YORK UNIVERSITY - FACULTY OF HEALTH - DEPARTMENT OF PSYCHOLOGY

PSYC 2022.03 B – STATISTICAL METHODS II

THURSDAYS 2:30 – 5:30 PM in CLF-H

Pre- and Co-requisites PSYC 2021 3.0
with a minimum grade of C in PSYC 1010 6.0 if used as a corequisite

INSTRUCTOR:	Ryan G. Barnhart, M.A. TA(s):	Marwan Daar	Sara Oczak
OFFICE:	BSB 262	LAS 0002E	BSB 043
OFFICE HOURS:	Thursday 12:00 –2:00	By Appt.	Tuesdays 12:00-1:00pm
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TEXTBOOK:

Gravetter, F.J. & Walnau L.B. Statistics for the Behavioral Sciences. 9th ed. Wadsworth, CA, 2013

CLASS RESOURCE:

Announcements, supplementary materials and communications will be available on the moodle page for our course – **PSYC 2022 Section B**.

IMPORTANT ACADEMIC DATES:

Last Day to Drop/Add Courses:	November 8th
Co-Curricular Days:	October 30th to November 3rd
Last Day of Classes:	December 6th
Exam Period Begins:	December 10th

EVALUATION PROCEDURE:

Grades will be based on the outcome of a combination of two or three tests.

Pre-Term Test – Test 1 - September 26th (Multiple Choice Only) – 15%

Test 1 is a **MANDATORY TEST.** This test is designed to evaluate the students' level of comprehension of concepts needed for the course. Emphasis is on theoretical implications and concepts central to statistical thinking. Performance on the test will be evaluated relative to test 2 and the exam and this will determine its weight. If performance enhances your grade it will be retained. If it would lower your grade the test will be dropped from the overall evaluation on a per student basis.

Midterm Test – Test 2 – October 24th (Multiple Choice & Short Answer) – 35-50%

Test 2 is a **MANDATORY TEST**. All students must write it for evaluation purposes. It will be comprised of both multiple choice and short answer items. Emphasis will be on conceptual thinking and weighting of the items will be equal across both the multiple choice and short answer formats.

Final Examination – Test 3 - TBA - (Multiple Choice & Short Answer) – 50%

The final examination is a **MANDATORY TEST**. All students must write it for evaluation purposes. It will be comprised of both multiple choice and short answer items. Emphasis will be on conceptual thinking and weighting of the items will be equal across both the multiple choice and short answer formats.

PROCEDURES FOR MISSED EXAMS AND LATE ASSIGNMENTS:

A make-up for a missed test will only be permitted with the correct documentation. In case of a missed final exam University regulations apply.

POLICIES, PROCEDURES AND REGULATIONS

All instructors, teaching assistants and students are expected to abide by the policies, procedures and regulations outlined by the York University Secretariat. If faced with an issue, please refer to these documents outlined at the web address indicated below.

http://www.yorku.ca/secretariat/policies/index-policies.html

GOAL OF THE COURSE:

The goal of this course is to gain the ability to think statistically and become a better consumer of statistical information. Students will be introduced to the statistical theory and methods employed in many of the standard design based research methods used in the social sciences. Students will gain a better understanding of the experimental findings to which they are exposed in other courses. They will also be able to better interpret and critically evaluate research findings reported in the media. The course will provide preparation for PSYC 2030, PSYC 3030 and PSYC 4000 or PSYC 4170.

STRATEGIES TO SUCCEED IN THIS COURSE:

(a) Make use of all available resources – Office Hours, emails, libraries, classmates, web searches, the excellent free website **Khanacademy.org**, and others.
(b) Choose to try – it is not brilliance that determines performance it is effort
(c) Setting aside weekly time periods for regular homework,
(d) Develop study groups together and collectively determine and aid each other's needs – you will make friends that way too
(e) Ask 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) Respect yourself and your classmates

(g) DO NOT BE AFFRAID! - School should be enjoyable not intimidating – there can be stress, but **YOU ARE MORE IMPORTANT THAN YOUR GRADES**. Success is not an endpoint but the product of a decision to live life in a particular way. It does not depend on what job you have, how much money you make, what your grades were. It is about love and loving, about helping to change tomorrow by choosing to be brave enough to live a life in service to each other. Therefore, success is always in the immediate and not about tomorrow. Choose to be successful, choose to love yourself now and not let it ever depend on anything other than that choice. If you do that, you will not be afraid and you will obtain the grade you should. That does not necessarily mean passing the course. You can be successful and still fail. The importance is in trying without fear.

CORRESPONDENCE:

Correspondence should be conducted by email with the course instructor or the teaching assistants. Identify yourself clearly (first and last name, course number and section) when you need to communicate. Please be sure to state **2022 B** in the subject line of all e-mails in order to prevent them from going to junk or spam mail folders. Please read your course outline carefully as 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 12 Introduction to the course
Re-thinking statistics - forget what we think we knew and start fresh
Begin review of the three flavours of t-tests and related concepts
Chapters 10

Sept 19 Continue our review of the three flavours of t-tests and related concepts
Chapters 11

Sept 26 **FIRST TEST (15%)**

Oct 3 Introduction to the Analysis of Variance (ANOVA) model
Chapter 12

Oct 10 Repeated Measures ANOVA models

Chapter 13

Oct 17   Two-Factor ANOVA models
Chapter 14

Oct 24   **SECOND TEST (35-50%)**

Oct 31   **Co-Curricular day**   **no classes**

Nov. 7   Correlation
Chapter 15

Nov 8   Last day to drop course without receiving a grade

Nov 15   Linear & Multiple Regression
Chapter 16

Nov 22   The Chi-Square statistic
Chapter 17

Nov 29   Other Non-Parametric tests and Review
Appendix E

Dec 5   Review & Discussion of the Final Examination
Review

TBA   **FINAL EXAM (50%)**

PERCENT TO LETTER GRADING:

From Percentage	To Letter Grade
90-100	A+
80- 89	A
75- 79	B+
70- 74	B
65- 69	C+
60- 64	C
55- 59	D+
50- 54	D
(Marginally below 50%) Marginally failing	E
(Below 50%) Failing	F