Faculty of Health
Department of Psychology
PSYC 2022 3.0 M: STATISTICAL METHODS II
Friday / 11:30 am – 2:30 pm / VH C
Winter / 2019

Instructor and T.A. Information

Instructor: Justeena Zaki-Azat
Office: DB 5022 B
Office Hours: By appointment
Email: justeena@yorku.ca

T.A.	Maria Ayala	Mariya Bezgrebelna
Email	mayala@yorku.ca	maffka@yorku.ca
Office	CC 304B	BSB 369
Office Hours	By appointment	By appointment
Students	Last Names A-J	Last Names K-Z

When contacting your professor or a TA, please include "PSYC 2022" in the subject line of your email as well as your registered full name and student number in the message.

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: Moodle

Course Description

This course builds on material presented in Statistical Methods I. Students will gain a greater understanding of the the statistical procedures used by researchers in the behavioural sciences, in addition to the appropriate use and interpretation of statistical results. Topics that will be covered include: hypothesis tests using t-tests (for independent and related measures); Analysis of variance (ANOVA) for repeated measures, independent measures and two factors; multiple comparison procedures (post-hoc analysis), correlation and prediction, and non-parametric techniques. Students should be able to identify the correct statistical test to use. Mathematical competency gained from PSYC2021 is expected-see Appendix A in the text for a Basic Mathematics Review.

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
- 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.

Specific Learning Objectives

This course allows students to be able to identify and calculate both descriptive and inferential statistics. By understanding topics covered above, students will gain knowledge of which test to use in a specific situation and how to formally communicate results using the latest APA standards. By the end of the course, the students should be able to conduct these statistical tests manually by hand, as well as using statistical software JASP.

Required Text

There is no required text for this course.

Optional Text

Five Course Text Options (PICK ONLY 1 OPTION):

a. Navarro, D. (2015). Learning statistics with R: A tutorial for psychology students and other beginners (version 0.5). http://compcogscisydney.org/learning-statistics-with-r/

b. Paper Copy text: Gravetter, F.J. & Wallnau, L. (2016). Statistics for the Behavioral Sciences, 10th Edition Belmont, CA: Wadsworth. ISBN: 9781305918542

c. Loose-leaf Package - Statistics for the Behavioral Sciences, 10th Edition ISBN: 9781337128995

d. Ceb E-book MindTap ISBN: 9781305647312 (the bookstore can generate and sell a code on the spot for students that only want digital access)

e. Use the 8th or 9th edition. Any of the 8, 9, or 10th edition will work fine. However the chapters covered and their order will be taught according to the 10th edition.

You do not need all five, you just need one of the five. You will not need Access to MindTap for any formative or summative assessments in this course.

Course Requirements and Assessment

Assessment	Date of Evaluation (if known)	Weighting
Online Lecture Learning Checks	Weekly	--
Online Mastery Quizzes	1% Due Weekly	10%
In-Class Participation	1% Weekly	10%
In-Class Quizzes	1% Weekly	10%
JASP Assignment	Monday April 1	10%
Midterm Exam	Friday February 15	30%
Final Exam	**TBD Apri 5-20**	30%
Total		100%

Description of Assessments

Online Lecture Learning Checks (Formative):
- Each week, you will be **REQUIRED** to access lecture videos online for every topic covered in the course (2 topics/week). The material will not be explained in class.
- The videos are interactive and have questions to help you assess your learning along the way. These questions are formative and **DO NOT COUNT** toward your grade.

Online Mastery Quizzes:
- Each week after class, you will have access to an Online Mastery Quizzes will be available for one week. They **MUST** be completed by the due date.
- They will be graded with a Pass/Fail format. Multiple submissions are allowed to reach a **PASS** which will be considered **80% MASTERY LEVEL** before the due date.

In-Class Participation:
- As lecture material is covered online, the time in class will be used to **ENGAGE** with the material at a deeper level, allow for discussion, problem-solving, student-led activities, collaborative work and iClicker questions.

In-Class Quizzes:
- Each week at the **BEGINNING** of class, you will have a Multiple Choice Format Quiz on the material learned through the Online Lecture over the course of the week.

JASP Assignment:
- The assignment will evaluate your ability to choose the right statistical test, process it, and to report results to the latest APA standard using the free JASP Software. Consult the **ASSIGNMENT DOCUMENT** for more information.

Midterm & Final Exams:
- Both exams cover review topics from PSYC 2021 and new topics from PSYC 2022.
- Both exams will be **3 HOURS** and only contain **SHORT ANSWER QUESTIONS**.
- Only a **SIMPLE CALCULATOR** will be allowed – scientific ones are not permitted.
- One page double-sided **CHEAT SHEET** will be permitted in both exams. The necessary Reference Tables will be provided by the instructor
- Exams cannot be written without **YORKU ID**.

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 2018-19)

Information Regarding Missed Course Assessment

If you miss the deadlines for any of following summative course assessment(s):
- Online Mastery Quiz
- In-Class Participation
- In-Class Pop Quiz
- JASP Assignment
- Midterm Exam
- Final Exam

There will be **NO** make-up opportunity! Missing any of these course assessments without a documented reason will result in a grade of **ZERO** on that assessment.

If you have documentation to excuse your absence such as the University approved Physician Statement, death certificate, police report, etc:

- Complete the Missed Course Assessment Form within **1 WEEK** of the original deadline. Failure to do so will result in a grade of **ZERO**.

- Once your documentation is reviewed by the Course Instructor, accommodation will be the weight of your grade added to the **FINAL EXAM**.

Beyond that, any further extensions or accommodation will require students to submit a formal Deferred Standing Agreement with the professor and/or petition to the Faculty.

Add/Drop Deadlines

For a list of all important dates please refer to: Fall/Winter 2018-19 - Important Dates

	WINTER (W)
Last date to add a course **without permission** of instructor (also see Financial Deadlines)	Jan. 16
Last date to add a course **with permission** of instructor (also see Financial Deadlines)	Jan. 30
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	March 8
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	March 9 - Apr. 3

*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 GPA or count towards the credits required for your degree.*

Electronic Device Policy

Electronic devices are required during class time to complete in class quizzes and in class participation. Extra-curricular engagement with your devices will be strongly discouraged.

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.

Electronic Devices During a Test/Examination

Electronic mobile devices of any kind are not allowed during examinations. 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: 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 2022 3.0 M 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(s)
January 4	Concepts Review Hypothesis Testing
January 11	z-test t-test
January 18	F-max test Independent t-test
January 25	One-Factor Independent ANOVA
February 1	Mann-Whitney U Kruksall-Wallis
February 8	Two-Factor Independent ANOVA
February 15	**30% Midterm Exam**
February 22	*Reading Week – No Class*
March 1	Dependent t-test Wilcoxon T test
March 8	Repeated Measures ANOVA Freidman test *Last day to drop the course without a grade*
March 15	Pearson Correlation Spearman Correlation
March 22	Simple Regression Multiple Regression
March 29	Chi Squared Goodness of Fit Chi Squared Test of Independence
April 1	**10% JASP Assignment is Due Online**
April 5-20	**30% Final Exam**