Instructor and T.A. Information
Instructor: Ji Yeh Choi, PhD
Office: BSB 331
Office Hours: by appointment
Email: jychoi@yorku.ca Be sure to include PSYC202 in the subject line.

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Email     spbonfie@ucalgary.ca

T.A.     Udi Alter
Email     udialter@yorku.ca

Please note that it may take the instructor and TAs up to 3 business days to respond to your emails. If you send 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.

This course is a remote course, combining asynchronous lectures and synchronous lab tutorials. Each week, two or three video clips that contain course materials will be uploaded as the main lecture. During our regular class time (also meeting virtually), we will have tutorial/discussion sessions. Note that examinations will take in place in person.

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

Course Description
Statistics are central to research in many fields of social sciences, including psychology. This course will introduce the basic concepts of statistical methods for the analysis of data obtained from experimental designs and other research studies. The course is hands-on, methodologically oriented. The course does not emphasize mathematics; there will be some calculations involved, but these require nothing more than elementary algebra. Instead, the focus will be on gaining a greater understanding of the statistical methods used by
researchers in the social sciences, in addition to the appropriate use and interpretation of statistical results.

**Note:** When sending an email, please include **PSYC2022** in the subject line and your full name and student number in the signature of the message.

**Calculator:** You will need a calculator in class and exams (including the final), but calculators may not be programmable or capable of storing text.

**Program Learning Outcomes**

**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
- Two 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
- 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**

1. Demonstrate the ability to generate statistical hypotheses (i.e., null and alternative) that are applicable to various research situations.
2. Identify the various research designs that address different types of questions and hypotheses.
3. Articulate strength and limitations of various research designs.
4. Demonstrate the ability to perform the correct statistical analysis procedures, either by hand (for basic statistics) or using a computer software program.
5. Draw conclusions and write up the results in APA style based on the analysis.

**Recommended Text**


There are **no** textbooks required for the course. Nonetheless, the listed book above will be useful to facilitate an understanding of many topics/problems discussed in the class.
Other Optional Text/Resources

https://open.umn.edu/opentextbooks/textbooks/an-introduction-to-psychological-statistics [FREE]

Course Requirements and Assessment:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Date of Evaluation (if known)</th>
<th>Weighting</th>
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</thead>
<tbody>
<tr>
<td>Assignment #1</td>
<td>Feb 2</td>
<td>12%</td>
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<tr>
<td>Assignment #2</td>
<td>March 16</td>
<td>15%</td>
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<tr>
<td>Assignment #3</td>
<td>April 6</td>
<td>13%</td>
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<tr>
<td>Mid-term exam</td>
<td>Feb 16</td>
<td>13%</td>
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<tr>
<td>Final exam</td>
<td>TBA</td>
<td>35%</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>100%</strong></td>
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Description of Assignments

Individual Assignments: There will be three individual assignments all of which together worth worth 40%. They will consist mainly of short problems. Assignments must be done independently. Students are required to submit all assignments in eClass. Incomplete and late submissions will be penalized, and submissions more than three days late will not be accepted.

Tests/Final exam: There will be one in person in-class mid-term exam and a final exam. As the nature of statistics is cumulative, the tests/exam will be as well. However, there will be a focus on the most recently learned materials. They will cover the materials from lectures, readings, and assignments. There will be some calculations required, so you will be permitted to use a calculator (Note that electronic devices other than a simple calculator will not be an acceptable replacement). The format of the tests will be a mix of multiple-choice and short-answer questions. For short-answer questions, all work must be shown for evaluation.

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 2022-23

Missed Tests/Midterm Exams/Late Assignment:

For any missed tests, midterm exam or late assignments, students MUST complete the following online form which will be received and reviewed in the Psychology undergraduate office.

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 tests, midterm exam or late assignments.
In addition, to the online form, students documented reason for a missed tests, midterm exam or late assignments such as illness, compassionate grounds, etc., MUST submit official documentation (e.g. Attending Physician Statement).

Upon completion of the online form and after receipt of your supporting documentation you can opt to have the weight of the missed test added to your cumulative final exam.

**Missed Final Exam:** If you miss your final exam please also complete the online form within 48 hours of the missed exam and provide formal documentation (i.e., Attending Physician Statement and Final Exam Deferred Standing Agreement Form) within 7 days of the missed final exam.

**Add/Drop Deadlines**

For a list of all important dates please refer to: Fall/Winter 2022-23 - Important Dates

<table>
<thead>
<tr>
<th></th>
<th>FALL (F)</th>
<th>YEAR (Y)</th>
<th>WINTER (W)</th>
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<tbody>
<tr>
<td>Last date to add a course without permission of instructor</td>
<td>Sept. 20</td>
<td>Sept. 20</td>
<td>Jan. 22</td>
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<tr>
<td>Last date to add a course with permission of instructor</td>
<td>Oct. 4</td>
<td>Oct. 25</td>
<td>Feb. 6</td>
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<td>Drop deadline: Last date to drop a course without receiving a grade</td>
<td>Nov. 11</td>
<td>Feb. 10</td>
<td>March 17</td>
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<td>Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript – see note below)</td>
<td>Nov. 12 - Dec. 7</td>
<td>Feb. 11 - Apr. 10</td>
<td>March 18 - Apr. 10</td>
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*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 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**

In class, students can use an electronic device (e.g., tablets, laptops) for course-related purposes.

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.
Attendance Policy
Students are expected to attend all classes as weekly class activities build on the previous week's material.

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 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 **PSYC 2022** 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

<table>
<thead>
<tr>
<th>Session</th>
<th>Date</th>
<th>Topic</th>
<th>Reading (Text Chapter)</th>
<th>Assignment Due</th>
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<tr>
<td>01</td>
<td>Jan 12</td>
<td>Course Overview</td>
<td>10-11</td>
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<td>Review of statistical concepts</td>
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<td>T-test introduction</td>
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<td>02</td>
<td>Jan 19</td>
<td>T-test cont’d One-way ANOVA I</td>
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<td>03</td>
<td>Jan 26</td>
<td>One-way ANOVA II</td>
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<td>04</td>
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<td>Two-way ANOVA</td>
<td>14</td>
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<td>ANOVA - Repeated Measures</td>
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<td>06</td>
<td>Feb 16</td>
<td>Mid-term Exam</td>
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<td>Feb 23</td>
<td>Reading Week – No Class</td>
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<td>07</td>
<td>Mar  2</td>
<td>Three-factors Experimental Design</td>
<td>14</td>
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<td>08</td>
<td>Mar  9</td>
<td>Catch-up; Non-parametric Statistics</td>
<td>Appendix E</td>
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<td>09</td>
<td>Mar 16</td>
<td>Multiple Regression I</td>
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<td>11</td>
<td>Mar 30</td>
<td>ANCOVA</td>
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<td>12</td>
<td>Apr  6</td>
<td>Overall Course Review</td>
<td>Assignment #3</td>
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<td>Apr  7 - 25</td>
<td>Final Examination</td>
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**Note: This lecture schedule is subject to change as needed during the semester.**