

**YORK UNIVERSITY****Faculty of Health, Department of Psychology****Course:** HH / PSYC 2021 3.0 N Statistical Methods I**Term:** Winter 2015**Time:** Tues/Thurs 2:30 – 4:00**Location:** LASS B**Course Instructor:** Holly Clayton, MA**Office:** FARQ 117**Office Hours:** T&R, 1-2, and by appointment**Phone:** 416-736-2100 x. 30029**E-mail:** hollis@yorku.ca**E-mail Etiquette:** Always put PSYC 2021 N in the subject header. Include your full name and student number in the body of the message.**Teaching Assistants:**Naail Khan, B.Sc  
(Last Names A-K)**Office:** SHR 1006**E-mail:** naailk@yorku.ca**Office Hours:** in class, or by appointmentLily Solomon-Harris, MA  
(Last Names L-Z)**Office:** SHR 1006**E-mail:** lilysh@yorku.ca**Office Hours:** in class, or by appointment

**Course Description:** This course is designed to provide students with the statistical skills necessary to analyze and understand data from psychological research. It is a course in the study of fundamental concepts and techniques of descriptive and inferential statistics. Some topics covered will include: frequency distributions, measures of central tendency and variability, z-scores and probability, hypothesis tests using z-scores and t-tests, correlation, regression and the Chi-Square non-parametric test.

**Organization:** The course involves formal lectures by the instructor on topics outlined below in the reading schedule. The required readings are central to the course. Class time will also include practical time that will serve to clarify and illustrate assigned topics with the completion of weekly homework problems, which are modelled by the TA's next class. This is important as they provide useful experience with statistical tasks. Suggested problems will be posted on Moodle. It is advisable that students complete these problems ahead of time. Optional In-Class Labs will serve as enrichment activities, as well as supervised practice with the teaching team, but will also give insight into how important statistics is for your degree, and research in general, by participating in typical research scenarios which use data from studies done at York.

**Course Text:** The following text is required for the course: Gravetter, F.J. & Wallnau, L.B. (2013) Statistics for the Behavioural Sciences, 9<sup>th</sup> Ed. Belmont CA: Thomson/Wadsworth. **You are required to purchase an access key to MindTap.**

You are **recommended** buy your copy from the York Bookstore, as you will need access to MindTap, the book's online resource which contains assignments that count towards your final grade, in addition to a wide variety of learning tools (even the e-

book!). Instructions for registering your MindTap key are on Moodle. If you only need MindTap, email Holly.

**Pre-requisite / Co-requisite:** PSYC 1010 6.0 (with a minimum grade of C, when used as a pre-requisite).

**Website:** Make sure that you sign up for a Moodle account as soon as possible. Go to <http://moodle.yorku.ca> and follow the instructions. You need to log-on using your Passport York ID and password. Once registered, you can see all Moodle websites associated with the courses you are registered in.

### **Evaluation:**

The final grade for the course will be based on the following weighted items:

<i>MindTap Assignments</i>	14%	Throughout the term; Best 7 of 9 count
<i>Term Test 1</i>	23%	In class, 80 minutes, February 10 <sup>th</sup>
<i>Term Test 2</i>	23%	In class, 80 minutes, March 19 <sup>th</sup>
<i>Final Exam</i>	40%	In the exam period, 3 hours, April 8 <sup>th</sup> -24 <sup>th</sup>

The in-class tests will cover material from lectures and readings preceding the test date. The final examination will be **cumulative**, covering **all course material**.

\***Optional**, enrichment days that do not count for marks are indicated by an asterisk\*.

**Missed Evaluations:** Students must e-mail the **instructor within 24 hours** of a missed evaluation (assignment, test or exam). Any student with a documented reason for missing any of the above evaluations, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (Attending Physician's Statement) may request accommodation from the Course Instructor. The Attending Physician's Statement form can be found on the Moodle website. Accommodations **may** include permission to write a make-up test, an extension on an assignment, or a re-weighting of the course evaluations. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

### **ADDITIONAL TEST INFORMATION**

- For tests (and the final!), you must bring your York sessional and photo ID, writing tools, and a **very basic** calculator (+, -, x, ÷, and  $\sqrt{\quad}$  only).
- A 3 x 5 inch "cheat sheet" with handwritten notes (**\*one side\*** for term tests. **Two sides** allowed for the final ☺).
- Statistical tables will be provided as needed.

<b>Date</b>	<b>Topic</b>	<b>Chapter</b>
Jan. 6	Introduction and Mathematics Review	<b>1 &amp; A</b>
Jan. 8	Frequency Distributions	<b>2</b>
Jan. 13	Central Tendency	<b>3</b>

Jan. 15*	Central Tendency	3
Jan. 20	Variability (Chp. 3 assignment due by 2pm)	4
Jan. 22*	Variability	4
Jan. 27	Z-scores (Chp. 4 assignment due by 2pm)	5
Jan. 29*	Z-scores	5
Feb. 3	Probability (Chp. 5 assignment due by 2pm)	6
Feb. 5*	Probability	6
<b>Feb. 10</b>	<b>Term Test 1 – 80 minutes worth 23%</b> (Chp. 6 Assignment due by 12pm)	
Feb. 12	Probability and Samples	7
<b>Feb. 17</b>	<b>No Class – Reading Week</b>	
Feb. 24*	Probability and Samples	7
Feb. 26	Introduction to Hypothesis Testing (Chp. 7 Assignment due by 2pm)	8
Mar. 3*	Introduction to Hypothesis Testing	8
Mar. 5	Introduction to the T-Statistic (Chp. 8 Assignment due by 2pm)	9
Mar. 10*	Introduction to the T-Statistic	9
Mar. 12	The T-Test for Two Independent Samples (Chp. 9 Assign. due by 2pm)	10
Mar. 17*	The T-Test for Two Independent Samples	10
<b>Mar. 19</b>	<b>Term Test 2 – 80 minutes worth 23%</b> (Chp.10 Assignment due by 12pm)	
Mar. 24	The T-Test for Two Related Samples	11
Mar. 26*	The T-Test for Two Related Samples	11
Mar. 31	Correlation and Regression	15.1-15.3 & 16
Apr. 2	The Chi-Square Statistic (Chp.11 <u>last assignment</u> due by 2pm)	17.1-17.3

## IMPORTANT COURSE INFORMATION FOR STUDENTS

### Academic Honesty and Integrity

York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty (<http://www.yorku.ca/secretariat/policies/document.php?document=69>). The policy affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards. Students are expected to review the materials on the Academic Integrity website (<http://www.yorku.ca/academicintegrity>)

### Access/Disability

York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and mental health disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University.

Students in need of these services are asked to register with disability services as early as possible to ensure that appropriate accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with the Course Instructor to discuss your accommodation needs. Please note that registering with disability services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs. We are committed to maintaining a “disability friendly” classroom. Please let us know how we can best meet your individual needs; we are always available to listen 😊

Additional information is available at the following websites:

Counselling & Disability Services – <http://www.yorku.ca/disabilityservices>

Counselling & Disability Services Glendon – <http://www.glendon.yorku.ca/counselling>

York Accessibility Hub – <http://www.yorku.ca/accessibilityhub/index.htm>

### **Religious Observance Accommodation**

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed at home, scheduled later in the term pose such a conflict, contact the Course Director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination period in April, students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre, or online at [http://www.registrar.yorku.ca/pdf/exam\\_accommodation.pdf](http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf)

### **Student Conduct in Academic Situations**

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in the endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive

and/or harassing behaviour by students in academic situations is available at <http://www.yorku.ca/secretariat/policies/document.php?document=82>