade of zero.

Attendance Policy

Although students are not graded on attendance it is in their best interest to attend all lectures, tutorials, and question & answer sessions.

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 the York grading system see the York University Undergraduate Calendar - [Grading Scheme for 2023-24](#)

Missed Tests

If you miss a test you will be given **one** chance to write a make-up test if, and only if, you complete the [HH PSYC: Missed Tests/Exams Form](#), which will be received and reviewed in the Psychology undergraduate office. Failure to complete the form within 48 hours of the original test date will result in a grade of zero for the missed test. For more detailed instructions, please refer to the *Rules Governing Missed Tests* link on the eClass.

Add/Drop Deadlines

For a list of all important dates please refer to: [Fall/Winter 2023-24 Important Dates](#)

	Fall (Term F)	Year (Term Y)	Winter (Term W)
Last date to add a course without permission of instructor (also see Financial Deadlines)	Sept. 20	Sept. 20	Jan. 22
Last date to add a course with permission of instructor (also see Financial Deadlines)	Sept. 28	Sept. 28	Jan. 31
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 8	Feb. 8	Mar. 11
Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript – see note below)	Nov. 9 - Dec. 5	Feb. 9 - April 8	March 12 - April 8

Add and Drop Deadline Information

There are deadlines for adding and dropping courses, both academic and financial. Since, for the most part, the dates are **different**, be sure to read the information carefully so that you understand the differences between the sessional dates below and the [Refund Tables](#).

You are strongly advised to pay close attention to the "Last date to enrol without permission of course instructor" deadlines. These deadlines represent the last date students have unrestricted access to the registration and enrolment system.

After that date, you must contact the professor/department offering the course to arrange permission.

You can drop courses using the registration and enrolment system up until the last date to drop a course without receiving a grade (drop deadline).

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.

Electronic Device Policy

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 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 information [SPARK Academic Integrity modules](#). These modules explain principles of academic honesty.

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.

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 university encourages students with disabilities to register with ***Student Accessibility Services (SAS)*** to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors as necessary. **Please let me know as early as possible in the term if you anticipate requiring academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course.**

<https://accessibility.students.yorku.ca/>

Excerpt from Senate Policy on Academic Accommodation for Students with Disabilities:

1. Pursuant to its commitment to sustaining an inclusive, equitable community in which all members are treated with respect and dignity, and consistent with applicable accessibility legislation, York University shall make reasonable and appropriate accommodations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs. This policy aims to eliminate systemic barriers to participation in academic activities by students with disabilities.

All students are expected to satisfy the essential learning outcomes of courses. Accommodations shall be consistent with, support and preserve the academic integrity of the curriculum and the academic standards of courses and programs. 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 2020 6.0G 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

Date	Topic	Reading
September 6	Orientation	
13	Introduction & Math Review	Chapter 1 & Appendix
20	Frequency Distributions	Chapter 2
27	Central Tendency & Variability	Chapters 3 & 4
October 4	Standardized Distributions	Chapter 5
11	<i>Reading Week (No Class)</i>	
18	Test 1 (20%)	
25	Probability	Chapter 6
November 1	Sampling Distributions	Chapter 7
8	Hypothesis Testing	Chapter 8
15	One Sample t-Test	Chapter 9
22	Pre-Test Q & A	
29	Test 2 (20%)	
HAPPY HOLIDAYS		
January 10	Two Independent Samples t-Test	Chapter 10
17	Two Related Samples t-Test	Chapter 11
24	Confidence Intervals	See Book Index
31	Introduction to ANOVA	Chapter 12
February 7	Repeated-Measures ANOVA	Chapter 13
8	<i>Last day to drop full year courses without academic penalty</i>	
14	Test 3 (20%)	
21	<i>Reading Week (No Class)</i>	
28	Two-Factor ANOVA	Chapter 14
March 6	Correlation	Chapters 15
13	Regression	Chapter 16
20	Chi-Square Test	Chapter 17
27	Pre-Test Q & A	
April 3	Test 4 (20%)	