

YORK UNIVERSITY
FACULTY OF HEALTH
DEPARTMENT OF PSYCHOLOGY
PSYC 2021 3.0 C – DATA ANALYSIS I
FALL 2011
THURSDAY 8:30 – 11:30 AM in CSE - B
Pre- or Co-requisite PSYC 1010 6.0
with a minimum grade of C in PSYC 1010 if used as a prerequisite

INSTRUCTOR:	Dr. Margarete Wolfram	TA:	Ryan Barnhart
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OFFICE:	BSB 274		
OFFICE HOUR:	Th and Fr 12:00– 1:00 PM		
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TEXTBOOK:

Required: Wolfram, M. and Cheng, L. Statistical Concepts and Procedures: The Essentials (third edition). York University, Toronto, 2011.

EVALUATION PROCEDURE:

Grades will be based on the outcome of three tests, worth 30%, each and weekly assignments, worth a total of 10%. All tests consist of 50% multiple-choice questions and 50% problem questions. Test dates are October 6, November 10, and a date TBA during the December exam period. Assignments are due at the beginning of each class.

PROCEDURES FOR MISSED EXAMS AND LATE ASSIGNMENTS:

There are **no make-ups for missed exams**. With appropriate documentation to justify their absence, students may add the weight of a missed exam to that of the immediately following exam. In case of a missed final exam University regulations apply.

There can be **no extensions on assignments**, since feedback is given as soon as the assignments are collected at the beginning of the class. The weight of a missed assignment is added to the next following exam.

GOAL OF THE COURSE:

The goal of this course is statistical literacy and competence in choosing and carrying out statistical analyses appropriate to different research questions. Students will gain a better understanding of the experimental findings to which they are exposed in other courses and they will be able to interpret and critically evaluate research findings reported in the media. The course will also provide top preparation for students who continue with PSYC 2022 and/or plan to enter PSYC 3030 (intermediate statistics), and PSYC 4000 (thesis course) or PSYC 4170 (advanced methodology). It is advantageous for students to take this course as early as possible in their course of study.

PARTICULARITY OF A STATISTICS COURSE:

Statistics is an important course. Succeeding in it will open doors for you in your course of study, while failing to succeed will keep these doors shut. Understanding statistics will greatly help you to understand other subject matters, which is the reason why statistics is mandatory for psychology majors. Mastering Psych 2021 does not require an unusual degree of aptitude for mathematics, but the course **does require** a fair amount of **regular work**. According to a questionnaire, successful students spend an average of five hours per week studying statistics in addition to class time. There is, however, a large range in the time required by different students.

Statistics differs from many other courses in that one thing builds on another. Students have to retain it all. The only way this can be achieved is by mastering each part to the point where it becomes automatic. Using statistics then becomes similar to speaking a language fluently without having to explicitly recall each rule. Lack of investing enough regular time and attention is the one prime reason for failure in this course.

Some students spend a lot of time wondering whether or not they will succeed. Henry Ford had the answer to their question when he said: “Whether you think you can or think you can’t, - either way you are right.” People tend to live up (or down) to their own expectation. However, positive expectations need to be combined with concrete strategies to move beyond wishful thinking.

STRATEGIES TO SUCCEED IN THIS COURSE:

Maximum efficiency can be achieved by:

- (a) good resource management, i.e. keeping oneself in good operating conditions and setting aside weekly time periods for regular homework,
- (b) using several smaller time periods rather than one big block,
- (c) making friends with classmates and working with others (but NOT during exams),
- (d) making use of the models provided, and
- (e) asking for help when encountering difficulties, i.e. essentially staying on top rather than letting things slide, hoping to catch up at some future point in time.
- (f) understanding the material AND making its use automatic through practice

CORRESPONDENCE:

Please be aware that this is not a correspondence course. Attending lectures cannot be substituted by requesting information and explanation from the instructor or the TA via e-mail. Identify yourself clearly (first and last name, course number and section) when you need to communicate by e-mail or phone. State **2021** in the subject line of any e-mail. Please read your course outline carefully. It contains all the administrative information students tend to ask about.

IF YOU FEEL THAT YOU NEED EXTRA HELP:

(1) Consider whether you have made an honest effort to cope on your own. Some students simply assume that they cannot handle the material. Hiring a tutor fulfils their need to depend on somebody other than themselves. (2) Make use of the resources available. The instructor and the TAs have weekly office hours and are ready to help you out. (3) Form a study group. (4) If you really find that the available resources do not suffice, look for peer tutoring with UPSA at York University.

COURSE SCHEDULE

Sept.	8	Introduction to the course Introduction to statistics (Chapter 1) Making sense out of data – graphic representation (Chapter 2)
Sept.	15	Assignment #1 Measures of central tendencies and measures of dispersion (Chapter 3)
Sept.	22	Assignment #2 Introduction to standard scores (Chapter 3 cont'd) Standard scores and the normal curve (Chapter 4)
Sept.	29	Assignment #3 Pearson correlation and regression (Chapter 5)

Oct.	6	Assignment #4 FIRST EXAM (30%) covering chapters 1 – 5
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Oct.	13	FALL READING WEEK	aka co-curricular week	no classes
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Oct.	20	Assignment #5 Probability (Chapter 6) Introduction to inferential statistics (Chapter 7)
Oct.	27	Assignment #6 Hypothesis testing: inferences about a single mean (Chapter 8)
Nov.	3	Assignment #7 Elements of research design; the t-test for correlated samples (Chapter 9)

Nov.	10	SECOND EXAM (30%) covering chapters 6 – 9
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Nov.	11	Last day to drop course without receiving a grade
Nov.	17	Assignment #8 t-test for independent samples (Chapter 10) The power of statistical tests and the problem of hypothesis testing (Chapter 11)
Nov.	24	Assignment #9 The Chi square test (Chapter 15)
Dec.	1	Assignment #10 Review

Final Exam Period	FINAL EXAM (30%) covering chapters 6 - 12
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