December 13, 2017

Faculty of Health
Department of Psychology
PSYC 2022 3.0 Section N STATISTICAL METHODS II
Thursday/14:30-17:30/VH B
Winter/2018

Instructor and T.A. Information

Instructor: Dr. H. Jenkin
Office: 254 BS
Office Phone: x22542
Office Hours: in class or by appointment
Email: hjenkin@yorku.ca

T.A.	Rivka Green	Devin Heinze Kehoe
Email	rgreen@yorku.ca	dhkehoe@yorku.ca
Office		
Office Hours	In class or by appointment	In class or by appointment

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: Moodle

Course Description

This is a continuation of the study of fundamental concepts and techniques of descriptive and inferential statistics (PSYC2021). Topics include power, correlation, regression analyses, analysis of variance and non-parametric statistics. The course involves formal lectures by the instructor on topics outlined below in the reading schedule. The required readings are central to the course.
Online MindTap Problem Sets will provide students with an opportiunity to work on course content on an almost weekly time schedule through self directed multiple choice tests. Three attempts are permitted and your best score is taken. MindTap has other review and tutorial demonstration featutres to enhance your experiaential learning of course materials.
Class time will also include tutorial/Q&A time that will serve to enrich, clarify, and

illustrate assigned topics with the completion of homework problems in class. This is important as they provide useful experience with more complex statistical calculations. Suggested problems will be posted on moodle. It is advisable that students complete these problems and then difficulties can be discussed on the appropriate day.

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
- One-way Independent Groups ANOVA (with contrasts)
- Two-way Independent Groups ANOVA (with interaction and contrasts)
- One-way Repeated Measures ANOVA (with contrasts)
- 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

Students should be able to:

1. Correctly identify which inferential statistical test is appropriate given information of a research design.
2. Generate the statistical hypotheses (H_0 and H_1) that are applicable to various research situations
3. Demonstrate the ability to calculate the appropriate test statistic applicable to various research situations
4. Conduct any appropriate post-hhoc tests as required
5. Communicate the results effectively within APA literature reporting style

Required Text

- Gravetter, F.J. & Wallnau, L. B. (2016) Statistics for the Behavioural Sciences. 10th Ed. with MindTap. Belmont CA: Thomson/Wadsworth
- Supplemental Chapter 20 from the 8th edition package required (see York Bookstore)

We will be using MindTap Problem Setsfor grade so make sure that you buy that resource.

Course Requirements and Assessment:

Assessment	**Date of Evaluation (if known)**	**Weighting**
MinTap Problem Sets	Weekly as indicated	12%

Assessment	Date of Evaluation (if known)	Weighting
Term Test 1	January 25 2018	21%
Term Test 2	March 8 2018	21%
Term Test 3	March 29 2018	12%
Cumulative Final	Winter Exam Period as scheduled	34%
Total		100%

Description of Assignments

Problem Sets are online questions that cover material in each Chapter. There are three opportunities to attempt each Prolem Set. Your bets score will be taken as your score. If you score perfect on the first attempt then you are finished with that Problem Set. They will be available for the chapters relating to a given term test until the day before that term test. The Problem sets are worth 15% ofyour grade.

Term Tests are held in class and cover specific chapters and lectures, In total they are workth 54% of your grade. Term Test 1 and 2 are worth 201% each, while Term Test 3 is worth 12%. All Term Tests are held in class time. Questions may be in true/false, multiple choice, paragraph or short answer calculation format. A formulae sheet will be given as will any required statistical tables needed.

The cumulative final has paragraph and short answer calculation formats covering the entire course content and is worth 34%.

- For the term tests/final you must bring York sessional and photo ID.

- You may bring writing tools, and a basic calculator (+, −, ×, ÷, and √ only). Any calculator more sophisticated will be confiscated until the test is over (Easy to check – does your calculator have any symbols such as these on it - ΣX, ΣX 2, σ2, σ, S-SUM, S-VAR, sx, σx). Your cell phone may NOT be used as a calculator

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 90, B+ = 75 to 79, etc.)

(For a full description of York grading system see the York University Undergraduate Calendar - Grading Scheme for 2017-18)

Late Work/Missed Tests or Exams

Students with a documented reason for missing a course test, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (Attending Physician Statement which can be found at: http://myacademicrecord.students.yorku.ca/pdf/attending-physicians-statement.pdf may request accommodation from the Course Instructor. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

For students with a documented reason for a missed term test there will be **one** opportunity for a make up test. The make up test may or may not be of a similar format as the test held on schedule but it will cover the same content. If the make-up is missed then the weight will go onto the cumulative final. In order to write the make up documnetaion **must be uploaded** to HH PSYC: Missed Tests/Final Exam form (see below) **within 48 hours** of the original test date/time.

Important New Information Regarding Missed Tests

For any missed tests 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 hous of the original deadline will result in a grade of zero for the test/assignment.

Add/Drop Deadlines

For a list of all important dates please refer to: Fall/Winter 2017-18 - Important Dates

	FALL (F)	**YEAR (Y)**	**WINTER (W)**
Last date to add a course **without permission** of instructor (also see Financial Deadlines)	Sept. 20	Sept. 20	Jan. 17
Last date to add a course **with permission** of instructor (also see Financial Deadlines)	Oct. 4	Oct. 18	Jan. 31
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 10	Feb. 9	March 9
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	Nov. 11 - Dec. 4	Feb. 10 - Apr. 6	March 10 - Apr. 6

***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

You are responsible for your own answers when submitting for grade. Do not show other students your answers or look at another students answers if you are expecting the work to be graded.

Electronic Device Policy

While I provide some of my slides as .pdf files before lecture I feel that you printing them out then writing supplemental notes in lecture is the best way to work through course content. Often I will leave space for the calculations to be completed in class during Q&A time. Students using electronic devices in class are asked to do so only for course-related purposes. Other use of eclectronic devices is proven a distraction from lecture to both the user and to others around them.

Attendance Policy

Students are expected to attend all classes as homework and Q &A sessions provide opportunities to discuss errors before they become problematic during tests. Attendance is recommended and occasionally will be taken in class.

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 by completing the Academic Integrity Tutorial and Academic Honesty Quiz.

It is recommended that you review information posted to the SPARK Academic Integrity modules. These modules explain principles of academic honesty, provide examples and list preventative measures.

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 PSYC2022N 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

Date	Topic	Readings
Jan 4	Review of hypothesis testing, Power and ttest	Chs. 8 and 9
Jan 11	Review of independent t test & Mann-Whitney non parametric test	Ch. 10 and Appendix E CH 20 from 8th Edition
Jan 17	*Last date to enroll without instructor's permission* NOTE: I will not give permission past Jan 18th	
Jan 18	Review of dependent t test & Wilcoxon non parametric test	Ch. 11 and Appendix E CH 20 from 8th Edition
Jan 25	***Test 1: 120 minutes***	***worth 21%***
Jan 31	*Last date to enroll with instructor's permission*	
Feb 1	ANOVA and effect size	Ch. 12
Feb 8	ANOVA post hoc tests & Kruskall-WALLIS non parametric test	Ch. 12 and Appendix E CH 20 from 8th Edition
Feb 15	ANOVA for repeated measures & Friedman non parametric test	Ch. 13 and Appendix E CH 20 from 8th Edition
Feb 22	*No class: Reading Week*	
Mar 1	2 factor ANOVA	Ch. 14
Mar 7	*Last date to drop without receiving a grade*	
Mar 8	***Test 2: 120 minutes***	***worth 21%***
Mar 15	Correlation Hypothesis tests Pearson and Spearmen	Ch. 15
Mar 22	Regression line: Linear and Multiple Regression Analyses	Ch. 17
Mar 29	***Test 3: 90 minutes*** Review following	***worth 12%***
Apr 5	*Study day*	

Apr 9 - 23	***Cumulative Final: 180 minutes***	***worth 34%***