

Faculty of Health
Department of Psychology
PSYC 2022 3.0 N: STATISTICAL METHODS II
Thursday / 11:30am – 2:30pm / Vari Hall C
Winter / 2022

- We will **in person every Thursday at 11:30am in VH C**. Each class will involve a lecture followed by demonstrations/ activities to aid in your understanding of the concepts covered in the lecture. Lecture attendance is strongly encouraged as material will expand upon the slides provided and demonstrations will be valuable to understand course material and statistical software use.
- In the case of a **university/provincial shut down of in-person learning lectures will be delivered online via Zoom** (information will be provided on eClass if this occurs). Please note these sessions should be treated like an official class and therefore you are expected to conduct yourself in a respectable manner.
- Please note that your quizzes will take place during the assigned class time 11:30am – 2:30pm and therefore **it is expected that you will be available during this time**. More information about your quizzes is provided below. All other assessments can be completed outside the assigned class time but will have specific due dates. **There will be no weekly live class activity on the day a quiz is scheduled.**

Instructor and T.A. Information

Instructor: **Stefania Moro, PhD**

Office Hours: By appointment only

Email: moros@yorku.ca (when sending an email please include PSYC2022N in the subject box and your full name and student number in the signature of the message)

T.A.	Carly Goodman	Tenzin Chosang
Email	goodmanc@yorku.ca	tencho@my.yorku.ca
Office Hours	By appointment only	By appointment only

Please note that it may take the instructor and TAs up to 3 business days to respond to your emails. If you send us an email over the weekend please do not expect a response until the normal work week (Monday – Friday) unless otherwise stated by a member of the teaching team or it is an urgent matter.

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 Credit Exclusions

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

Course website: [eClass](#)

All course materials will be available on the course eClass site, unless otherwise indicated by the instructor. The site will be your central access point for course materials. **Note: Please do not send the teaching team messages through the chat on eClass.**

Course Description

A continuation of the study of fundamental concepts and techniques of descriptive and inferential statistics. Topics include correlation, regression, analysis of variance, and non-parametric statistics.

Program Learning Outcomes

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

1. Compute inferential statistics for univariate linear models (ANOVA, regression).
2. Interpret and report the results of inferential statistics for univariate linear models.
3. Recognize the limits of inferential statistics.

Topics Covered

- Review of basic statistical concepts
- 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 (optional)

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

Specific Learning Objectives

- Demonstrate a deeper understanding of the statistical concepts reviewed and extended in this course.
- Identify and apply appropriate statistical analysis(es) to address specific research question(s) and/or hypotheses.

- Demonstrate the ability to compute univariate inferential statistics (where necessary for conceptual understanding)
- Interpret and report the results of statistical analyses from statistical software, in APA form for various research situations.
- Identify limits of conclusions based on inferential statistics (e.g., statistical vs practical significance)

Required Text

There is no required text for this course. All materials and a list of resources to aid in your learning will be provided to you but see below for a list of recommended texts/resources you can consult.

Recommended text/resources

Gravetter, F. J., & Wallnau, L. B. *Statistics for the behavioral sciences*. Wadsworth Publishing, Cengage Learning. (8th -10th edition would be useful)

Howell, D. C. (2016). *Fundamental statistics for the behavioral sciences* (9th ed). Wadsworth Publishing, Cengage Learning.

<https://open.umn.edu/opentextbooks/textbooks/an-introduction-to-psychological-statistics>

<https://www.learnstatswithjamovi.com>

APA resource:

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/reference_list_books.html

Course Requirements and Assessment:

Assessment	Date of Evaluation (if known)	Weighting
Participation	Course activities, surveys, & iClicker	5%
Mini Assignment 1	February 14, 2022	5%
Mini Assignment 2	March 21, 2022	5%
Mini Assignment 3	March 28, 2022	5%
Quiz 1	March 3, 2022	15%
Quiz 2	April 7, 2022	15%
Assignment 1	March 7, 2022	20%
Assignment 2	April 11, 2022	30%
Total		100%

Description of Assignments

Participation: You will have the opportunity to participate in various activities throughout the course such as completing feedback surveys related to course information, responding to iClicker

questions during our weekly class meetings, etc. More information about iClicker can be found on eClass.

Mini Assignments: Students will complete an activity that covers key material taught throughout the course. **This activity will be completed outside the normal class meeting time and students will be allowed to work individually.** The activity may take the form of a scenario where students will be asked to read some information and then respond to a question(s) – students will need to use course materials and other resources to respond. These activities will be made available on eClass on the assigned dates provided and you will receive them in advance of the due date.

Quizzes: Quizzes will be non-cumulative and cover the material from lectures, readings, and class & mini assignments. The format of the quizzes may be a mix of multiple-choice and open-ended/short-answer questions (e.g., defining concepts or responses to analysis questions).

Quizzes will take place during the assigned class time: 11:30am-2:30pm. More information about the content, format and length of the quiz will be provided prior to its administration.

Assignments: The purpose of an assignment is to further evaluate your conceptual understanding of the material covered in class, to demonstrate that you can perform the types of analysis covered in this course and that you can interpret/report the results. **Assignments will be completed outside the normal class time and students are expected to complete their assignment individually.** More information will be provided in eClass and you will receive each assignment in advance of the due date.

Class Format and Attendance Policy

Students are strongly encouraged to attend the class sessions as the material covered in the course in a given week build on the previous week's material and enhances your overall learning experience. These sessions will also help you to stay on track with the 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 2021-22](#)

Missed Tests/Midterm Exams/Late Assignment

For any missed quiz or late assignment, students MUST complete the following online form which will be received and reviewed in the Psychology undergraduate office. **At this time, due to COVID-19 an Attending Physician's Statement (APS) is not required, however, a reason for missing an evaluated component in the course must be provided.**

[HH PSYC: Missed Tests/Exams Form](#). Failure to complete the form within 48 hours of the original deadline will result in a grade of zero for the missed quiz or late assignment.

Missed Quiz: If you miss a Quiz you must complete the Missed Tests/Exam Form and contact your Teaching Assistant within 48 hours of missing the Quiz. Once you have notified us about your missed quiz, a member of the teaching team will be in contact with you to schedule a make-up. **There is only one opportunity to write a make-up quiz;** the makeup may be in a different form from the original test. If you do not contact us or complete the form within 48 hours, you will be assigned a 0. **Please note that stats check, or an assignment cannot be used as a substitute for a missed quiz.**

Late Mini Assignment/Assignment: Similar to your quizzes you must have a valid reason for missing the scheduled due date for your mini assignment or assignment. It is up to the course instructor to determine how much additional time, if any, will be allowed to complete and submit the stats check/assignment. **Please note that a quiz cannot be used as a substitute for stats check or assignment and a stats check cannot be used as a substitute for an assignment or vice versa.**

Add/Drop Deadlines

For a list of all important dates please refer to: [Fall/Winter 2021-22 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. 21	Sept. 21	Jan. 23
Last date to add a course with permission of instructor (also see Financial Deadlines)	Oct. 5	Oct. 26	Feb. 7
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 12	Feb. 11	18-Mar
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	Nov. 13 - Dec. 7	Feb. 12 - April 10	March 19 - April 10

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.

Information on Plagiarism Detection

Turnitin will be used to detect any evidence of plagiarism.

Electronic Device Policy

Electronic devices (e.g., tablets, laptops) are permitted during class time for course-related purposes. It is expected that you would complete tests/exams in a manner that does not require consulting an unauthorised source during an examination unless the tests/exams are open book.

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.

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 **PSYC 2022 N** 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

<i>Week</i>	<i>Date</i>	<i>Topic</i>	<i>Reminder</i>
1	Jan 13	Course Overview Key Statistical Concepts Review	Participation: Class Survey DUE MON JAN 17
2	Jan 20	Key Statistical Concepts Review	
3	Jan 27	Key Statistical Concepts Review Working with data: Introduction to jamovi	
4	Feb 03	Independent samples (between subjects) designs Independent samples t test	
5	Feb 10	Dependent samples (within subjects) designs Dependent samples t test	Mini Assignment #1 (5%) DUE MON FEB 14
6	Feb 17	One-Factor Analysis of Variance	
	Feb 24	NO CLASS – WINTER READING WEEK	
7	Mar 03	QUIZ (15%)	ASSIGNMENT 1 (20%) DUE MON MAR 7
8	Mar 10	Repeated-Measures Analysis of Variance	
9	Mar 17	Two-Factor Analysis of Variance Mar 18: Last date to drop course without receiving a grade	Mini Assignment #2 (5%) DUE MON MAR 21
10	Mar 24	Correlation	Mini Assignment #3 (5%) DUE MON MAR 28
11	Mar 31	Introduction to Regression	
12	Apr 07	QUIZ (15%)	ASSIGNMENT 2 (30%) DUE MON APR 11

QUIZ 1 (10%) - COVERS WEEKS 1, 2, 3, 4, 5, 6

QUIZ 2 (10%) - COVERS WEEKS 8, 9, 10, 11