

YORK UNIVERSITY
Faculty of Health, Department of Psychology

Course: HH/SC PSYC 2020 6.0 C Statistical Methods I & II
Time: Lecture Monday 11:30 - 14:30

Term: Fall 2014 Winter 2015
Location: VH1152A

Course Instructor: Heather Jenkin, Ph. D.

Office: 254 BS

Tel: 416 736 2100 x22542

Email etiquette: Always put PSYC2020 C in Subject header, include your full name and student number in the body of the message.

Office Hours: R 12:30 - 1:30 and by appointment

Email contact: hjenkin@yorku.ca

Teaching Assistant: Information will be on moodle

Secretary: Ms. Barbara Thurston

Office: 283 BS

Email contact: bthurst@yorku.ca

Course Description: This course is designed to provide the student with the statistical skills necessary to analyze and understand the data from psychological research. Topics covered will include basic concepts of measurement, measures of central tendency, variability and relationship. As well, selected inferential statistics will be covered (for example t-tests, ANOVAs, correlation and regression), there will also be non-parametric test such as χ^2 and tests of ordinal data. Students should have a reasonably good working knowledge of high school mathematics.

Course Learning Objectives: The purpose of this course is to introduce students to the field of psychology statistical analysis. In addition it is hoped that students will develop appropriate study habits and critical thinking skills.

Pre-requisite or co-requisite: PSYC 1010 6.0 (with a minimum grade of C, when used as a pre-requisite)

Course Credit Exclusion: For exclusions see the Department of Psychology handbook 2014-15.

Text: Gravetter, F.J. & Wallnau, L. B. (2012) Statistics for the Behavioral Sciences. 9th Ed. Belmont CA: Thomson/Wadsworth

Additional readings: Supplemental Chapter 20 package required(see York Bookstore)

Website: Make sure that you sign up for a Moodle account as soon as possible. Online go to moodle.yorku.ca and follow the instructions, you need to logon using your *yorku id* and *password*, once registered with Moodle you can then find all Moodle websites associated with the courses you are registered in.

Evaluation: There are three parts to how your grade is generated:

- (1) Five term tests non-cumulative term tests (multiple choice questions, short answers and calculations). These tests sum to 65% of your grade. Tests will begin at 11:30 on the Test day - I will go over the test immediately after. **You are also able to see your test with the TA up until the next Term test date.** You are encouraged to go over each test before the next test to make sure you understand where you may improve, statistics is a course that builds on knowledge from earlier in the course. Do not ignore material you do not understand - it will appear again!
- (2) There are 8 assignments that are done over the year worth 6% in total. We will count your best 6 of the eight assignments. The assignments and due dates will be posted on Moodle. Assignments are **due in class at 11:30 on the assigned date. No late assignments will be accepted**, no electronic submissions are allowed. Early submissions will be accepted if date and time stamped. You can hand them in to me in my office hours, or drop it off with Ms. Barb Thurston in 283 BS.
- (3) The last 29% is a **cumulative final** (short answers and calculations covering the entire course content).

Missed Test: If you miss a term test you will score a zero.

Documentation for a missed test due to illness: York University Attending Physician's Statement form must be completed by your healthcare provider (available on the course moodle site). This is the ONLY form of medical documentation acceptable in this course. A "doctor's note" is NOT sufficient.

There are no make-ups for missed tests. With appropriate documentation you can request a re-weighting onto the cumulative final. Note that when one term test is missed the final is then weighted 42%, two tests would result in a final worth 55%. If your health is so severely compromised that you miss more than one test you should consider dropping as you will probably be missing too much lecture time to do well in the course. If more than one term test is missed then be aware that you may not have a true understanding of your performance in the course before the drop deadline.

IMPORTANT COURSE INFORMATION FOR STUDENTS

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage (see Policies, Procedures and Regulations; Major Documents and Publications) - <http://www.yorku.ca/secretariat/index.html>

- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

Information on cheating and Plagiarism is available

- At a comprehensive website on Academic Integrity for students
<http://www.yorku.ca/academicintegrity/students/index.htm>
- In the Psychology Supplemental Calendar
- At the Senate Policy on Academic Honesty website
<http://www.yorku.ca/secretariat/policies/document.php?document=69>

Part 1	Introduction and Mathematical Review; Frequency distribution and Graphing; Central Tendency; Variability
Readings	Chapters 1, 2, 3, 4, 5 and Appendix A
TEST 1	October 6th 2014 worth 13%
Part 2	z-score; Probability; Sampling and Distributions; Hypothesis Testing and Power
Readings	Chapters 6, 7, and 8
TEST 2	November 17th 2014 worth 13%
Part 3	Single sample t-tests; Independent measures t-tests; Dependent measures t-tests: Confidence intervals (supplement)
Readings	Chapters 9, 10, and 11, (supplement)
TEST 3	Jan 12th 2015 worth 13%
Part 4	ANOVA; Repeated measures ANOVA; Factorial ANOVA; Ordinal tests (Appendix E)
Readings	Chapters 12, 13, 14, and Supplemental chapter
TEST 4	March 2nd 2015 worth 13%
Part 5	Correlation and Regression Analysis; Chi-Square tests; Ordinals (supplement)
Readings	Chapters 15, 16, 17 and 19
TEST 5	March 30th 2015 worth 13%
CUMULATIVE FINAL	Scheduled in the Winter Exam period (TBA) Cumulative worth 29%

Important dates

September 8th	First lecture of PSYC2020 C
September 22nd	Last date to add a course without permission of instructor
Oct 13th	Thanksgiving - no lecture
October 14th	Last date to add a course with permission of instructor
Oct 29th - Nov 2	Fall Co-curricular Days

Dec 9th - Dec 22nd	Fall examinations
Feb 6th	Last date to drop courses without receiving a grade
Feb 14th - 20th	Winter Reading Week
March 30th	Last lecture in PSYC 2020C
April 8th - April 24th	Winter Examinations

Date	Topic	Readings
Sept 8	Introduction, Frequency Distributions	Chapter 1,2 Appendix A
Sept 15	Central Tendancy	Chapter 3
Sept 22	Variability	Chapter 4
Sept 29	z-Scores	Chapter 5
Oct 6	Test 1	Worth 13%
Oct 13	Thanksgiving - no class	
Oct 20	Probability	Chapter 6
Oct 27	Probability and Samples	Chapter 7
Nov 3	Introduction to hypothesis testing	Chapter 8
Nov 10	Introduction to hypothesis testing	Chapter 8
Nov 17	Test 2	Worth 13%
Nov 24	Introduction to the t Statistic	Chapter 9
Dec 1	t Test for Two Independent Samples	Chapter 10
Jan 5	t Test for Two Dependent Samples	Chapter 11
Jan 12	Test 3	Worth 13%
Jan 19	Introduction to Analysis of Variance	Chapter 12
Jan 26	Introduction to Analysis of Variance	Chapter 12
Feb 2	Repeated-Measures Analysis of Variance	Chapter 13
Feb 9	Two-Factor Analysis of Variance (Independent measures)	Chapter 14
Feb 16	Family Day - no class	
Feb 23	Ordinals	Supplement
Mar 2	Test 4	Worth 13%
Mar 9	Correlation	Chapter 15
Mar 16	Introduction to Regression	Chapter 16
Mar 23	The Chi-Squre Statistic When to use what test	Chapter 17 Chapter 19
Mar 30	Test 5	Worth 13%
April 8 - 24	Cumulative final evaluation	Worth 29%